# SAFETY DATA SHEET according to the OSHA Hazard Communication Standard

Version 6.12
Revision Date 07/15/2026
Print Date 07/16/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : Xylene Substitute

Product Number : A5597
Brand : Sigma
Index-No. : 649-276-00-X
CAS-No. : 64741-66-8

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

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : Not Available

### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

## 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

Aspiration hazard : Category 1



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

**Other hazards**

None known.

**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.

Precautionary statements :

**Prevention:**

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.
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.
P331 Do NOT induce vomiting.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

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 : Substance

CAS-No. : 64741-66-8



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

**Components**

| Chemical name | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|---|---|---|---|
| Naphtha (petroleum), light alkylate a complex combination of hydrocarbons produced by distillation of the reaction products of isobu | 64741-66-8* | >= 80 - <= 100 | 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. Call in physician. |
| 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<br>Carbon dioxide (CO2)<br>Dry powder |
| Unsuitable extinguishing | : | For this substance/mixture no limitations of |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | |
|---|---|---|
| media | | extinguishing agents are given. |
| Specific hazards during fire fighting | : | Combustible.<br><br>Pay attention to flashback.<br><br>Vapours are heavier than air and may spread along floors.<br><br>Development of hazardous combustion gases or vapours possible in the event of fire.<br><br>Forms explosive mixtures with air at ambient temperatures. |
| Hazardous combustion products | : | Nature of decomposition products not known. |
| Specific extinguishing methods | : | No data available |
| Further information | : | Remove container from danger zone and cool with water.<br>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:<br>Do not breathe vapours, aerosols.<br>Avoid substance contact.<br>Ensure adequate ventilation.<br>Keep away from heat and sources of ignition.<br>Evacuate the danger area, observe emergency procedures, consult an expert.<br>Advice for emergency responders:<br>Wear appropriate personal protective equipment, as |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

indicated in Section 8.

| | | |
|---|---|---|
| Environmental precautions | : | Do not let product enter drains.<br>Risk of explosion. |
| Methods and materials for containment and cleaning up | : | Cover drains. Collect, bind, and pump off spills.<br>Observe possible material restrictions (see sections 7 and 10).<br>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.<br>Take precautionary measures against static discharge. |
| Advice on safe handling | : | Work under hood. Do not inhale substance/mixture.<br>Avoid generation of vapours/aerosols. |
| Further information on storage conditions | : | Keep container tightly closed in a dry and well-ventilated place.<br>Keep away from heat and sources of ignition.<br>Keep locked up or in an area accessible only to qualified or authorised persons. |
| Storage class | : | 3, Flammable liquids |
| Recommended storage temperature | : | 36 - 46 °F / 2 - 8 °C |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| Naphtha (petroleum), light alkylate a complex combination of hydrocarbons produced by distillation of the reaction products of isobu | 64741-66-8 | TWA | 500 ppm<br>2,000 mg/m3 | OSHA Z-1 |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | | | |
|---|---|---|---|---|
| | | TWA (Mist) | 5 mg/m3 | OSHA Z-1 |
| | | TWA (Mist) | 5 mg/m3 | NIOSH REL |
| | | ST (Mist) | 10 mg/m3 | NIOSH REL |

**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 entrepeneur 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



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | |
|---|---|---|
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Melting point | : | No data available |
| Boiling point/boiling range | : | 244 - 259 °F / 118 - 126 °C (1,013 hPa) |
| Flash point | : | 63.0 °F / 17.2 °C<br>Method: closed cup |
| 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 | : | 0.723 g/cm3 |
| 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 | : | Not classified as explosive. |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | |
|---|---|---|
| Oxidizing properties | : | none |
| 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 | : | In the event of fire: see section 5 |

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity**
TDLo Oral - Rat - 10,000 mg/kg
Remarks: Kidney, Ureter, Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis).
TCLo Inhalation - Rat - 13 Weeks - 7500 ppm

Remarks: Liver:Changes in liver weight.
Kidney, Ureter, Bladder:Changes in kidney weight.
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**

IARC: 1 - Group 1: Carcinogenic to humans (Naphtha (petroleum), light alkylate a complex combination of hydrocarbons produced by distillation of the reaction products of isobu)



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

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**
No data available

**Aspiration hazard**
May be fatal if swallowed and enters airways.

### 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

Stomach - Irregularities - Based on Human Evidence

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
No data available

**Persistence and degradability**
No data available

**Bioaccumulative potential**
No data available

**Mobility in soil**
No data available

**Other adverse effects**
No data available

**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



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

itself.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | UN 1268 |
| Proper shipping name | : | Petroleum distillates, n.o.s. |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | Class 3 - Flammable liquids |
| Packing instruction (cargo aircraft) | : | 364 |
| Packing instruction (passenger aircraft) | : | 353 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 1268 |
| Proper shipping name | : | PETROLEUM DISTILLATES, N.O.S. |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | 3 |
| EmS Code | : | F-E, S-E |
| Marine pollutant | : | no |

### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

### National Regulations

**49 CFR**

| | | |
|---|---|---|
| UN/ID/NA number | : | UN 1268 |
| Proper shipping name | : | Petroleum distillates, n.o.s. |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | Class 3 - Flammable liquids |
| ERG Code | : | 128 |
| Marine pollutant | : | no |
| Poison Inhalation Hazard | : | No |

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

## SECTION 15. REGULATORY INFORMATION

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**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** | : | Fire Hazard<br>Chronic Health Hazard |
| **SARA 313** | : | This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. |

**US State Regulations**

**Massachusetts Right To Know**

| | |
|---|---|
| Naphtha (petroleum), light alkylate a complex combination of hydrocarbons produced by distillation of the reaction products of isobu | 64741-66-8 |

**Pennsylvania Right To Know**

| | |
|---|---|
| Naphtha (petroleum), light alkylate a complex combination of hydrocarbons produced by distillation of the reaction products of isobu | 64741-66-8 |

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

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

| | | |
|---|---|---|
| US TSCA | : | All substances listed as active on the TSCA inventory |

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16. OTHER INFORMATION

**Full text of other abbreviations**



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | |
|---|---|---|
| NIOSH REL | : | USA. NIOSH Recommended Exposure Limits |
| OSHA Z-1 | : | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| 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 |
| OSHA Z-1 / TWA | : | 8-hour time weighted average |

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); 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.



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

Copyright 2025 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

Revision Date : 07/15/2026

US / EN



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada