

## SAFETY DATA SHEET

Version 8.11  
Revision Date 04/08/2024  
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Perchloric acid c(HClO<sub>4</sub>) = 0.1 mol/l (0.1 N)  
Titripur® Reag. Ph Eur, Reag. USP

Product Number : 1.09065  
Catalogue No. : 109065  
Brand : Millipore

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

Identified uses : Reagent for analysis

**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**

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

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 3), H226  
Skin corrosion (Category 1A), H314  
Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal Word

Danger

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## Hazard Statements

H226 Flammable liquid and vapor.  
H314 Causes severe skin burns and eye damage.

## Precautionary Statements

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
P363 Wash contaminated clothing before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Component	Classification	Concentration
<b>acetic acid</b>		
CAS-No.	64-19-7	Flam. Liq. 3; Skin Corr. 1A; Eye Dam. 1; H226, H314, H318
EC-No.	200-580-7	
Index-No.	607-002-00-6	
Registration number	01-2119475328-30-XXXX	Concentration limits: >= 90 %: Skin Corr. 1A, H314; 25 - < 90 %: Skin Corr. 1B, H314; 10 - < 25 %: Skin Irrit. 2, H315; 10 - < 25 %: Eye Irrit. 2, H319;
		>= 90 - <= 100 %

<b>Perchloric acid</b>			
CAS-No.	7601-90-3	Ox. Liq. 1; Met. Corr. 1; Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; STOT RE 2; H271, H290, H302, H314, H318, H373 Concentration limits: >= 50 %: Skin Corr. 1A, H314; 10 - < 50 %: Skin Corr. 1B, H314; 1 - < 10 %: Skin Irrit. 2, H315; 1 - < 10 %: Eye Irrit. 2, H319; > 50 %: Ox. Liq. 1, H271; <= 50 %: Ox. Liq. 2, H272; 1 - 50 %: Ox. Liq. 2, H272;	>= 0.1 - < 1 %
EC-No.	231-512-4		
Index-No.	017-006-00-4		
Registration number	01-2120066865-44- XXXX		
<b>Acetic anhydride</b>			
CAS-No.	108-24-7	Flam. Liq. 3; Acute Tox. 4; Acute Tox. 2; Skin Corr. 1B; Eye Dam. 1; H226, H302, H330, H314, H318 Concentration limits: >= 25 %: Skin Corr. 1B, H314; 5 - < 25 %: Skin Irrit. 2, H315; 5 - < 25 %: Eye Dam. 1, H318; 1 - < 5 %: Eye Irrit. 2, H319; >= 5 %: STOT SE 3, H335;	>= 0.1 - < 1 %
EC-No.	203-564-8		
Index-No.	607-008-00-9		
Registration number	01-2119486470-36- XXXX		

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material 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. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

**If swallowed**

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

**Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**

Carbon oxides

Combustible.

Fire may cause evolution of:

Acetic acid vapours

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

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

**5.3 Advice for firefighters**

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

**5.4 Further information**

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, 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.

For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains. Risk of explosion.

**6.3 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 with liquid-absorbent and neutralising material (e.g. Chemizorb® H<sup>+</sup>, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

## 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### **Hygiene measures**

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

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### **Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

#### **Storage class**

Storage class (TRGS 510): 3: Flammable liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### **Ingredients with workplace control parameters**

Component	CAS-No.	Value	Control parameters	Basis
acetic acid	64-19-7	TWA	10 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	15 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	10 ppm 25 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		ST	15 ppm 37 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		TWA	10 ppm 25 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		PEL	10 ppm 25 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		C	40 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		STEL	15 ppm 37 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Acetic anhydride	108-24-7	TWA
	Remarks	Not classifiable as a human carcinogen		
		STEL	3 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		
		C	5 ppm 20 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		TWA	5 ppm 20 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	5 ppm 20 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

## 8.2 Exposure controls

### Appropriate engineering controls

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

### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

### **Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

### **Body Protection**

Flame retardant antistatic protective clothing.

### **Respiratory protection**

Recommended Filter type: filter E-(P2)

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.

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.

### **Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- |                                 |                                  |
|---------------------------------|----------------------------------|
| a) Appearance                   | Form: liquid<br>Color: colorless |
| b) Odor                         | of acetic acid                   |
| c) Odor Threshold               | No data available                |
| d) pH                           | ca.0.1 at 20 °C (68 °F)          |
| e) Melting point/freezing point | No data available                |
| f) Initial boiling point        | No data available                |

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	and boiling range	
g)	Flash point	40 °C (104 °F)
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Density	1.06 g/cm <sup>3</sup> at 20 °C (68 °F)
	Relative density	No data available
n)	Water solubility	insoluble
o)	Partition coefficient: n-octanol/water	No data available
p)	Autoignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	Not classified as explosive.
t)	Oxidizing properties	Oxidizing potential

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Risk of explosion with:

peroxi compounds

fuming sulfuric acid

phosphorus halides

hydrogen peroxide

chromium(VI) oxide

potassium permanganate

Peroxides

Strong oxidizing agents

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Risk of ignition or formation of inflammable gases or vapours with:

Iron

Zinc

Magnesium

Mild steel

Possible formation of:

Hydrogen

Violent reactions possible with:

strong alkalis

anhydrides

Aldehydes

alkali hydroxides

nonmetallic halides

ethanolamine

Acetaldehyde

Alcohols

halogen-halogen compounds

chlorosulfonic acid

chromosulfuric acid

Potassium hydroxide

Nitric acid

#### **10.4 Conditions to avoid**

Heating.

#### **10.5 Incompatible materials**

No data available

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Mixture**

##### **Acute toxicity**

Acute toxicity estimate Oral - 3,369 mg/kg

(Calculation method)

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

Acute toxicity estimate Inhalation - 4 h - 62.51 mg/l - vapor (Calculation method)

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

Dermal: No data available

##### **Skin corrosion/irritation**

Remarks: Mixture causes severe burns.

##### **Serious eye damage/eye irritation**

Remarks: Mixture causes serious eye damage.

Risk of blindness!

### **Respiratory or skin sensitization**

No data available

### **Germ cell mutagenicity**

No data available

### **Carcinogenicity**

IARC: No ingredient 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 ingredient 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**

No data available

## **11.2 Additional Information**

No data available

### **Components**

#### **acetic acid**

##### **Acute toxicity**

LD50 Oral - Rat - 3,310 mg/kg

Remarks: (RTECS)

LC50 Inhalation - Mouse - 4 h - 2,819 mg/l - vapor

Remarks: (RTECS)

Dermal: No data available

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: Causes burns. - 4 h

(OECD Test Guideline 404)

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

##### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Causes burns. - 4 h

(OECD Test Guideline 405)

Remarks: (IUCLID)

Remarks: Causes serious eye damage.

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

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

Method: Mutagenicity (micronucleus test)

Species: Rat - male and female - 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

**Perchloric acid****Acute toxicity**

LD50 Oral - Rat - 1,100 mg/kg

Remarks: Behavioral:Excitement.

Lungs, Thorax, or Respiration:Dyspnea.

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

(RTECS)

Inhalation: Corrosive to respiratory system.

Dermal: No data available

**Skin corrosion/irritation**

Remarks: Causes severe 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.

**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**

No data available

**Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

- Thyroid

**Aspiration hazard**

No data available

**Acetic anhydride****Acute toxicity**

LD50 Oral - Rat - male and female - 630 mg/kg

Remarks: (ECHA)

LC50 Inhalation - Rat - 4 h - > 0.5 - < 2 mg/l - vapor

(OECD Test Guideline 412)

Remarks: (ECHA)

Dermal: No data available

**Skin corrosion/irritation**

Skin - in vitro test

Result: Causes burns. - 4 h

Remarks: (ECHA)

**Serious eye damage/eye irritation**

Eyes - Rat

Result: Corrosive - 24 h

Remarks: (ECHA)

Remarks: Causes serious eye damage.

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

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

Method: OECD Test Guideline 474

Species: Rat - male and female - Bone marrow

Result: negative

**Carcinogenicity**

IARC:

No ingredient 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 ingredient 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**

No data available

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**SECTION 12: Ecological information**

**12.1 Toxicity**

**Mixture**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Endocrine disrupting properties**

No data available

**12.7 Other adverse effects**

Biological effects:

Harmful effect due to pH shift.

Caustic even in diluted form.

Discharge into the environment must be avoided.

**Components**

**acetic acid**

Toxicity to fish	semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l - 96 h (OECD Test Guideline 203)
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Toxicity to daphnia and other aquatic	static test EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 48 h
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invertebrates	(OECD Test Guideline 202)
Toxicity to algae	static test EC50 - Skeletonema costatum - > 1,000 mg/l - 72 h (ISO 10253)
Toxicity to bacteria	EC5 - Pseudomonas putida - 2,850 mg/l - 16 h Remarks: neutral (maximum permissible toxic concentration) (Lit.)
	microtox test EC50 - Photobacterium phosphoreum - 11 mg/l - 15 min Remarks: (IUCLID)

### Perchloric acid

Toxicity to fish	flow-through test EC50 - Lepomis macrochirus (Bluegill sunfish) - 1,470 mg/l - 96 h (US-EPA) Remarks: The value is given in analogy to the following substances: Sodium perchlorate monohydrate
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 435.7 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: Sodium perchlorate
Toxicity to bacteria	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (ISO 8192) Remarks: The value is given in analogy to the following substances: Sodium perchlorate
Toxicity to fish(Chronic toxicity)	semi-static test NOEC - Danio rerio (zebra fish) - 10 mg/l - 12 Weeks (OECD Test Guideline 215) Remarks: The value is given in analogy to the following substances: Ammonium perchlorate

### Acetic anhydride

Toxicity to fish	semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 300.82 mg/l - 96 h (OECD Test Guideline 203) Remarks: (in analogy to similar products)
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Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Skeletonema costatum - > 300.82 mg/l - 72 h (ISO 10253)
Toxicity to bacteria	static test NOEC - Pseudomonas putida - 1,150 mg/l - 16 h Remarks: (ECHA)

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

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.

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## SECTION 14: Transport information

#### DOT (US)

UN number: 2789 Class: 8 (3) Packing group: II  
 Proper shipping name: Acetic acid solution  
 Reportable Quantity (RQ):  
 Poison Inhalation Hazard: No

#### IMDG

UN number: 2789 Class: 8 (3) Packing group: II EMS-No: F-E, S-C  
 Proper shipping name: ACETIC ACID SOLUTION

#### IATA

UN number: 2789 Class: 8 (3) Packing group: II  
 Proper shipping name: Acetic acid solution

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## SECTION 15: Regulatory information

#### SARA 302 Components

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

#### SARA 313 Components

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



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.

#### Massachusetts Right To Know Components

	CAS-No.	Revision Date
acetic acid	64-19-7	1993-04-24

#### Pennsylvania Right To Know Components

	CAS-No.	Revision Date
acetic acid	64-19-7	1993-04-24

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### SECTION 16: Other information

#### Further information

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](http://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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