

SAFETY DATA SHEET

according to the OSHA
Hazard Communication Standard

Version 6.31
Revision Date 08/12/2026
Print Date 08/12/2026

SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : EPA 8270 Calibration Mix 1

Product Number : 5M00720

Brand : Supelco

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Research and development as defined in 40 C.F.R. § 751.403. See section 15 for more information.

Restrictions on use : For R&D use only. Not for pharmaceutical, household or other uses. After February 3, 2025, this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or reaction product; (3) Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7) Industrial and commercial use as a paint and coating remover from safety critical, corrosion-sensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space vehicle, and turbine applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export.

1.3 Details of the supplier of the safety data sheet

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Company : Sigma-Aldrich Inc.
SPRUCE ST 3050
63103 St. Louis

Telephone : (314) 771-5765
Telefax: (800) 325-5052

1.4 Emergency telephone number

Emergency Phone # : 800 424 9300 (CHEMTREC) 24/7
+1 703 527 3887 (CHEMTREC) 24/7

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards for the product as supplied

Flammable liquids : Category 2

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitisation : Category 1

Germ cell mutagenicity : Category 1B

Carcinogenicity : Category 1A

Reproductive toxicity : Category 1B

Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

Specific target organ toxicity - repeated exposure : Category 1 (Blood)

Aspiration hazard : Category 1

Short-term (acute) aquatic hazard : Category 1

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Long-term (chronic) aquatic hazard : Category 1

Other hazards

None known.

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs (Blood) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P260 Do not breathe mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P331 Do NOT induce vomiting.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

CAS-No. : Not Assigned

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Dichloromethane	75-09-2*	>= 45 - <= 70	TSC
benzene	71-43-2*	>= 15 - <= 40	TSC
Hexachloroethane	67-72-1*	>= 0 - <= 0.1	TSC

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Hexachlorobenzene	118-74-1*	$\geq 0 - \leq 0.1$	TSC
1,2,4-trichlorobenzene	120-82-1*	$\geq 0 - \leq 0.1$	TSC
Bis(2-ethylhexyl) phthalate	117-81-7*	$\geq 0 - \leq 0.1$	TSC
2,4-dichlorophenol	120-83-2*	$\geq 0 - \leq 0.1$	TSC
1-Chloro-4- phenoxybenzene	7005-72-3*	$\geq 0 - \leq 0.1$	TSC
2,4-dinitrotoluene	121-14-2*	$\geq 0 - \leq 0.1$	TSC
1,4-dichlorobenzene	106-46-7*	$\geq 0 - \leq 0.1$	TSC
N-Nitrosodimethylamine	62-75-9*	$\geq 0 - \leq 0.1$	TSC
N-Nitroso dipropylamine	621-64-7*	$\geq 0 - \leq 0.1$	TSC
1,2-Dichlorobenzene	95-50-1*	$\geq 0 - \leq 0.1$	TSC
chlorocresol	59-50-7*	$\geq 0 - \leq 0.1$	TSC
2-nitrophenol	88-75-5*	$\geq 0 - \leq 0.1$	TSC
1,2,3,4,5,5- Hexachlorocyclopentadie ne	77-47-4*	$\geq 0 - \leq 0.1$	TSC
4-chloroaniline	106-47-8*	$\geq 0 - \leq 0.1$	TSC
2,4-Dinitrophenol	51-28-5*	$\geq 0 - \leq 0.1$	TSC
isophorone	78-59-1*	$\geq 0 - \leq 0.1$	TSC
4-Nitroaniline	100-01-6*	$\geq 0 - \leq 0.1$	TSC
2,6-Dinitrotoluene	606-20-2*	$\geq 0 - \leq 0.1$	TSC
4-Bromophenyl phenyl ether	101-55-3*	$\geq 0 - \leq 0.1$	TSC
m-nitroaniline	99-09-2*	$\geq 0 - \leq 0.1$	TSC
Nitrobenzene	98-95-3*	$\geq 0 - \leq 0.1$	TSC
2,4,6,-Trichlorophenol	88-06-2*	$\geq 0 - \leq 0.1$	TSC
Hexachlorobuta-1,3- diene	87-68-3*	$\geq 0 - \leq 0.1$	TSC
3,5-Dinitro-2- hydroxytoluene	534-52-1*	$\geq 0 - \leq 0.1$	TSC

Indeno[1,2,3-cd]pyrene	193-39-5*	$\geq 0 - \leq 0.1$	TSC
bis(2-Chloroisopropyl)ether	39638-32-9*	$\geq 0 - \leq 0.1$	TSC
Bis-(2-chloroethoxy)methane	111-91-1*	$\geq 0 - \leq 0.1$	TSC
Pyrene	129-00-0*	$\geq 0 - \leq 0.1$	TSC
Benzo[b]fluoranthene	205-99-2*	$\geq 0 - \leq 0.1$	TSC
chrysene	218-01-9*	$\geq 0 - \leq 0.1$	TSC
Benzo[k]fluoranthene	207-08-9*	$\geq 0 - \leq 0.1$	TSC
benzo[a]pyrene	50-32-8*	$\geq 0 - \leq 0.1$	TSC
Benzo[jk]fluorene	206-44-0*	$\geq 0 - \leq 0.1$	TSC
Dibenz[a,h]anthracene	53-70-3*	$\geq 0 - \leq 0.1$	TSC
anthracene	120-12-7*	$\geq 0 - \leq 0.1$	TSC
Naphthalene	91-20-3*	$\geq 0 - \leq 0.1$	TSC
Benzo[ghi]perylene	191-24-2*	$\geq 0 - \leq 0.1$	TSC
acenaphthene	83-32-9*	$\geq 0 - \leq 0.1$	TSC
phenanthrene	85-01-8*	$\geq 0 - \leq 0.1$	TSC
Benz[a]anthracene	56-55-3*	$\geq 0 - \leq 0.1$	TSC
Fluorene	86-73-7*	$\geq 0 - \leq 0.1$	TSC
Azobenzene	103-33-3*	$\geq 0 - \leq 0.1$	TSC
p-cresol	106-44-5*	$\geq 0 - \leq 0.1$	TSC
Benzyl butyl phthalate	85-68-7*	$\geq 0 - \leq 0.1$	TSC
o-cresol	95-48-7*	$\geq 0 - \leq 0.1$	TSC
Pentachlorophenol	87-86-5*	$\geq 0 - \leq 0.1$	TSC
carbazole	86-74-8*	$\geq 0 - \leq 0.1$	TSC
2,4,5-Trichlorophenol	95-95-4*	$\geq 0 - \leq 0.1$	TSC
Phenol	108-95-2*	$\geq 0 - \leq 0.1$	TSC

2,4-xylenol; 2,4-dimethylphenol	105-67-9*	$\geq 0 - \leq 0.1$	TSC
o-nitroaniline	88-74-4*	$\geq 0 - \leq 0.1$	TSC
bis(2-chloroethyl) ether	111-44-4*	$\geq 0 - \leq 0.1$	TSC
dibutyl phthalate	84-74-2*	$\geq 0 - \leq 0.1$	TSC

* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	: Show this safety data sheet to the doctor in attendance.
If inhaled	: After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
In case of skin contact	: In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
In case of eye contact	: After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
If swallowed	: After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.
Most important symptoms and effects, both acute and delayed	: The most important known symptoms and effects are described in the labelling (see section 2 GHS label elements) and/or in section 11
Protection of first-aiders	: For personal protection see section 8.
Notes to physician	: No data available

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Foam Carbon dioxide (CO ₂) Dry powder
Unsuitable extinguishing	: For this substance/mixture no limitations of

media extinguishing agents are given.

Specific hazards during fire fighting : Mixture with combustible ingredients.

Combustible.

Pay attention to flashback.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

Hazardous combustion products : Carbon oxides

Hydrogen chloride gas

Specific extinguishing methods : No data available

Further information : Remove container from danger zone and cool with water.
Suppress (knock down) gases/vapours/mists with a water spray jet.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:
Do not breathe vapours, aerosols.
Avoid substance contact.
Ensure adequate ventilation.
Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.
 Advice for emergency responders:
 Wear appropriate personal protective equipment, as indicated in Section 8.

- Environmental precautions : Do not let product enter drains.
 Risk of explosion.
- Methods and materials for containment and cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).
 Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7. HANDLING AND STORAGE

For precautions see section 2 GHS label elements

- Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.
 Take precautionary measures against static discharge.
- Advice on safe handling : Work under hood. Do not inhale substance/mixture.
 Avoid generation of vapours/aerosols.
- Further information on storage conditions : Keep container tightly closed in a dry and well-ventilated place.
 Keep away from heat and sources of ignition.
 Keep locked up or in an area accessible only to qualified or authorised persons.
- Storage class : 3, Flammable liquids
- Recommended storage temperature : Recommended storage temperature if relevant, see product label.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Dichloromethane	75-09-2	TWA	50 ppm	ACGIH
		PEL	25 ppm	OSHA

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				CARC
		STEL	125 ppm	OSHA CARC
		ECEL-TWA	2 ppm 8 mg/m3	TSCA ECEL
		EPA STEL	16 ppm 57 mg/m3	TSCA ECEL
benzene	71-43-2	TWA	0.5 ppm	ACGIH
		STEL	2.5 ppm	ACGIH
		TWA	10 ppm	OSHA Z-2
		CEIL	25 ppm	OSHA Z-2
		Peak	50 ppm	OSHA Z-2
		TWA	0.1 ppm	NIOSH REL
		ST	1 ppm	NIOSH REL
bis(2-Chloroisopropyl)ether	39638-32-9	TWA	3 ppm	US WEEL
		STEL	21 mg/m3	US WEEL
3,5-Dinitro-2-hydroxytoluene	534-52-1	TWA (Inhalable fraction and vapor)	0.2 mg/m3	ACGIH
		TWA	0.2 mg/m3	NIOSH REL
		TWA	0.2 mg/m3	OSHA Z-1
Hexachlorobuta-1,3-diene	87-68-3	TWA	0.02 ppm	ACGIH
		TWA	0.02 ppm 0.24 mg/m3	NIOSH REL
Nitrobenzene	98-95-3	TWA	1 ppm	ACGIH
		TWA	1 ppm 5 mg/m3	NIOSH REL
		TWA	1 ppm 5 mg/m3	OSHA Z-1
2,6-Dinitrotoluene	606-20-2	TWA	1.5 mg/m3	NIOSH REL
4-Nitroaniline	100-01-6	TWA	3 mg/m3	ACGIH
		TWA	3 mg/m3	NIOSH REL
		TWA	1 ppm 6 mg/m3	OSHA Z-1
isophorone	78-59-1	C	5 ppm	ACGIH
		TWA	4 ppm 23 mg/m3	NIOSH REL
		TWA	25 ppm 140 mg/m3	OSHA Z-1
1,2,3,4,5,5-Hexachlorocyclopentadiene	77-47-4	TWA	0.01 ppm	ACGIH
		TWA	0.01 ppm 0.1 mg/m3	NIOSH REL
1,2-Dichlorobenzene	95-50-1	TWA	25 ppm	ACGIH
		STEL	50 ppm	ACGIH
		C	50 ppm 300 mg/m3	NIOSH REL
		C	50 ppm	OSHA Z-1

			300 mg/m3	
1,4-dichlorobenzene	106-46-7	TWA	10 ppm	ACGIH
		TWA	75 ppm 450 mg/m3	OSHA Z-1
2,4-dinitrotoluene	121-14-2	TWA	1.5 mg/m3	NIOSH REL
2,4-dichlorophenol	120-83-2	TWA	1 ppm	US WEEL
Bis(2-ethylhexyl) phthalate	117-81-7	TWA	0.1 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL
		ST	10 mg/m3	NIOSH REL
		TWA	5 mg/m3	OSHA Z-1
1,2,4-trichlorobenzene	120-82-1	C	5 ppm	ACGIH
		C	5 ppm 40 mg/m3	NIOSH REL
Hexachlorobenzene	118-74-1	TWA	0.002 mg/m3	ACGIH
Hexachloroethane	67-72-1	TWA	1 ppm	ACGIH
		TWA	1 ppm 10 mg/m3	NIOSH REL
		TWA	1 ppm 10 mg/m3	OSHA Z-1
dibutyl phthalate	84-74-2	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL
		TWA	5 mg/m3	OSHA Z-1
bis(2-chloroethyl) ether	111-44-4	TWA	5 ppm	ACGIH
		STEL	10 ppm	ACGIH
		TWA	5 ppm 30 mg/m3	NIOSH REL
		ST	10 ppm 60 mg/m3	NIOSH REL
		C	15 ppm 90 mg/m3	OSHA Z-1
2,4-xylenol; 2,4-dimethylphenol	105-67-9	TWA (Inhalable fraction and vapor)	1 ppm	ACGIH
Phenol	108-95-2	TWA	5 ppm	ACGIH
		TWA	5 ppm 19 mg/m3	NIOSH REL
		C	15.6 ppm 60 mg/m3	NIOSH REL
		TWA	5 ppm 19 mg/m3	OSHA Z-1
Pentachlorophenol	87-86-5	TWA (Inhalable fraction and vapor)	0.5 mg/m3	ACGIH
		STEL (Inhalable fraction and vapor)	1 mg/m3	ACGIH
		TWA	0.5 mg/m3	NIOSH REL

		TWA	0.5 mg/m ³	OSHA Z-1
o-cresol	95-48-7	TWA	2.3 ppm 10 mg/m ³	NIOSH REL
		TWA	5 ppm 22 mg/m ³	OSHA Z-1
		TWA (Inhalable fraction and vapor)	20 mg/m ³	ACGIH
p-cresol	106-44-5	TWA	2.3 ppm 10 mg/m ³	NIOSH REL
		TWA	5 ppm 22 mg/m ³	OSHA Z-1
		TWA (Inhalable fraction and vapor)	20 mg/m ³	ACGIH
phenanthrene	85-01-8	TWA	0.2 mg/m ³	OSHA Z-1
		TWA	0.1 mg/m ³	NIOSH REL
Naphthalene	91-20-3	TWA	10 ppm	ACGIH
		TWA	10 ppm 50 mg/m ³	NIOSH REL
		ST	15 ppm 75 mg/m ³	NIOSH REL
		TWA	10 ppm 50 mg/m ³	OSHA Z-1
anthracene	120-12-7	TWA	0.2 mg/m ³	OSHA Z-1
		TWA	0.1 mg/m ³	NIOSH REL
Benzo[jk]fluorene	206-44-0	TWA	0.2 mg/m ³	OSHA Z-1
		TWA	0.1 mg/m ³	NIOSH REL
benzo[a]pyrene	50-32-8	TWA	0.2 mg/m ³	OSHA Z-1
		TWA	0.1 mg/m ³	NIOSH REL
chrysene	218-01-9	TWA	0.2 mg/m ³	OSHA Z-1
		TWA	0.1 mg/m ³	NIOSH REL
Pyrene	129-00-0	TWA	0.2 mg/m ³	OSHA Z-1
		TWA	0.1 mg/m ³	NIOSH REL

Biological occupational exposure limits

Components	CAS-No.	Control parameter s	Biological specimen	Samplin g time	Permissibl e concentrat ion	Basis
Dichloromethane	75-09-2	Dichlorom ethane	Urine	End of shift (As soon as possible after exposur e	0.3 mg/l	ACGIH BEI

				ceases)		
Pyrene	129-00-0	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
Benzo[b]fluoranthene	205-99-2	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
chrysene	218-01-9	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
Benzo[k]fluoranthene	207-08-9	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
benzo[a]pyrene	50-32-8	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
Benzo[jk]fluorene	206-44-0	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
Dibenz[a,h]anthracene	53-70-3	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
anthracene	120-12-7	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
Benzo[ghi]perylene	191-24-2	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
acenaphthene	83-32-9	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI

phenanthrene	85-01-8	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
Benz[a]anthracene	56-55-3	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
Fluorene	86-73-7	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI
Phenol	108-95-2	Phenol	Urine	End of shift (As soon as possible after exposure ceases)	250 mg/g creatinine	ACGIH BEI
Bis(2-ethylhexyl) phthalate	117-81-7	Mono(2-ethylhexyl)phthalate	Urine	End of shift	5 µg/g creatinine	ACGIH BEI
		Mono(2-ethyl-5-hydroxyhexyl)phthalate	Urine	End of shift	20 µg/g creatinine	ACGIH BEI
		Mono(2-ethyl-5-oxohexyl)phthalate	Urine	End of shift	15 µg/g creatinine	ACGIH BEI
		Mono(2-ethyl-5-carboxypentyl)phthalate	Urine	End of shift	25 µg/g creatinine	ACGIH BEI
Nitrobenzene	98-95-3	Methemoglobin	In blood	During or at the end of the shift	1.5 % Hb	ACGIH BEI
Indeno[1,2,3-cd]pyrene	193-39-5	1-Hydroxypyrene	Urine	End of shift at end of workweek	2.5 µg/l	ACGIH BEI

Engineering measures : No data available

Personal protective equipment

Respiratory protection : required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Hand protection

Remarks : required

Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Safety glasses

Skin and body protection : Flame retardant antistatic protective clothing.

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : No data available

Odour : No data available

Odour Threshold : No data available
pH : No data available

Melting point	: No data available
Boiling point/boiling range	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Flammability (liquids)	: No data available
Burning rate	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: No data available
Water solubility	: No data available
Partition coefficient: n- octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Particle characteristics Particle size	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Vapours may form explosive mixture with air.
Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	: No data available
Conditions to avoid	: Warming.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: For Hazardous combustion products in the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixture

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye irritation.

Respiratory or skin sensitization

Mixture may cause an allergic skin reaction.

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: 1 - Group 1: Carcinogenic to humans (benzene)

IARC: 1 - Group 1: Carcinogenic to humans (benzo[a]pyrene)

IARC: 1 - Group 1: Carcinogenic to humans (Pentachlorophenol)

IARC: 2A - Group 2A: Probably carcinogenic to humans (Dichloromethane)

IARC: 2A - Group 2A: Probably carcinogenic to humans (Dibenz[a,h]anthracene)

IARC: 2A - Group 2A: Probably carcinogenic to humans (N-Nitrosodimethylamine)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Benzo[b]fluoranthene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (chrysene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Benzo[k]fluoranthene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (anthracene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Naphthalene)

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. (Naphthalene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Benz[a]anthracene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (carbazole)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,4,5-Trichlorophenol)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Hexachloroethane)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Hexachlorobenzene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Bis(2-ethylhexyl) phthalate)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,4-dichlorophenol)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,4-dinitrotoluene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (1,4-dichlorobenzene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (N-Nitroso dipropylamine)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (4-chloroaniline)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (isophorone)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,6-Dinitrotoluene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Nitrobenzene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,4,6,-Trichlorophenol)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Indeno[1,2,3-cd]pyrene)

NTP: Known - Known to be human carcinogen (benzene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Dichloromethane)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Benzo[b]fluoranthene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Benzo[k]fluoranthene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (benzo[a]pyrene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Dibenz[a,h]anthracene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Naphthalene)

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. (Naphthalene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Benz[a]anthracene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Pentachlorophenol)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Hexachloroethane)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Hexachlorobenzene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Bis(2-ethylhexyl) phthalate)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (1,4-dichlorobenzene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (N-Nitrosodimethylamine)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (N-Nitroso dipropylamine)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Nitrobenzene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (2,4,6,- Trichlorophenol)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Indeno[1,2,3-cd]pyrene)

OSHA: OSHA specifically regulated carcinogen (Dichloromethane)

OSHA: OSHA specifically regulated carcinogen (benzene)

OSHA: OSHA specifically regulated carcinogen (Pyrene)

OSHA: OSHA specifically regulated carcinogen (chrysene)

OSHA: OSHA specifically regulated carcinogen (benzo[a]pyrene)

OSHA: OSHA specifically regulated carcinogen (Benzo[jk]fluorene)

OSHA: OSHA specifically regulated carcinogen (anthracene)

OSHA: OSHA specifically regulated carcinogen (N-Nitrosodimethylamine)

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

11.2 Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Components

Dichloromethane

Acute toxicity

LD50 Oral - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Mouse - 4 h - 86 mg/l - vapour

Remarks: (ECHA)

Symptoms: Possible damages:, mucosal irritations

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritations - 4 h

(OECD Test Guideline 404)

Remarks: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

Remarks: (ECHA)

Remarks: Risk of corneal clouding.

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: positive

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause drowsiness or dizziness. - Central nervous system

Acute inhalation toxicity - Possible damages:, mucosal irritations

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

benzene

Acute toxicity

LD50 Oral - Rat - male - > 2,000 mg/kg

(OECD Test Guideline 401)

Symptoms: Nausea

LD50 Oral - Rat - male and female - 3,002 mg/kg

(OECD Test Guideline 401)

Symptoms: Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.

Inhalation: No data available

Symptoms: mucosal irritations

LD50 Dermal - Rabbit - 13,630 mg/kg

Remarks: (IUCLID)

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: irritating

(OECD Test Guideline 404)

Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

Remarks: (IUCLID)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

May cause genetic defects.

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male - Bone marrow

Result: positive

Carcinogenicity

May cause cancer. Positive evidence from human epidemiological studies.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Acute oral toxicity - Nausea

Acute oral toxicity - Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.

Acute inhalation toxicity - mucosal irritations

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

- Blood

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

Aspiration may cause pulmonary oedema and pneumonitis.

Hexachloroethane**Acute toxicity**

LD50 Oral - Rat - 4,460 mg/kg

Remarks: (RTECS)

Inhalation: No data available

LD50 Dermal - Rabbit - 32,000 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: No skin irritation - 1 h

(OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes. - 24 h

Remarks: (ECHA)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Hexachlorobenzene**Acute toxicity**

LD50 Oral - Rat - 10,000 mg/kg

LD50 Oral - Mouse - 4,000 mg/kg

LD50 Oral - Cat - 1,700 mg/kg

LD50 Oral - Rabbit - 2,600 mg/kg

LD50 Oral - Guinea pig - > 3,000 mg/kg

LD50 Oral - Quail - > 6,400 mg/kg

LD50 Oral - Mammal - > 5,000 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Change in motor activity (specific assay).

LC50 Inhalation - Rat - 3,600 mg/m3 - dust/mist

LC50 Inhalation - Mouse - 4,000 mg/m3 - dust/mist

LC50 Inhalation - Cat - 1,600 mg/m3 - dust/mist

LC50 Inhalation - Rabbit - 1,800 mg/m3 - dust/mist

Dermal: No data available

No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

Causes photosensitivity. Exposure to light can result in allergic reactions resulting in dermatologic lesions, which can vary from sunburnlike responses to edematous, vesiculated lesions, or bullae

Germ cell mutagenicity

No data available

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Ingestion - Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

1,2,4-trichlorobenzene

Acute toxicity

LD50 Oral - Rat - male and female - 930 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rat - 6,139 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Convulsions or effect on seizure threshold.

(RTECS)

Skin corrosion/irritation

Skin - Rabbit

Result: Moderate skin irritation

Remarks: (RTECS)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: *S. typhimurium*

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Bis(2-ethylhexyl) phthalate

Acute toxicity

LD50 Oral - Rat - 30,000 mg/kg

Remarks: (RTECS)

LC0 Inhalation - Rat - male and female - 4 h - > 10.62 mg/l - vapour
(OECD Test Guideline 403)

Remarks: (highest concentration to be prepared)

LD50 Dermal - Rabbit - 19,800 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: slight irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 72 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: negative

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Result: negative

Test Type: Micronucleus test

Test system: Chinese hamster lung cells

Result: negative

Remarks: (ECHA)

Method: OECD Test Guideline 475

Species: Rat - male - Bone marrow

Result: negative

Method: OECD Test Guideline 486

Species: Rat - male and female - Liver cells

Result: negative

Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

May damage the unborn child.

May damage fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

2,4-dichlorophenol

Acute toxicity

LD50 Oral - Mouse - male and female - 1,276 - 1,352 mg/kg

(OECD Test Guideline 401)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Inhalation: Corrosive to respiratory system.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

LD50 Dermal - Rat - male and female - 780 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns.

Remarks: (IUCLID)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

1-Chloro-4-phenoxybenzene

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

The value is given in analogy to the following substances: Diphenyl ether

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2,4-dinitrotoluene

Acute toxicity

LD50 Oral - Rat - 268.0 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Inhalation - 4 h - 0.51 mg/l - dust/mist

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Dermal - 300.1 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

Skin - Rabbit

Result: Mild skin irritation - 24 h

Remarks: (RTECS)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (IUCLID)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Remarks: (National Toxicology Program)

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Result: Positive results were obtained in some in vitro tests.

Remarks: (National Toxicology Program)

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

Suspected of damaging the unborn child.

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

1,4-dichlorobenzene

Acute toxicity

LD50 Oral - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 5.07 mg/l - vapour

(OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Species: Mouse - male and female - Bone marrow
Result: negative
Remarks: (ECHA)

Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.
Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

N-Nitrosodimethylamine

Acute toxicity

LD50 Oral - Rat - 23 mg/kg
Remarks: (Lit.)
LC50 Inhalation - Rat - 4 h - 0.24 mg/l - vapour
Remarks: (Lit.)
Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

- Liver

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

N-Nitroso dipropylamine**Acute toxicity**

LD50 Oral - Rat - 480.0 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Possible human carcinogen

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

1,2-Dichlorobenzene**Acute toxicity**

LD50 Oral - Rat - male and female - 2,000 mg/kg

(OECD Test Guideline 401)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Acute toxicity estimate Inhalation - 4 h - 11.1 mg/l - vapour
(Expert judgement)

LD50 Dermal - Rabbit - > 10,000 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 24 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: positive
(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Method: OECD Test Guideline 474

Species: Rat - male - Red blood cells (erythrocytes)

Result: negative

Method: OECD Test Guideline 489

Species: Rat - male - Bone marrow

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory Tract

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure**Aspiration hazard**

No data available

chlorocresol**Acute toxicity**

LD50 Oral - Rat - male - 1,830 mg/kg

(OECD Test Guideline 401)

Remarks: (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - > 583 mg/l - dust/mist
(OECD Test Guideline 403)

Remarks: (ECHA)

LD50 Dermal - Rat - female - > 2,000 mg/kg
(OECD Test Guideline 402)

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive after 1 to 4 hours of exposure
(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage. - 72 h
(OECD Test Guideline 405)

Remarks: (ECHA)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: positive
(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: UDS (Unscheduled DNA synthesis assay)

Test system: rat hepatocytes

Result: negative

Test Type: Ames test

Test system: S. typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation. - Respiratory Tract

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

2-nitrophenol

Acute toxicity

LD50 Oral - Rat - 334 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Inhalation - 4 h - 1.6 mg/l - dust/mist
(Expert judgement)

Symptoms: mucosal irritations, Cough, Shortness of breath

Acute toxicity estimate Dermal - 1,100.1 mg/kg

(Expert judgement)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 20 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No skin irritation - 72 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

1,2,3,4,5,5-Hexachlorocyclopentadiene

Acute toxicity

LD50 Oral - Rat - male and female - 1,400 mg/kg

(OECD Test Guideline 401)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

LC50 Inhalation - Rat - male - 4.0 h - 0.018 mg/l - vapour

(OECD Test Guideline 403)

LD50 Dermal - Rabbit - 430.0 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit

Result: Severe skin irritation - 4 h

Remarks: (RTECS)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.

(OECD Test Guideline 405)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Method: OECD Test Guideline 478

Species: Mouse - male and female

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure**Aspiration hazard**

No data available

4-chloroaniline**Acute toxicity**

LD50 Oral - Rat - female - 300.0 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Behavioral:Muscle weakness.

Respiratory disorder

(RTECS)

Acute toxicity estimate Inhalation - 4 h - 0.51 mg/l - dust/mist

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: Drowsiness, Shortness of breath, Cyanosis

LD50 Dermal - Rabbit - 360 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit

Result: No eye irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: positive

(OECD Test Guideline 406)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: positive

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Result: negative

Species: Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute inhalation toxicity - Drowsiness, Shortness of breath, Cyanosis

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2,4-Dinitrophenol

Acute toxicity

Acute toxicity estimate Oral - 30 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Inhalation - 4.0 h - 0.51 mg/l - dust/mist

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Dermal - 300 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

Skin - Rabbit

Result: slight irritation

Remarks: (ECHA)

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Oral - Causes damage to organs through prolonged or repeated exposure.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

isophorone

Acute toxicity

LD50 Oral - Rat - male and female - 1,500 mg/kg

Remarks: (ECHA)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Inhalation: Irritating to respiratory system.

LC50 Inhalation - Rat - male - 4 h - 7 mg/l - aerosol

Remarks: (ECHA)

LD50 Dermal - Rabbit - male and female - 1,200 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye irritation.

(Draize Test)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (National Toxicology Program)

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: Positive results were obtained in some in vitro tests.

Remarks: (ECHA)

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Result: negative

Remarks: (ECHA)

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells

Result: Positive results were obtained in some in vitro tests.

Remarks: (ECHA)

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Result: negative

Remarks: (ECHA)

Test Type: unscheduled DNA synthesis assay

Test system: rat hepatocytes

Result: negative

Remarks: (ECHA)

Species: Drosophila melanogaster (vinegar fly) - male

Result: negative

Remarks: (ECHA)

Species: Mouse - male and female

Result: negative

Remarks: (ECHA)

Result: negative

Remarks: (National Toxicology Program)

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory Tract

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

4-Nitroaniline

Acute toxicity

LD50 Oral - Rat - 750.0 mg/kg

LC50 Inhalation - 4 h - 0.51 mg/l - dust/mist

LD50 Dermal - Guinea pig - > 500.0 mg/kg

No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

2,6-Dinitrotoluene

Acute toxicity

LD50 Oral - Rat - 177.0 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Inhalation - 4 h - 0.51 mg/l - dust/mist
(Expert judgement)
Acute toxicity estimate Dermal - 300 mg/kg
(Expert judgement)

Skin corrosion/irritation

Skin - Rabbit
Result: Mild skin irritation - 24 h
Remarks: (RTECS)

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

4-Bromophenyl phenyl ether

Acute toxicity

Oral: No data available
Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

m-nitroaniline**Acute toxicity**

Acute toxicity estimate Oral - 100 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Inhalation - 4 h - 0.6 mg/l - dust/mist

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: Possible damages: , slight mucosal irritations

Acute toxicity estimate Dermal - 300.1 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Remarks: (National Toxicology Program)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute inhalation toxicity - Possible damages: , slight mucosal irritations

Specific target organ toxicity - repeated exposure

Oral - May cause damage to organs through prolonged or repeated exposure.

- Kidney, Liver, Heart, Blood

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

Nitrobenzene**Acute toxicity**

Acute toxicity estimate Oral - 100 mg/kg

(Expert judgement)

Remarks: Blood: Methemoglobinemia-Carboxyhemoglobin.

(Regulation (EC) No 1272/2008, Annex VI)

LC50 Inhalation - Rat - 4 h - 2.81 mg/l - vapour

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation.

Behavioral: Tremor.

(RTECS)

LD50 Dermal - Rabbit - 760 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (ECHA)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (ECHA)

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

Method: OECD Test Guideline 486

Species: Rat - male - Liver cells

Result: negative

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

May damage fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

- Blood

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

2,4,6,-Trichlorophenol

Acute toxicity

LD50 Oral - Rat - 820.0 mg/kg

Remarks: (RTECS)

Symptoms: Possible damages:, mucosal irritations

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Skin irritation - 24 h

Remarks: (RTECS)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute inhalation toxicity - Possible damages:, mucosal irritations

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Hexachlorobuta-1,3-diene**Acute toxicity**

LD50 Oral - Rat - 82.0 mg/kg

LC50 Inhalation - Mouse - 370.0 mg/m³ - dust/mist

LD50 Dermal - Rabbit - 100.0 mg/kg

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Suspected of causing cancer.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3,5-Dinitro-2-hydroxytoluene**Acute toxicity**

LD50 Oral - Rat - 7.0 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Inhalation - 0.051 mg/l - dust/mist

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Dermal - 5 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

Remarks: Causes skin irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes. - 24 h

(Draize Test)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

May cause allergic skin reaction. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Indeno[1,2,3-cd]pyrene

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

bis(2-Chloroisopropyl)ether**Acute toxicity**

LD50 Oral - Rat - 240 mg/kg

LD50 Oral - Mouse - 296 mg/kg

Inhalation: No data available

LD50 Dermal - Rat - > 2,000 mg/kg

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

In vitro tests showed mutagenic effects

Test Type: Hamster

Test system: ovary

Remarks: Cytogenetic analysis

Test Type: Hamster

Test system: ovary

Remarks: Sister chromatid exchange

Carcinogenicity

No data available

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

Eye contact - May cause damage to organs.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Bis-(2-chloroethoxy)methane

Acute toxicity

LD50 Oral - Rat - 65.0 mg/kg

LC50 Inhalation - Rat - male and female - 4 h - 0.05 - 0.5 mg/l

LD50 Dermal - Rat - 1,071 - 1,174 mg/kg

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

(Draize Test)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

in vivo assay - Mouse

Did not cause sensitisation on laboratory animals.

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: in vitro assay

Test system: *S. typhimurium*

Result: negative

Method: Mutagenicity (micronucleus test)

Species: Rat - male

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Pyrene

Acute toxicity

LD50 Oral - Rat - 2,700 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Conjunctive irritation.

Behavioral: Excitement.

Behavioral: Muscle contraction or spasticity.

(RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: slight irritation

Remarks: (External MSDS)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (External MSDS)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

Benzo[b]fluoranthene

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

chrysene**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

In vitro tests showed mutagenic effects

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Remarks: (Lit.)

Carcinogenicity

Possible human carcinogen

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Benzo[k]fluoranthene**Acute toxicity**

Oral: No data available

Inhalation: Irritating to respiratory system.

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

benzo[a]pyrene**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Mouse

Result: Mild skin irritation

Remarks: (RTECS)

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

May cause allergic skin reaction. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity

May cause genetic defects.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Remarks: (Lit.)

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: positive

Remarks: (National Toxicology Program)

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Result: positive

Remarks: (National Toxicology Program)

Species: Mouse - male - Bone marrow
Result: positive
Remarks: (National Toxicology Program)

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

May damage the unborn child.

May damage fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Benzo[jk]fluorene

Acute toxicity

LD50 Oral - Rat - 2,000 mg/kg

Remarks: (RTECS)

Inhalation: No data available

LD50 Dermal - Rabbit - 3,180 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Dibenz[a,h]anthracene

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

anthracene

Acute toxicity

LD50 Oral - Mouse - 4,900 mg/kg

Remarks: (RTECS)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 1,320 mg/kg

Remarks: (ECHA)

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

Remarks: (ECHA)

Remarks: Possible damages:

Dermatitis

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 - 72 h

Remarks: (ECHA)

Respiratory or skin sensitization

Intracutaneous test - Guinea pig

Result: negative

Remarks: (ECHA)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (ECHA)

Test Type: Chromosome aberration test in vitro

Test system: rat hepatocytes

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - Bone marrow

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Naphthalene**Acute toxicity**

Oral: No data available

LC50 Inhalation - Rat - male and female - 4 h - > 0.4 mg/l - vapour
(OECD Test Guideline 403)

LD50 Dermal - Rabbit - 20,000 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h

Remarks: (ECHA)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: positive

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 486

Species: Rat - male - Liver cells

Result: negative

Method: US-EPA

Species: Mouse - male and female - Bone marrow

Result: negative

Remarks: (ECHA)

Carcinogenicity

Suspected of causing cancer.

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

Benzo[ghi]perylene

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

acenaphthene**Acute toxicity**

LD50 Oral - Rat - > 16,000 mg/kg

Remarks: (IUCLID)

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (IUCLID)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

phenanthrene**Acute toxicity**

LD50 Oral - Mouse - 700 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli

Result: negative

Remarks: (Lit.)

(National Toxicology Program)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Benz[a]anthracene**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Fluorene**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Result: positive

Remarks: (Lit.)

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (Lit.)

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Azobenzene**Acute toxicity**

LD50 Oral - Rat - 1,000 mg/kg

LC50 Inhalation - 4 h - 1.5 mg/l - dust/mist

Remarks: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Laboratory experiments have shown mutagenic effects.

In vitro tests showed mutagenic effects

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

p-cresol**Acute toxicity**

LD50 Oral - Rat - male - 207.0 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes.

Behavioral:Convulsions or effect on seizure threshold.

Gastrointestinal:Ulceration or bleeding from stomach.

(ECHA)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

LC50 Inhalation - Rat - 1 h - > 710 mg/m³

Remarks: (RTECS)

LD50 Dermal - Rabbit - 301.0 mg/kg

Remarks: Behavioral:Tremor.

Gastrointestinal:Changes in structure or function of salivary glands.

Kidney, Ureter, Bladder:Other changes.

(ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns.

Remarks: (ECHA)

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

Draize Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: positive

Method: OECD Test Guideline 478

Species: Mouse - male

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

Benzyl butyl phthalate

Acute toxicity

LD50 Oral - Rat - male and female - 2,330 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
LD50 Dermal - Rabbit - > 10,000 mg/kg
Remarks: (RTECS)

Skin corrosion/irritation

Skin - In vitro study
Result: No skin irritation
Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit
Result: No eye irritation - 24 h
Remarks: (ECHA)

Respiratory or skin sensitization

Sensitisation test: - Guinea pig
Result: negative
Remarks: (ECHA)

Germ cell mutagenicity

Test Type: Ames test
Test system: *S. typhimurium*
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: negative
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative
Method: US-EPA
Species: Mouse - male - Bone marrow
Result: Positive results were obtained in some in vivo tests.
Method: US-EPA
Species: Mouse - male - Bone marrow
Result: positive

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child.
Suspected of damaging fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure**Aspiration hazard**

No data available

o-cresol**Acute toxicity**

LD50 Oral - Rat - 121.0 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Lungs, Thorax, or Respiration:Dyspnea.

Gastrointestinal:Ulceration or bleeding from stomach.

(RTECS)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Inhalation: Corrosive to respiratory system.

LD50 Dermal - Rat - 620.0 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Remarks: Causes skin burns.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Result: positive

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

Pentachlorophenol

Acute toxicity

LD50 Oral - Rat - 27 mg/kg

Remarks: Vascular:BP elevation not characterized in autonomic section.

Endocrine:Hyperglycemia.

Nutritional and Gross Metabolic:Changes in:Body temperature increase.

LC50 Inhalation - 4 h - 0.051 mg/l - dust/mist

LC50 Inhalation - Rat - 355 mg/m³ - dust/mist

Remarks: Behavioral:Excitement.

Behavioral:Muscle contraction or spasticity.

Lungs, Thorax, or Respiration:Dyspnea.

LD50 Dermal - Rat - 96.0 mg/kg

Remarks: Behavioral:Excitement.

Behavioral:Muscle contraction or spasticity.

Lungs, Thorax, or Respiration:Dyspnea.

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Open irritation test - 24.00 h

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation - 24.00 h

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

The evidence for carcinogenicity of pentachlorophenol (PCP) is based on assays that utilized less than pure PCP. Contaminants of PCP include: tri- or tetra- chlorophenol, hexachlorobenzene, polychlorinated dibenzo-p-dioxins, or polychlorinated dibenzofurans. Indications are that positive evidence for carcinogenicity is from the contaminant(s) and not the PCP. This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

No data available

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

carbazole**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h
(OECD Test Guideline 404)

Skin - Rabbit

Result: No skin irritation
(Draize Test)

Remarks: (IUCLID)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitization

Intracutaneous test - Guinea pig

Result: negative

Remarks: (ECHA)

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (National Toxicology Program)

Test Type: unscheduled DNA synthesis assay

Test system: Liver

Result: negative

Method: OECD Test Guideline 478

Species: Mouse - male - Intrauterine

Result: positive

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2,4,5-Trichlorophenol**Acute toxicity**

LD50 Oral - Rat - 820.0 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Phenol**Acute toxicity**

Acute toxicity estimate Oral - 100.1 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Inhalation - 4 h - 0.51 mg/l - dust/mist

(Expert judgement)

Symptoms: Irritation, Lung oedema

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

LD50 Dermal - Rat - female - 660 mg/kg
(OECD Test Guideline 402)
No data available

Skin corrosion/irritation

Skin - In vitro study
Result: Causes burns.
(OECD Test Guideline 431)

Serious eye damage/eye irritation

Eyes - Rabbit
Result: Corrosive
(OECD Test Guideline 405)
Remarks: Causes serious eye damage.
Risk of blindness!

Respiratory or skin sensitization

Sensitisation test: - Guinea pig
Result: negative
Remarks: (IUCLID)

Germ cell mutagenicity

Suspected of causing genetic defects.
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Result: positive
Test Type: Mutagenicity (mammal cell test): micronucleus.
Test system: Chinese hamster ovary cells
Result: positive

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute inhalation toxicity - Irritation, Lung oedema

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.
- Nervous system, Kidney, Liver, Skin
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

2,4-xyleneol; 2,4-dimethylphenol

Acute toxicity

Acute toxicity estimate Oral - 100 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: mucosal irritations, Cough, Shortness of breath

Inhalation: Corrosive to respiratory system.

Acute toxicity estimate Dermal - 300 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

Remarks: Causes skin burns.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: positive

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: Positive results were obtained in some in vitro tests.

Remarks: (ECHA)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

o-nitroaniline

Acute toxicity

Symptoms: Nausea, Vomiting

Oral: No data available

Acute toxicity estimate Oral - 100.1 mg/kg
(Expert judgement)
Acute toxicity estimate Inhalation - 0.6 mg/l - dust/mist
(Expert judgement)
Symptoms: Cough, Shortness of breath, Irritation symptoms in the respiratory tract.
Inhalation: No data available
Acute toxicity estimate Dermal - 300.0 mg/kg
(Expert judgement)
Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (National Toxicology Program)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - Nausea, Vomiting

Acute inhalation toxicity - Cough, Shortness of breath, Irritation symptoms in the respiratory tract.

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

- Blood

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

bis(2-chloroethyl) ether

Acute toxicity

Acute toxicity estimate Oral - 5.1 mg/kg

(Expert judgement)

Oral: No data available

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Stomach/intestinal disorders, Diarrhoea

Acute toxicity estimate Inhalation - 4 h - 0.6 mg/l - vapour

(Expert judgement)

Inhalation: No data available

Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Symptoms may be delayed.

Acute toxicity estimate Dermal - 10 mg/kg

(Expert judgement)

Dermal: No data available

LD50 Dermal - Rabbit - 90 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Chicken eye

Result: No eye irritation - 10 s

(OECD Test Guideline 438)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Micronucleus test

Test system: mouse lymphoma cells

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: positive

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Stomach/intestinal disorders, Diarrhoea

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath,

Inhalation may lead to the formation of oedemas in the respiratory tract.,

Symptoms may be delayed.

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

dibutyl phthalate

Acute toxicity

LD50 Oral - Rat - male and female - 6,279 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - $\geq$ 15.68 mg/l - aerosol

Remarks: (ECHA)

LD50 Dermal - Rabbit - $>$ 21,000 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 72 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: *S. typhimurium*

Result: negative

Remarks: (ECHA)

Species: Mouse

Result: negative

Remarks: (ECHA)

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child.

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Dichloromethane:

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): 193.00 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	: LC50 (Daphnia magna (Water flea)): 27 mg/l End point: mortality Exposure time: 48 h Test Type: static test Method: US-EPA
Toxicity to fish (Chronic toxicity)	: LC50 (Pimephales promelas (fathead minnow)): 471 mg/l End point: mortality Exposure time: 8 d Test Type: flow-through test Analytical monitoring: yes Remarks: (ECHA)
Toxicity to microorganisms	: EC50 (activated sludge): 2,590 mg/l Exposure time: 40 min Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 209

benzene:

Toxicity to fish	: LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 1,000 mg/l End point: Immobilization Exposure time: 48 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes

NOEC (*Daphnia magna* (Water flea)): > 1,000 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): > 1,000 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

NOEC (*Pseudokirchneriella subcapitata* (green algae)): >= 1,000 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC (*Pimephales promelas* (fathead minnow)): 0.8 mg/l
Exposure time: 32 d
Test Type: flow-through test
Analytical monitoring: yes
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : LC50 (*Daphnia magna* (Water flea)): > 100 mg/l
End point: mortality
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Hexachloroethane:

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 0.84 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia magna* (Water flea)): 1.36 mg/l
Exposure time: 48 h
Remarks: (ECOTOX Database)

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata*): 0.88 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Hexachlorobenzene:

Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill)): 7.6 mg/l
Exposure time: 96.0 h

NOEC (*Pimephales promelas* (fathead minnow)): > 0.0048 mg/l
Exposure time: 96.0 h

LC50 : 0.1 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 0.005 mg/l
Exposure time: 48 h
Test Type: Immobilization

M-Factor (Acute aquatic toxicity) : 100

1,2,4-trichlorobenzene:

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 1.4 mg/l
End point: Immobilization
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): 1.4 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Bis(2-ethylhexyl) phthalate:

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): > 0.67 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes Remarks: (above the solubility limit in the test medium)
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 0.16 mg/l End point: Immobilization Exposure time: 48 h Remarks: (ECOTOX Database)
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata): > 0.003 mg/l Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	: NOEC (Pimephales promelas (fathead minnow)): 23.8 mg/l Exposure time: 32 d Test Type: flow-through test Remarks: (above the solubility limit in the test medium) (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 0.158 mg/l End point: mortality Exposure time: 21 d Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 211 Remarks: (above the solubility limit in the test medium)
Toxicity to microorganisms	: NOEC (activated sludge): 1,000 mg/l End point: Growth rate Exposure time: 3 h Test Type: static test

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

2,4-dichlorophenol:

Toxicity to fish : LC50 (*Carassius auratus* (goldfish)): 1.24 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 2.8 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata*): 3.44 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

1-Chloro-4-phenoxybenzene:

Toxicity to fish : LC50 (*Salvelinus fontinalis* (Brook trout)): 0.73 mg/l
End point: mortality
Exposure time: 96.0 h
Remarks: (ECOTOX Database)

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

2,4-dinitrotoluene:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 24.3 mg/l
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Remarks: (ECOTOX Database)

Toxicity to daphnia and : EC50 (*Daphnia magna* (Water flea)): 26.2 mg/l

other aquatic invertebrates	Exposure time: 48 h Test Type: static test Remarks: (ECOTOX Database)
Toxicity to algae/aquatic plants	: EC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): 1.6 mg/l Exposure time: 96 h Test Type: static test Remarks: (ECOTOX Database)
Toxicity to fish (Chronic toxicity)	: NOEC (<i>Oryzias latipes</i> (Orange-red killifish)): 1 mg/l End point: Growth inhibition Exposure time: 28 d Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (<i>Daphnia magna</i> (Water flea)): 3.2 mg/l Exposure time: 21 d Test Type: static test Remarks: (ECOTOX Database)

Ecotoxicology Assessment

Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.

1,4-dichlorobenzene:

Toxicity to fish	: LC50 (<i>Salmo gairdneri</i>): 1.12 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	: EC50 (<i>Daphnia magna</i> (Water flea)): 0.7 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Remarks: (ECHA)
Toxicity to algae/aquatic plants	: ErC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): 1.6 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: US-EPA
M-Factor (Acute aquatic toxicity)	: 1

Toxicity to fish (Chronic toxicity) : NOEC (Jordanelia floridae): 0.2 - 0.23 mg/l
End point: mortality
Exposure time: 14 d
Test Type: flow-through test
Analytical monitoring: yes
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.22 mg/l
End point: reproduction rate
Exposure time: 28 d
Test Type: semi-static test
Analytical monitoring: yes
Remarks: (ECHA)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

N-Nitrosodimethylamine:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)):
832.00 - 1,062.00 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)):
4.00 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

N-Nitroso dipropylamine:

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

1,2-Dichlorobenzene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.58 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Remarks: (ECHA)

Toxicity to daphnia and other aquatic : EC50 (Ceriodaphnia dubia (water flea)): 0.66 mg/l
End point: Immobilization

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invertebrates	Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: US-EPA
Toxicity to algae/aquatic plants	: ErC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): 2.2 mg/l Exposure time: 96 h Analytical monitoring: yes Method: US-EPA
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: EC50 (<i>Daphnia magna</i> (Water flea)): 0.55 mg/l End point: Respiratory function Exposure time: 14 d Test Type: semi-static test Analytical monitoring: yes Remarks: (ECHA)

Ecotoxicology Assessment

Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.

chlorocresol:

Toxicity to fish	: LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 0.917 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: US-EPA GLP: yes
Toxicity to daphnia and other aquatic invertebrates	: EC50 (<i>Daphnia magna</i> (Water flea)): 2.29 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: US-EPA GLP: yes
Toxicity to algae/aquatic plants	: ErC50 (<i>Desmodesmus subspicatus</i> (green algae)): 30.62 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes NOEC (<i>Desmodesmus subspicatus</i> (green algae)): 9.8

mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.15 mg/l
End point: Growth inhibition
Exposure time: 28 d
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 215
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.32 mg/l
End point: reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes

Toxicity to microorganisms : EC50 (activated sludge): 41.4 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes

2-nitrophenol:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

1,2,3,4,5,5-Hexachlorocyclopentadiene:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill)): 0.13 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.04 mg/l
End point: mortality
Exposure time: 48 h
Test Type: static test

M-Factor (Acute aquatic toxicity) : 100

M-Factor (Chronic aquatic toxicity) : 10

4-chloroaniline:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 0.05 mg/l
End point: mortality
Exposure time: 48 h
Test Type: static test
Remarks: (ECHA)

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 2.20 - 6.30 mg/l
Exposure time: 72 h
Remarks: (ECOTOX Database)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

2,4-Dinitrophenol:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

isophorone:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 228 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 120 mg/l
End point: mortality
Exposure time: 48 h
Test Type: static test
Method: US-EPA

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 475 mg/l
Exposure time: 72 h
Test Type: static test
Remarks: (ECHA)

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 4.2 - 15.6 mg/l
Exposure time: 32 d
Test Type: flow-through test
Analytical monitoring: yes
Method: US-EPA

Toxicity to microorganisms : EC10 (Pseudomonas putida): 435 mg/l
Exposure time: 18 h
Remarks: (External MSDS)

4-Nitroaniline:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 85.7 - 142 mg/l
Exposure time: 96.0 h

LC50 (Leuciscus idus (Golden orfe)): 35 mg/l
Exposure time: 48.0 h

LC50 (Danio rerio (zebra fish)): 87.6 mg/l
Exposure time: 96.0 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 17.00 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Algae): 68.00 mg/l
Exposure time: 24 h

2,6-Dinitrotoluene:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 17.2 - 50 mg/l
Exposure time: 96.0 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 21.70 mg/l
Exposure time: 48 h
Remarks: (ECOTOX Database)

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 11.00 - 20.00 mg/l
Exposure time: 72 h
Remarks: (ECOTOX Database)

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

4-Bromophenyl phenyl ether:

Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill)): 50.9 mg/l
Exposure time: 24.0 h

LC50 (*Lepomis macrochirus* (Bluegill)): 9.6 mg/l
Exposure time: 48.0 h

LC50 : 0.1 mg/l
Exposure time: 96 h

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 10

m-nitroaniline:

Toxicity to fish : LC50 (*Poecilia reticulata* (guppy)): 81.2 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

Toxicity to microorganisms : EC50 (Bacteria): 622.7 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Nitrobenzene:

Toxicity to fish : LC50 (*Danio rerio* (zebra fish)): 92 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 35 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Remarks: (ECHA)

Toxicity to algae/aquatic plants : ErC50 (*Chlorella pyrenoidosa*): 18 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 0.002 mg/l
End point: mortality

Exposure time: 23 d
Test Type: flow-through test
Analytical monitoring: yes
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 2.6 mg/l
End point: reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: yes

Toxicity to microorganisms : EC20 (activated sludge): 1,000 mg/l
Exposure time: 30 min
Test Type: static test
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

2,4,6,-Trichlorophenol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.32 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.2 mg/l
End point: Immobilization
Exposure time: 48 h
Remarks: (ECOTOX Database)

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Hexachlorobuta-1,3-diene:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.09 mg/l
End point: mortality
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 0.5 mg/l
Exposure time: 24 h

Toxicity to fish (Chronic toxicity) : LOEC (Pimephales promelas (fathead minnow)): 0.013 mg/l
Exposure time: 28 d

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

3,5-Dinitro-2-hydroxytoluene:

Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill)): 0.23 mg/l
End point: mortality
Exposure time: 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia pulex* (Water flea)): 0.14 mg/l
Exposure time: 48 h
Remarks: (ECOTOX Database)

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Indeno[1,2,3-cd]pyrene:

Toxicity to fish : Remarks: No data available

Bis-(2-chloroethoxy)methane:

Toxicity to fish : LC50 (*Danio rerio* (zebra fish)): 50.2 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 190 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae/aquatic plants : EC50 (*Desmodesmus subspicatus* (green algae)): 150 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC (*Danio rerio* (zebra fish)): 2.4 mg/l
Exposure time: 28 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia* (water flea)): 0.99 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Pyrene:

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Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 2 mg/l Exposure time: 96 h Remarks: (External MSDS)
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0.002 - 0.003 mg/l Exposure time: 48 h Remarks: (External MSDS)
Toxicity to algae/aquatic plants	: NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.0012 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Remarks: (ECHA)
M-Factor (Acute aquatic toxicity)	: 100
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: EC10 (Ceriodaphnia dubia (water flea)): 0.002 mg/l End point: mortality Exposure time: 7 d Test Type: semi-static test Analytical monitoring: yes Remarks: (ECHA)
M-Factor (Chronic aquatic toxicity)	: 10

Benzo[b]fluoranthene:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

chrysene:

Toxicity to fish : LC50 : 0.1 mg/l
Exposure time: 96 h

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 10

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Benzo[k]fluoranthene:

Toxicity to fish : Remarks: No data available

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 10

benzo[a]pyrene:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.25 mg/l
End point: mortality
Exposure time: 48 h
Remarks: (above the solubility limit in the test medium)
(ECOTOX Database)

Toxicity to algae/aquatic plants : ErC50 (Scenedesmus acutus): 0.005 mg/l
Exposure time: 72 h
Test Type: static test
Remarks: (ECOTOX Database)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Benzo[jk]fluorene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0077 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.117 mg/l
End point: mortality
Exposure time: 48 h
Remarks: (ECOTOX Database)

M-Factor (Acute aquatic toxicity) : 100

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.0014 mg/l
End point: mortality
Exposure time: 32 d

Test Type: flow-through test
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.0014 mg/l
Exposure time: 21 d
Test Type: Reproduction Test
Remarks: (ECOTOX Database)

M-Factor (Chronic aquatic toxicity) : 10

Dibenz[a,h]anthracene:

M-Factor (Acute aquatic toxicity) : 100

M-Factor (Chronic aquatic toxicity) : 100

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

anthracene:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill)): 0.002 mg/l
End point: Immobilization
Exposure time: 96.0 h
Test Type: flow-through test
Analytical monitoring: yes
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 0.036 mg/l
End point: mortality
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

M-Factor (Acute aquatic toxicity) : 100

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Ceriodaphnia dubia (water flea)): > 0.0034 mg/l
End point: mortality
Exposure time: 7 d
Test Type: semi-static test
Analytical monitoring: yes
Remarks: (ECHA)

M-Factor (Chronic aquatic toxicity) : 100

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Naphthalene:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 1.6 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 2.16 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): 2.96 mg/l Exposure time: 4 h Test Type: static test Analytical monitoring: yes Method: US-EPA Remarks: (ECHA)
Toxicity to fish (Chronic toxicity)	: LC50 (Oncorhynchus kisutch (coho salmon)): 2.1 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Remarks: (ECHA) NOEC (Oncorhynchus kisutch (coho salmon)): 0.37 mg/l End point: Growth inhibition Exposure time: 40 Days Test Type: flow-through test Analytical monitoring: yes Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia pulex (Water flea)): 0.59 mg/l End point: mortality Exposure time: 125 d Test Type: static test Analytical monitoring: yes Remarks: (ECHA)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Benzo[ghi]perylene:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0002 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae/aquatic plants : EC10 (Pseudokirchneriella subcapitata (green algae)): > 0.0016 mg/l
Exposure time: 72 h
Test Type: Growth rate

M-Factor (Acute aquatic toxicity) : 1,000

M-Factor (Chronic aquatic toxicity) : 1,000

acenaphthene:

Toxicity to fish : LC50 (Salmo trutta): 0.58 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.45 mg/l
Exposure time: 48 h
Remarks: (IUCLID)

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.52 - 0.53 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

phenanthrene:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.234 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic : EC50 (Daphnia magna (Water flea)): 0.212 mg/l
End point: mortality

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M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Azobenzene:

Toxicity to fish : LC50 (*Oryzias latipes*): 0.5 mg/l
Exposure time: 48.0 h

LC50 : 0.1 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 5.00 mg/l
Exposure time: 24 h

EC50 (*Daphnia* (water flea)): 0.13 mg/l
Exposure time: 24 h
Test Type: Immobilization

Toxicity to algae/aquatic plants : EC50 (*Desmodesmus subspicatus* (green algae)): 1.70 - 2.50 mg/l
Exposure time: 48 h

M-Factor (Acute aquatic toxicity) : 10

p-cresol:

Toxicity to fish : LC50 (*Salmo trutta* (brown trout)): 4.4 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 7.7 mg/l
Exposure time: 48 h
Test Type: static test
Method: DIN 38412

Toxicity to algae/aquatic plants : ErC50 (*Selenastrum capricornutum* (green algae)): 48.4 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201

NOEC (*Selenastrum capricornutum* (green algae)): 17.1 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC (*Pimephales promelas* (fathead minnow)): 1.35 mg/l
Exposure time: 32 d
Test Type: flow-through test
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): 1 mg/l
End point: mortality
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: yes
Remarks: (ECHA)

Toxicity to microorganisms : EC50 (*Tetrahymena pyriformis*): 157 mg/l
End point: Growth rate
Exposure time: 48 h
Test Type: static test
Remarks: (ECHA)

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Benzyl butyl phthalate:

Toxicity to fish : LC50 (Fish): 0.51 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Americamysis bahia* (Mysid)): > 0.74 mg/l
Exposure time: 48 h
Test Type: flow-through test
Analytical monitoring: yes
Method: US-EPA
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (*Desmodesmus subspicatus* (green algae)): 1.5 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201

GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.064 - 0.067 mg/l
Exposure time: 126 Days
Test Type: flow-through test
Analytical monitoring: yes
Method: US-EPA
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.28 mg/l
End point: reproduction rate
Exposure time: 21 d
Test Type: flow-through test
Analytical monitoring: yes
Remarks: (ECHA)

Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

o-cresol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 8.4 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 15.7 mg/l
End point: mortality
Exposure time: 48 h
Test Type: static test
Remarks: (ECHA)
The value is given in analogy to the following substances: p-cresol

NOEC (Daphnia (water flea)): 1 mg/l
End point: mortality
Exposure time: 21 d
Test Type: semi-static test
Remarks: The value is given in analogy to the following substances:

Toxicity to algae/aquatic plants : ErC50 (SELENASTRUM): 100.00 mg/l
Exposure time: 96 h
Test Type: static test
Remarks: (ECHA)

Toxicity to : EC50 (Photobacterium phosphoreum): 32 mg/l

microorganisms Exposure time: 30 min
Remarks: (IUCLID)

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Pentachlorophenol:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)):
0.16 - 0.5 mg/l
Exposure time: 96.0 h

LC50 (Carassius auratus (goldfish)): 0.16 - 0.38 mg/l
Exposure time: 96.0 h

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.075
mg/l
Exposure time: 96.0 h

NOEC (other fish): 0.01 mg/l
Exposure time: 24.0 h

LOEC (other fish): 0.1 mg/l
Exposure time: 24.0 h

Toxicity to daphnia and : EC50 (Daphnia magna (Water flea)): 0.30 - 1.30 mg/l
other aquatic Exposure time: 48 h
invertebrates

Toxicity to algae/aquatic : EC50 (Chlorella vulgaris (Fresh water algae)): 10.30
plants mg/l
Exposure time: 96 h

EC50 (Scenedesmus quadricauda (Green algae)):
0.08 mg/l
Exposure time: 96 h
Test Type: Growth inhibition

M-Factor (Acute aquatic : 10
toxicity)

Toxicity to fish (Chronic : NOEC (Pimephales promelas (fathead minnow)):
toxicity) 0.056 mg/l
Exposure time: 28 d
Test Type: Growth inhibition

LOEC (Pimephales promelas (fathead minnow)):
0.056 mg/l
Exposure time: 28 d
Test Type: Growth inhibition

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : LOEC (Daphnia magna (Water flea)): 0.56 mg/l
Exposure time: 21 d
Test Type: Growth inhibition

M-Factor (Chronic aquatic toxicity) : 1

Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

carbazole:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.93 mg/l
Exposure time: 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.3 - 4.9 mg/l
Exposure time: 48 h
Remarks: (ECOTOX Database)

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : No toxicity at the limit of solubility, May cause long lasting harmful effects to aquatic life.

2,4,5-Trichlorophenol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.274 mg/l
Exposure time: 96.0 h
Remarks: (ECOTOX Database)

NOEC (Cyprinodon variegatus (sheepshead minnow)): 1 mg/l
Exposure time: 96.0 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.9 mg/l
End point: Immobilization
Exposure time: 48 h
Remarks: (ECOTOX Database)

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : LOEC (Pimephales promelas (fathead minnow)): 0.342 mg/l
Exposure time: 32 d

M-Factor (Chronic aquatic : 1
toxicity)

Phenol:

- Toxicity to fish : LC50 (*Onchorhynchus clarki*): 8.9 mg/l
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Method: US-EPA
- Toxicity to daphnia and : EC50 (*Ceriodaphnia dubia* (water flea)): 3.1 mg/l
other aquatic
invertebrates
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: US-EPA
- Toxicity to algae/aquatic : EC50 (*Pseudokirchneriella subcapitata* (algae)): 61.1
plants
mg/l
Exposure time: 96 h
Test Type: static test
Method: US-EPA
- Toxicity to fish (Chronic : NOEC (Fish): 0.077 mg/l
toxicity)
Exposure time: 60 d
Test Type: semi-static test
Remarks: (ECHA)
- Toxicity to daphnia and : NOEC (*Daphnia magna* (Water flea)): 0.16 mg/l
other aquatic
invertebrates (Chronic
toxicity)
End point: Growth inhibition
Exposure time: 16 d
Test Type: semi-static test
Remarks: (ECHA)
- Toxicity to : IC50 (microorganisms): 21 mg/l
microorganisms
Exposure time: 24 h
Test Type: static test
Remarks: (ECHA)

2,4-xyleneol; 2,4-dimethylphenol:

- Toxicity to daphnia and : EC50 (*Daphnia magna* (Water flea)): 4.21 mg/l
other aquatic
invertebrates
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants	: ErC50 (<i>Pseudokirchneriella subcapitata</i>): 13 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
Toxicity to fish (Chronic toxicity)	: NOEC (<i>Pimephales promelas</i> (fathead minnow)): 1.92 mg/l Exposure time: 32 d Remarks: (ECOTOX Database)

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

o-nitroaniline:

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 10.1 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
Remarks: (ECHA)

bis(2-chloroethyl) ether:

Toxicity to fish : LC50 (*Oryzias latipes*): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia magna* (Water flea)): 240 mg/l
End point: mortality
Exposure time: 48 h
Test Type: static test
Method: US-EPA

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata*): > 79.44 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

Toxicity to fish (Chronic toxicity) : LC50 (*Oryzias latipes*): > 100 mg/l
End point: mortality
Exposure time: 14 d
Test Type: flow-through test

Analytical monitoring: yes
Method: OECD Test Guideline 204
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : LC50 (Daphnia magna (Water flea)): > 100 mg/l
End point: mortality
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes

dibutyl phthalate:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): ca. 0.48 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): ca. 2.99 mg/l
End point: mortality
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: US-EPA
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Persistence and degradability

Components:

Dichloromethane:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 5 mg/l
Result: Readily biodegradable.
Biodegradation: 68 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

benzene:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 17 mg/l
Result: Readily biodegradable.
Biodegradation: 96 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Hexachloroethane:

Biodegradability : Result: Not biodegradable
Method: OECD Test Guideline 301

Hexachlorobenzene:

Biodegradability : Remarks: No data available

1,2,4-trichlorobenzene:

Biodegradability : aerobic
Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 14 d
Method: OECD Test Guideline 301C

Bis(2-ethylhexyl) phthalate:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 20.3 mg/l
Result: Readily biodegradable.
Biodegradation: ca. 82 %
Exposure time: 29 d
Method: OECD Test Guideline 301B
GLP: yes

2,4-dichlorophenol:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 20 mg/l
Result: Not readily biodegradable.
Biodegradation: 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

2,4-dinitrotoluene:

Biodegradability : aerobic

Inoculum: activated sludge
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 14 d
Method: OECD Test Guideline 301C
Remarks: (Lit.)

1,4-dichlorobenzene:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 8 mg/l
Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

1,2-Dichlorobenzene:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

chlorocresol:

Biodegradability : aerobic
Concentration: 4.5 mg/l
Result: Readily biodegradable.
Biodegradation: 85 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

ThOD : 1,852 mg/g

2-nitrophenol:

Biodegradability : aerobic
Concentration: 100 mg/l
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301C
GLP: yes

4-chloroaniline:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted

Concentration: 2 mg/l
Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 30 d
Method: OECD Test Guideline 301D

isophorone:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 10 mg/l
Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.A.
GLP: yes

4-Nitroaniline:

Biodegradability : Remarks: No data available

2,6-Dinitrotoluene:

Biodegradability : Result: According to the results of tests of biodegradability this product is not readily biodegradable.

4-Bromophenyl phenyl ether:

Biodegradability : Remarks: No data available

m-nitroaniline:

Biodegradability : Result: Not readily eliminated from water.
Biodegradation: < 20 %
Exposure time: 28 d
Method: OECD Test Guideline 302B

Nitrobenzene:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 100 mg/l
Result: Readily biodegradable.
Biodegradation: 50 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Hexachlorobuta-1,3-diene:

Biodegradability : Remarks: No data available

3,5-Dinitro-2-hydroxytoluene:

Biodegradability : Result: According to the results of tests of biodegradability this product is not readily biodegradable.

Indeno[1,2,3-cd]pyrene:

Biodegradability : Remarks: No data available

Bis-(2-chloroethoxy)methane:

Biodegradability : Remarks: No data available

Pyrene:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 13 %
Exposure time: 28 d
Remarks: (HSDB)

chrysene:

Biodegradability : Remarks: No data available

anthracene:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 3.6 %
Exposure time: 28 d
Method: OECD Test Guideline 302C

Naphthalene:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 2 %
Exposure time: 28 d
Method: OECD Test Guideline 302C

phenanthrene:

Biodegradability : Remarks: No data available

Fluorene:

Biodegradability : aerobic
Inoculum: activated sludge
Biochemical oxygen demand
Result: Not readily biodegradable.

Biodegradation: 1 %
Exposure time: 28 d
Remarks: (Lit.)

Photodegradation :

Azobenzene:

Biodegradability : Remarks: No data available

p-cresol:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Inherently biodegradable.
Biodegradation: 100 %
Exposure time: 10 d
Method: OECD Test Guideline 302B

aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 80.0 - 95.0 %
Exposure time: 40 d
Method: OECD Test Guideline 301C

Benzyl butyl phthalate:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 14 d
Method: OECD Test Guideline 301C

o-cresol:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Inherently biodegradable.
Biodegradation: 100 %
Exposure time: 7 d
Method: OECD Test Guideline 302B

ThOD : 2,520 mg/g
Remarks: (Lit.)

BOD/ThOD : 65 %
Remarks: (Lit.)

Pentachlorophenol:

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Biodegradability : Result: Not readily biodegradable.

carbazole:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Not biodegradable
Biodegradation: 2.8 %
Exposure time: 14 d
Method: OECD Test Guideline 301C

Phenol:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Readily biodegradable.
Biodegradation: 62 %
Exposure time: 100 h
Method: OECD Test Guideline 301C

2,4-xyleneol; 2,4-dimethylphenol:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301C
GLP: yes

o-nitroaniline:

Biodegradability : aerobic
Concentration: 100 mg/l
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 14 d
Method: OECD Test Guideline 301C

bis(2-chloroethyl) ether:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 5.4 mg/l
Result: Not inherently biodegradable.
Biodegradation: 15.7 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

dibutyl phthalate:

Biodegradability : Inoculum: activated sludge, non-adapted
Concentration: 21.7 mg/l
Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 28 d
Method: Regulation (EC) No. 440/2008, Annex, C.4-C
GLP: yes

Bioaccumulative potential**Components:****Dichloromethane:**

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 2 - 5.4
Exposure time: 6 Weeks
Concentration: 250 µg/l
Method: OECD Test Guideline 305
GLP: yes

Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 6 - 40
Exposure time: 6 Weeks
Concentration: 25 µg/l
Method: OECD Test Guideline 305
GLP: yes

Partition coefficient: n-octanol/water : log Pow: 1.25 (68 °F / 20 °C)
pH: 7
Method: (experimental)
Remarks: Bioaccumulation is not expected.

benzene:

Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 10
Exposure time: 3 d
Concentration: 0.05 mg/l

Partition coefficient: n-octanol/water : log Pow: 2.13 (77 °F / 25 °C)
pH: 7
Remarks: Bioaccumulation is not expected.
(ECHA)

Hexachloroethane:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill)
Bioconcentration factor (BCF): 139
Exposure time: 28 d
Concentration: 0.00617 mg/l

Hexachlorobenzene:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): 22,000
Exposure time: 32 d
Concentration: 0.0003 mg/l

1,2,4-trichlorobenzene:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): 2,800
Exposure time: 32 d
Concentration: 0.0016 mg/l

Partition coefficient: n-octanol/water : log Pow: 4.05 (77 °F / 25 °C)
Method: OECD Test Guideline 123
Remarks: Potential bioaccumulation

Bis(2-ethylhexyl) phthalate:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 113
Exposure time: 100 d
Concentration: 0.014 mg/l
Remarks: Does not bioaccumulate.

2,4-dinitrotoluene:

Partition coefficient: n-octanol/water : log Pow: 1.98
Method: (experimental)
Remarks: Bioaccumulation is not expected.
(IUCLID)

1,4-dichlorobenzene:

Bioaccumulation : Species: Jordanella floridae
Bioconcentration factor (BCF): 296
Exposure time: 5 d
Temperature: 77 °F / 25 °C
Concentration: 2.68 µg/l

Partition coefficient: n-octanol/water : log Pow: 3.37 (77 °F / 25 °C)
pH: 7
Method: US-EPA
Remarks: Bioaccumulation is not expected.

N-Nitroso dipropylamine:

Partition coefficient: n-octanol/water : log Pow: 1.36
Remarks: Bioaccumulation is not expected.
(HSDB)

1,2-Dichlorobenzene:

Bioaccumulation : Species: Cyprinus carpio (Carp)
 Bioconcentration factor (BCF): 90 - 260
 Exposure time: 56 d
 Temperature: 77 °F / 25 °C
 Concentration: 0.01 mg/l
 Method: OECD Test Guideline 305C

Partition coefficient: n-octanol/water : log Pow: ca. 3.43 (77 °F / 25 °C)
 Method: OECD Test Guideline 123
 Remarks: Bioaccumulation is not expected.

chlorocresol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
 Bioconcentration factor (BCF): 5.5 - 11
 Exposure time: 6 Weeks
 Temperature: 77 °F / 25 °C
 Concentration: 0.002 mg/l

Partition coefficient: n-octanol/water : log Pow: 0.47 (86 °F / 30 °C)
 pH: 5.03
 Remarks: Bioaccumulation is not expected.

2-nitrophenol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
 Bioconcentration factor (BCF): < 5
 Exposure time: 42 d
 Concentration: 1 mg/l
 Method: OECD Test Guideline 305C

Species: Cyprinus carpio (Carp)
 Bioconcentration factor (BCF): < 22
 Exposure time: 42 d
 Concentration: 0.1 mg/l
 Method: OECD Test Guideline 305C

Partition coefficient: n-octanol/water : log Pow: 1.77
 Remarks: Bioaccumulation is not expected.

1,2,3,4,5,5-Hexachlorocyclopentadiene:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)
 Bioconcentration factor (BCF): < 11
 Exposure time: 30 d
 Temperature: 77 °F / 25 °C
 Concentration: 0.007 mg/l
 Method: OECD Test Guideline 305

4-chloroaniline:

Partition coefficient: n-octanol/water : log Pow: 1.87
 Remarks: Bioaccumulation is not expected.

(ECHA)

2,4-Dinitrophenol:

Bioaccumulation : Species: Cyprinodon variegatus (sheepshead minnow)
Bioconcentration factor (BCF): 10
Exposure time: 96 h
Concentration: 7.3 mg/l

Partition coefficient: n-octanol/water : log Pow: 1.54
Remarks: Bioaccumulation is not expected.

isophorone:

Bioaccumulation : Species: Lepomis macrochirus
Bioconcentration factor (BCF): 1.1 - 1.8
Exposure time: 14 Days
Temperature: 61 °F / 16 °C

Partition coefficient: n-octanol/water : log Pow: 1.67 (68 °F / 20 °C)
Remarks: Bioaccumulation is not expected.

4-Nitroaniline:

Bioaccumulation : Species: Danio rerio (zebra fish)
Bioconcentration factor (BCF): 4.4
Exposure time: 96 h
Concentration: 0.028 mg/l

Partition coefficient: n-octanol/water : log Pow: 1.39

log Pow: 5

2,6-Dinitrotoluene:

Partition coefficient: n-octanol/water : log Pow: 2.10
Remarks: Bioaccumulation is not expected.
(HSDB)

4-Bromophenyl phenyl ether:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-octanol/water : log Pow: 4.34

m-nitroaniline:

Bioaccumulation : Species: Danio rerio (zebra fish)
Bioconcentration factor (BCF): 8.3
Exposure time: 96 h
Concentration: 28 mg/l

Partition coefficient: n-octanol/water : log Pow: 1.37
Remarks: Bioaccumulation is not expected.

Nitrobenzene:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 3.1 - 4.8
Exposure time: 42 d
Temperature: 77 °F / 25 °C
Concentration: ca. 0.125 mg/l
Method: OECD Test Guideline 305C

Partition coefficient: n-octanol/water : log Pow: 1.86 (76.1 °F / 24.5 °C)
pH: 7.9
Method: Regulation (EC) No. 440/2008, Annex, A.8
GLP: yes
Remarks: Bioaccumulation is not expected.

2,4,6,-Trichlorophenol:

Bioaccumulation : Species: Poecilia reticulata (guppy)
Bioconcentration factor (BCF): 12,180
Exposure time: 36 d
Concentration: 0.0005 mg/l

Hexachlorobuta-1,3-diene:

Bioaccumulation : Remarks: No data available

3,5-Dinitro-2-hydroxytoluene:

Partition coefficient: n-octanol/water : log Pow: 2.12
Method: (experimental)
Remarks: (Lit.)
Bioaccumulation is not expected.

Indeno[1,2,3-cd]pyrene:

Bioaccumulation : Remarks: No data available

Bis-(2-chloroethoxy)methane:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-octanol/water : log Pow: 1.6 (77 °F / 25 °C)
pH: 7
Method: OECD Test Guideline 117

Pyrene:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 4,810
Exposure time: 2 d

Concentration: 0.056 mg/l
Remarks: (External MSDS)

Partition coefficient: n-octanol/water : log Pow: ca. 5.43 (86 °F / 30 °C)
pH: 5 - 8
Method: OECD Test Guideline 117
Remarks: Potential bioaccumulation

chrysene:

Partition coefficient: n-octanol/water : log Pow: 5.73
Remarks: Potential bioaccumulation (HSDB)

Benzo[k]fluoranthene:

Partition coefficient: n-octanol/water : log Pow: 6.188 (77 °F / 25 °C)
Remarks: Potential bioaccumulation

benzo[a]pyrene:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill)
Bioconcentration factor (BCF): 3,208
Exposure time: 48 h
Concentration: 0.0005 mg/l

anthracene:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 2,615
Exposure time: 42 d
Temperature: 77 °F / 25 °C
Concentration: 0.015 mg/l
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: ca. 4.65 (68 °F / 20 °C)
pH: 7
Method: OECD Test Guideline 117
Remarks: Potential bioaccumulation

Naphthalene:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 36.5 - 168
Exposure time: 56 d
Temperature: 77 °F / 25 °C
Method: OECD Test Guideline 305
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 3.4 (77 °F / 25 °C)
pH: 7 - 7.5
Method: OECD Test Guideline 107
Remarks: Bioaccumulation is not expected.

Benzo[ghi]perylene:

Partition coefficient: n-octanol/water : log Pow: 6.22 (77 °F / 25 °C)
Remarks: Potential bioaccumulation

acenaphthene:

Bioaccumulation : Species: *Lepomis macrochirus* (Bluegill)
Bioconcentration factor (BCF): 387
Exposure time: 28 d
Concentration: 0.00894 mg/l

Partition coefficient: n-octanol/water : log Pow: 3.39 - 4.19

phenanthrene:

Bioaccumulation : Species: *Pimephales promelas* (fathead minnow)
Bioconcentration factor (BCF): 5,100
Exposure time: 28 d
Concentration: 0.00255 mg/l

Partition coefficient: n-octanol/water : log Pow: 4.46
Method: (experimental)
Remarks: (Lit.)
A remarkable bioaccumulation potential is expected (log Po/w >3).

Fluorene:

Bioaccumulation : Species: *Oncorhynchus mykiss* (rainbow trout)
Bioconcentration factor (BCF): 512
Exposure time: 24 h
Concentration: 0.0191 mg/l

Azobenzene:

Bioaccumulation : Remarks: No data available

p-cresol:

Bioaccumulation : Species: *Danio rerio* (zebra fish)
Bioconcentration factor (BCF): 10.7
Temperature: 77 °F / 25 °C
Method: OECD Test Guideline 305
Remarks: Does not bioaccumulate.
The value is given in analogy to the following substances:
The value is given in analogy to the following substances: o-cresol

Partition coefficient: n-octanol/water : log Pow: 1.94

octanol/water

Remarks: Bioaccumulation is not expected.

Benzyl butyl phthalate:

Bioaccumulation : Species: *Lepomis macrochirus*
Bioconcentration factor (BCF): 9.4
Exposure time: 3.27 Days
Temperature: 72 °F / 22 °C
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 4.91 (68 °F / 20 °C)
Method: OECD Test Guideline 107
Remarks: Potential bioaccumulation

o-cresol:

Bioaccumulation : Species: *Danio rerio* (zebra fish)
Bioconcentration factor (BCF): 10.7
Method: OECD Test Guideline 305

Pentachlorophenol:

Bioaccumulation : Species: *Oncorhynchus mykiss* (rainbow trout)
Bioconcentration factor (BCF): 482
Exposure time: 144 h
Concentration: 0.0912 mg/l

Partition coefficient: n-octanol/water : log Pow: 5.12

carbazole:

Bioaccumulation : Species: *Cyprinus carpio* (Carp)
Bioconcentration factor (BCF): 241
Exposure time: 42 d
Temperature: 77 °F / 25 °C
Concentration: 0.05 mg/l

Species: *Cyprinus carpio* (Carp)
Bioconcentration factor (BCF): 200
Exposure time: 42 d
Temperature: 77 °F / 25 °C
Concentration: 0.005 mg/l

Partition coefficient: n-octanol/water : log Pow: 3.84 (72 °F / 22 °C)
pH: 7
Method: OECD Test Guideline 107
Remarks: Bioaccumulation is not expected.

2,4,5-Trichlorophenol:

Bioaccumulation : Species: *Pimephales promelas* (fathead minnow)
Bioconcentration factor (BCF): 1,900

Exposure time: 28 d
Concentration: 0.0048 mg/l

Phenol:

Bioaccumulation : Species: Danio rerio (zebra fish)
Bioconcentration factor (BCF): 17.5
Exposure time: 5 h
Temperature: 77 °F / 25 °C
Concentration: 2 mg/l
Method: OECD Test Guideline 305
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 1.47 (86 °F / 30 °C)
pH: 3 - 8
Remarks: (ECHA)
Bioaccumulation is not expected.

2,4-xlenol; 2,4-dimethylphenol:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill)
Bioconcentration factor (BCF): 150
Exposure time: 28 d
Concentration: 0.0102 mg/l

o-nitroaniline:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 2.1 - 4.9
Exposure time: 6 Weeks
Temperature: 77 °F / 25 °C
Concentration: 0.5 mg/l
Method: OECD Test Guideline 305C

Partition coefficient: n-octanol/water : log Pow: 1.85
Remarks: Bioaccumulation is not expected.

bis(2-chloroethyl) ether:

Bioaccumulation : Species: Lepomis macrochirus
Bioconcentration factor (BCF): 11
Exposure time: 28 d
Temperature: 61 °F / 16 °C
Concentration: 0.0099 mg/l

Partition coefficient: n-octanol/water : log Pow: 1.12 (68 °F / 20 °C)
Method: OECD Test Guideline 107
Remarks: Bioaccumulation is not expected.

dibutyl phthalate:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): 2,165

Exposure time: 11 d
Concentration: 0.0348 mg/l
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 4.46 (86 °F / 30 °C)
pH: 5 - 8
Method: Regulation (EC) No. 440/2008, Annex, A.8
Remarks: Potential bioaccumulation

Mobility in soil

Components:

Hexachlorobenzene:

Stability in soil : Remarks: No data available

1,2,4-trichlorobenzene:

Distribution among environmental compartments : Adsorption/Soil
Koc: 1659, log Koc: 3.22
Method: (experimental)
Remarks: Moderately mobile in soils

1,2-Dichlorobenzene:

Distribution among environmental compartments : Adsorption/Soil
Koc: 379, log Koc: 2.58
Method: (experimental)
Remarks: Moderately mobile in soils (Lit.)

4-Nitroaniline:

Stability in soil : Remarks: No data available

4-Bromophenyl phenyl ether:

Stability in soil : Remarks: No data available

Hexachlorobuta-1,3-diene:

Stability in soil : Remarks: No data available

Indeno[1,2,3-cd]pyrene:

Stability in soil : Remarks: No data available

Bis-(2-chloroethoxy)methane:

Stability in soil : Remarks: No data available

Fluorene:

Stability in soil : Remarks: Adsorbs on soil.

Azobenzene:

Stability in soil : Remarks: No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Components:**Dichloromethane:**

Results of PBT and vPvB assessment : Not persistent, bioaccumulative, and toxic (PBT). Not very persistent and very bioaccumulative (vPvB).
: Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

benzene:

Additional ecological information : Endangers drinking-water supplies if allowed to enter soil or water.
Discharge into the environment must be avoided.

2,4-dichlorophenol:

Additional ecological information : Discharge into the environment must be avoided.

2,4-dinitrotoluene:

Additional ecological information : Discharge into the environment must be avoided.

1,2-Dichlorobenzene:

Results of PBT and vPvB assessment : Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

chlorocresol:

Additional ecological information : Discharge into the environment must be avoided.

2-nitrophenol:

Additional ecological information : Discharge into the environment must be avoided.

4-chloroaniline:

Additional ecological information : Discharge into the environment must be avoided.

isophorone:

Additional ecological information : Discharge into the environment must be avoided.

m-nitroaniline:

Additional ecological information : Discharge into the environment must be avoided.

Hexachlorobuta-1,3-diene:

Results of PBT and vPvB assessment : PBT substance

Additional ecological information : No data available

3,5-Dinitro-2-hydroxytoluene:

Additional ecological information : Discharge into the environment must be avoided.

Indeno[1,2,3-cd]pyrene:

Additional ecological information : No data available

Bis-(2-chloroethoxy)methane:

Additional ecological information : No data available

chrysene:

Additional ecological information : Discharge into the environment must be avoided.

Dibenz[a,h]anthracene:

Additional ecological information : Discharge into the environment must be avoided.

anthracene:

Additional ecological information : Discharge into the environment must be avoided.

acenaphthene:

Additional ecological information : Discharge into the environment must be avoided.

phenanthrene:

Additional ecological information : Discharge into the environment must be avoided.

Benz[a]anthracene:

Additional ecological information : Discharge into the environment must be avoided.

p-cresol:

Additional ecological information : Biological effects:

Change in the flavour characteristics of fish protein.

Hazard for drinking water supplies.

Discharge into the environment must be avoided.

Benzyl butyl phthalate:

Additional ecological information : Avoid release to the environment.

Discharge into the environment must be avoided.

o-cresol:

Results of PBT and vPvB assessment : Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

Additional ecological information : Biological effects:

Hazard for drinking water supplies.

Change in the flavour characteristics of fish protein.

Discharge into the environment must be avoided.

carbazole:

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Additional ecological information : Discharge into the environment must be avoided.

Phenol:

Results of PBT and vPvB assessment : Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

2,4-xyleneol; 2,4-dimethylphenol:

Additional ecological information : Discharge into the environment must be avoided.

o-nitroaniline:

Additional ecological information : Discharge into the environment must be avoided.

bis(2-chloroethyl) ether:

Additional ecological information : Discharge into the environment must be avoided.

dibutyl phthalate:

Additional ecological information : Discharge into the environment must be avoided.

Endocrine disrupting properties

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not permitted for transport

IMDG-Code

Not permitted for transport

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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National Regulations

49 CFR

Not permitted for transport

Poison Inhalation Hazard : No

Special precautions for user

Remarks : Unable to ship at this time, further testing needed.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
benzene	71-43-2	10	32
benzene	71-43-2	10	10 (D018)
p-cresol	106-44-5	100	100 (D025)
o-cresol	95-48-7	100	100 (D023)
Pentachlorophenol	87-86-5	10	10 (D037)
Pentachlorophenol	87-86-5	1	1 (F027)
2,4,5-Trichlorophenol	95-95-4	1	1 (F027)
2,4,6,-Trichlorophenol	88-06-2	1	1 (F027)
2,4,5-Trichlorophenol	95-95-4	10	10 (D041)
Hexachloroethane	67-72-1	100	100 (D034)
Hexachlorobenzene	118-74-1	10	10 (D032)
2,4-dinitrotoluene	121-14-2	10	10 (D030)
1,4-dichlorobenzene	106-46-7	100	100 (D027)
1,2-Dichlorobenzene	95-50-1	10	10 (F002)
Nitrobenzene	98-95-3	1000	1000 (D036)
Nitrobenzene	98-95-3	100	100 (F004)
2,4,6,-Trichlorophenol	88-06-2	10	10 (D042)
Hexachlorobuta-1,3-diene	87-68-3	1	1 (D033)
3,5-Dinitro-2-hydroxytoluene	534-52-1	10	10 (P047)

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
bis(2-chloroethyl) ether	111-44-4	10	10000
N-Nitrosodimethylamine	62-75-9	10	10000
1,2,3,4,5,5-Hexachlorocyclopentadiene	77-47-4	10	10000
3,5-Dinitro-2-hydroxytoluene	534-52-1	10	10000

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

SARA 313

: The following components are subject to reporting levels established by SARA Title III, Section 313:

Dichloromethane	75-09-2	>= 50 - < 70 %
benzene	71-43-2	>= 30 - < 50 %
2,4,6,- Trichlorophenol	88-06-2	>= 0.1 - < 1 %
Nitrobenzene	98-95-3	>= 0.1 - < 1 %
2,6- Dinitrotoluene	606-20-2	>= 0.1 - < 1 %
4-chloroaniline	106-47-8	>= 0.1 - < 1 %
N-Nitroso dipropylamine	621-64-7	>= 0.1 - < 1 %
N- Nitrosodimethylamine	62-75-9	>= 0.1 - < 1 %
1,4- dichlorobenzene	106-46-7	>= 0.1 - < 1 %
2,4- dinitrotoluene	121-14-2	>= 0.1 - < 1 %
Bis(2- ethylhexyl) phthalate	117-81-7	>= 0.1 - < 1 %
Hexachlorobenzene	118-74-1	>= 0.1 - < 1 %
Hexachloroethane	67-72-1	>= 0.1 - < 1 %
Pentachlorophenol	87-86-5	>= 0.1 - < 1 %
Benzo[ghi]perylene	191-24-2	>= 0.1 - < 1 %
Benzo[jk]fluorene	206-44-0	>= 0.1 - < 1 %

chrysene	218-01-9	>= 0.1 - < 1 %
Indeno[1,2,3-cd]pyrene	193-39-5	>= 0.1 - < 1 %
Benz[a]anthracene	56-55-3	>= 0.1 - < 1 %
Dibenz[a,h]anthracene	53-70-3	>= 0.1 - < 1 %
benzo[a]pyrene	50-32-8	>= 0.1 - < 1 %
Benzo[k]fluoranthene	207-08-9	>= 0.1 - < 1 %
Benzo[b]fluoranthene	205-99-2	>= 0.1 - < 1 %
2-chlorophenol	95-57-8	>= 0.1 - < 1 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Dichloromethane	75-09-2	>= 50 - < 70 %
benzene	71-43-2	>= 30 - < 50 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Dichloromethane	75-09-2	>= 50 - < 70 %
benzene	71-43-2	>= 30 - < 50 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. Clean Water Act, Section 311, Table 116.4A:

benzene	71-43-2	>= 30 - < 50 %
Naphthalene	91-20-3	>= 0.1 - < 1 %
p-cresol	106-44-5	>= 0.1 - < 1 %
o-cresol	95-48-7	>= 0.1 - < 1 %
Pentachlorophenol	87-86-5	>= 0.1 - < 1 %
4-Nitrophenol	100-02-7	>= 0.1 - < 1 %
2,4,5-Trichlorophenol	95-95-4	>= 0.1 - < 1 %
Phenol	108-95-2	>= 0.1 - < 1 %
dibutyl phthalate	84-74-2	>= 0.1 - < 1 %
2,4-dinitrotoluene	121-14-2	>= 0.1 - < 1 %
1,4-dichlorobenzene	106-46-7	>= 0.1 - < 1 %
1,2-Dichlorobenzene	95-50-1	>= 0.1 - < 1 %

2-nitrophenol	88-75-5	>= 0.1 - < 1 %
1,2,3,4,5,5-Hexachlorocyclopentadiene	77-47-4	>= 0.1 - < 1 %
2,4-Dinitrophenol	51-28-5	>= 0.1 - < 1 %
2,6-Dinitrotoluene	606-20-2	>= 0.1 - < 1 %
Nitrobenzene	98-95-3	>= 0.1 - < 1 %
2,4,6,-Trichlorophenol	88-06-2	>= 0.1 - < 1 %

The following Hazardous Chemicals are listed under the U.S. Clean Water Act, Section 311, Table 117.3:

benzene	71-43-2	>= 30 - < 50 %
Naphthalene	91-20-3	>= 0.1 - < 1 %
Pentachlorophenol	87-86-5	>= 0.1 - < 1 %
Phenol	108-95-2	>= 0.1 - < 1 %
dibutyl phthalate	84-74-2	>= 0.1 - < 1 %
1,2,3,4,5,5-Hexachlorocyclopentadiene	77-47-4	>= 0.1 - < 1 %
Nitrobenzene	98-95-3	>= 0.1 - < 1 %

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Dichloromethane	75-09-2	>= 50 - < 70 %
benzene	71-43-2	>= 30 - < 50 %

This product contains the following priority pollutants related to the U.S. Clean Water Act:

Dichloromethane	75-09-2	>= 50 - < 70 %
benzene	71-43-2	>= 30 - < 50 %

US State Regulations

Massachusetts Right To Know

Dichloromethane	75-09-2
benzene	71-43-2
Pyrene	129-00-0
Benzo[b]fluoranthene	205-99-2
chrysene	218-01-9
Benzo[k]fluoranthene	207-08-9
benzo[a]pyrene	50-32-8
Dibenz[a,h]anthracene	53-70-3
Benz[a]anthracene	56-55-3
Azobenzene	103-33-3
o-cresol	95-48-7
Phenol	108-95-2
bis(2-chloroethyl) ether	111-44-4
Hexachloroethane	67-72-1
Hexachlorobenzene	118-74-1
Bis(2-ethylhexyl) phthalate	117-81-7
2,4-dinitrotoluene	121-14-2
1,4-dichlorobenzene	106-46-7
N-Nitrosodimethylamine	62-75-9
N-Nitroso dipropylamine	621-64-7
1,2,3,4,5,5-Hexachlorocyclopentadiene	77-47-4
Nitrobenzene	98-95-3
2,4,6,-Trichlorophenol	88-06-2

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Hexachlorobuta-1,3-diene	87-68-3
3,5-Dinitro-2-hydroxytoluene	534-52-1
Indeno[1,2,3-cd]pyrene	193-39-5

Pennsylvania Right To Know

Dichloromethane	75-09-2
benzene	71-43-2
Bis-(2-chloroethoxy)methane	111-91-1
2-chlorophenol	95-57-8
Pyrene	129-00-0
Benzo[b]fluoranthene	205-99-2
chrysene	218-01-9
Benzo[k]fluoranthene	207-08-9
benzo[a]pyrene	50-32-8
Benzo[jk]fluorene	206-44-0
Dibenz[a,h]anthracene	53-70-3
anthracene	120-12-7
Acenaphthylene	208-96-8
Benzo[ghi]perylene	191-24-2
acenaphthene	83-32-9
phenanthrene	85-01-8
Benz[a]anthracene	56-55-3
Fluorene	86-73-7
p-cresol	106-44-5
Benzyl butyl phthalate	85-68-7
o-cresol	95-48-7
Pentachlorophenol	87-86-5
4-Nitrophenol	100-02-7
Dioctyl phthalate	117-84-0
2,4,5-Trichlorophenol	95-95-4
Phenol	108-95-2
2,4-xlenol; 2,4-dimethylphenol	105-67-9
bis(2-chloroethyl) ether	111-44-4
dibutyl phthalate	84-74-2
Hexachloroethane	67-72-1
Hexachlorobenzene	118-74-1
1,2,4-trichlorobenzene	120-82-1
Bis(2-ethylhexyl) phthalate	117-81-7
Diethyl phtalate	84-66-2
2,4-dichlorophenol	120-83-2
1-Chloro-4-phenoxybenzene	7005-72-3
Dibenzofuran	132-64-9
2,4-dinitrotoluene	121-14-2
1,4-dichlorobenzene	106-46-7
N-Nitrosodimethylamine	62-75-9
1,3-dichlorbenzene	541-73-1
N-Nitroso dipropylamine	621-64-7
1,2-Dichlorobenzene	95-50-1
Dimethyl phthalate	131-11-3
chlorocresol	59-50-7
2-nitrophenol	88-75-5
1,2,3,4,5,5-Hexachlorocyclopentadiene	77-47-4

4-chloroaniline	106-47-8
2,4-Dinitrophenol	51-28-5
isophorone	78-59-1
4-Nitroaniline	100-01-6
2,6-Dinitrotoluene	606-20-2
4-Bromophenyl phenyl ether	101-55-3
Nitrobenzene	98-95-3
2-methylnaphthalene	91-57-6
2,4,6,-Trichlorophenol	88-06-2
Hexachlorobuta-1,3-diene	87-68-3
3,5-Dinitro-2-hydroxytoluene	534-52-1
Indeno[1,2,3-cd]pyrene	193-39-5
2-Chloronaphthalene	91-58-7
bis(2-Chloroisopropyl)ether	39638-32-9

Maine Chemicals of High Concern

benzene	71-43-2
Hexachlorobenzene	118-74-1

Vermont Chemicals of High Concern

Dichloromethane	75-09-2
benzene	71-43-2
Benzyl butyl phthalate	85-68-7
Dioctyl phthalate	117-84-0
Phenol	108-95-2
dibutyl phthalate	84-74-2
Hexachlorobenzene	118-74-1
Bis(2-ethylhexyl) phthalate	117-81-7
Diethyl phthalate	84-66-2
N-Nitrosodimethylamine	62-75-9
4-chloroaniline	106-47-8
Hexachlorobuta-1,3-diene	87-68-3

Washington Chemicals of High Concern

Dichloromethane	75-09-2
benzene	71-43-2
Benzyl butyl phthalate	85-68-7
Dioctyl phthalate	117-84-0
Phenol	108-95-2
dibutyl phthalate	84-74-2
Hexachlorobenzene	118-74-1
Bis(2-ethylhexyl) phthalate	117-81-7
Diethyl phthalate	84-66-2
N-Nitrosodimethylamine	62-75-9
4-chloroaniline	106-47-8
Hexachlorobuta-1,3-diene	87-68-3

California Prop. 65

WARNING: This product can expose you to chemicals including Indeno[1,2,3-cd]pyrene, Hexachlorobuta-1,3-diene, 2,4,6,-Trichlorophenol, 2-methylnaphthalene, Nitrobenzene, 2,6-Dinitrotoluene, 4-chloroaniline, N-Nitroso dipropylamine, N-Nitrosodimethylamine, 1,4-dichlorobenzene, 2,4-dinitrotoluene, Bis(2-ethylhexyl) phthalate, Hexachlorobenzene, Hexachloroethane, bis(2-chloroethyl) ether, carbazole, Pentachlorophenol, Azobenzene,

Fluorene, Benz[a]anthracene, phenanthrene, acenaphthene, Benzo[ghi]perylene, Acenaphthylene, anthracene, Dibenz[a,h]anthracene, Benzo[jk]fluorene, benzo[a]pyrene, Benzo[k]fluoranthene, chrysene, Benzo[b]fluoranthene, Pyrene, benzene, Dichloromethane, which is/are known to the State of California to cause cancer, and benzene, Benzyl butyl phthalate, dibutyl phthalate, Hexachlorobenzene, Bis(2-ethylhexyl) phthalate, 2,4-dinitrotoluene, 2,6-Dinitrotoluene, Nitrobenzene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. **International Regulations**

Rotterdam Convention (Prior Informed Consent) : Pentachlorophenol
Hexachlorobenzene
3,5-Dinitro-2-hydroxytoluene

Stockholm Convention (Persistent Organic Pollutants) : Pentachlorophenol
Hexachlorobenzene
Hexachlorobuta-1,3-diene
2-Chloronaphthalene

The components of this product are reported in the following inventories:

US TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

The following substance(s) is/are subject to a Significant New Use Rule:

4-Bromophenyl phenyl ether 101-55-3 See 40 CFR § 721.3430; Final Rule

After February 3, 2025, this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or reaction product; (3) Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7) Industrial and commercial use as a paint and coating remover from safety critical, corrosion-sensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space vehicle, and turbine applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export.

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:

Dichloromethane 75-09-2
2,4,5-Trichlorophenol 95-95-4

2,4-dichlorophenol	120-83-2
1,4-dichlorobenzene	106-46-7

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	: ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA CARC	: OSHA Specifically Regulated Chemicals/Carcinogens
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2	: USA. Occupational Exposure Limits (OSHA) - Table Z-2
TSCA ECEL	: TSCA Existing Chemical Exposure Limit
US WEEL	: USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
ACGIH / C	: Ceiling limit
NIOSH REL / TWA	: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
NIOSH REL / C	: Ceiling value not be exceeded at any time.
OSHA CARC / PEL	: Permissible exposure limit (PEL)
OSHA CARC / STEL	: Excursion limit
OSHA Z-1 / TWA	: 8-hour time weighted average
OSHA Z-1 / C	: Ceiling
OSHA Z-2 / TWA	: 8-hour time weighted average
OSHA Z-2 / CEIL	: Acceptable ceiling concentration
OSHA Z-2 / Peak	: Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
TSCA ECEL / ECEL-TWA	: Existing Chemical Exposure List (TWA)
TSCA ECEL / EPA STEL	: EPA STEL
US WEEL / TWA	: 8-hr TWA
US WEEL / STEL	: Short-Term TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory

concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LSPN - List of Hazardous Notified Substances (Chile); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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