

Creation Date 05-May-2009

Revision Date 24-Oct-2013

Revision Number 7

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

<b>Product Description:</b>	<b>Acetic acid</b>
<b>Cat No. :</b>	<b>A/0406/PB08, A/0406/PB15</b>
<b>Synonyms</b>	Ethanoic acid; Glacial acetic acid; Methanecarboxylic acid
<b>CAS-No</b>	64-19-7
<b>EC-No.</b>	200-580-7
<b>Molecular Formula</b>	C2 H4 O2
<b>Reach Registration Number</b>	--

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

<b>Recommended Use</b>	Laboratory chemicals
<b>Sector of use</b>	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
<b>Product category</b>	PC21 - Laboratory chemicals
<b>Process categories</b>	PROC15 - Use as a laboratory reagent
<b>Environmental release category</b>	ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
<b>Uses advised against</b>	No Information available

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

<b>Company</b>	Fisher Scientific UK Bishop Meadow Road, Loughborough, Leicestershire LE11 5RG, United Kingdom
<b>E-mail address</b>	begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

Chemtrec US: (800) 424-9300  
Chemtrec EU: 001 (202) 483-7616  
Tel: 01509 231166

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### CLP Classification - Regulation (EC) No 1272/2008

##### **Physical hazards**

Flammable liquids

Category 3

##### **Health hazards**

Skin Corrosion/Irritation

Category 1 A

Serious Eye Damage/Eye Irritation

Category 1

##### **Environmental hazards**

Based on available data, the classification criteria are not met

#### Classification according to EU Directives 67/548/EEC or 1999/45/EC

**Symbol(s)**

C - Corrosive

Acetic acid

**SECTION 2: HAZARDS IDENTIFICATION**

R-phrase(s) R10 - Flammable  
R35 - Causes severe burns

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

**2.2. Label elements****Signal Word****Danger****Hazard Statements**

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

**Precautionary Statements**

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P310 - Immediately call a POISON CENTER or doctor/ physician  
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

**2.3. Other hazards**

No information available.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Substances**

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008	DSD Classification - 67/548/EEC
Acetic acid	64-19-7	EEC No. 200-580-7	>95	Skin Corr. 1A (H314) Eye Dam. 1 (H318) Flam. Liq. 3 (H226)	R10 C; R35

**Reach Registration Number**

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For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

**SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures****General Advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

Acetic acid

<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Call a physician immediately.
<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water. Call a physician immediately.
<b>Inhalation</b>	If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Remove from exposure, lie down. Call a physician immediately.
<b>Protection of First-aiders</b>	Use personal protective equipment.

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

Causes burns by all exposure routes. . Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

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

<b>Notes to Physician</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.
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**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media****Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.

**Extinguishing media which must not be used for safety reasons**

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

**Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Thermal decomposition can lead to release of irritating gases and vapors.

**5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

**6.2. Environmental precautions**

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

**6.3. Methods and material for containment and cleaning up**

## Acetic acid

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

**6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Do not ingest. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

**7.2. Conditions for safe storage, including any incompatibilities**

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

**7.3. Specific end use(s)**

Use in laboratories

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Exposure limits**

List source(s):

**EU** - Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement.

**IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Component	European Union	The United Kingdom	France	Belgium	Spain
Acetic acid	-	STEL: 37 mg/m <sup>3</sup> STEL: 15 ppm TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	STEL / VLCT: 10 ppm. STEL / VLCT: 25 mg/m <sup>3</sup> .	TWA: 10 ppm 8 uren TWA: 25 mg/m <sup>3</sup> 8 uren STEL: 15 ppm 15 minuten STEL: 38 mg/m <sup>3</sup> 15 minuten	STEL / VLA-EC: 15 ppm (15 minutos). STEL / VLA-EC: 37 mg/m <sup>3</sup> (15 minutos). TWA / VLA-ED: 10 ppm (8 horas) TWA / VLA-ED: 25 mg/m <sup>3</sup> (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Acetic acid	-	TWA: 10 ppm (8 Stunden). AGW - exposure factor 2 TWA: 25 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 2 TWA: 10 ppm (8 Stunden). MAK TWA: 25 mg/m <sup>3</sup> (8 Stunden). MAK Höhepunkt: 20 ppm Höhepunkt: 50 mg/m <sup>3</sup>	STEL: 15 ppm 15 minutos TWA: 10 ppm 8 horas	MAC-TGG 25 mg/m <sup>3</sup>	TWA: 5 ppm 8 tunteina TWA: 13 mg/m <sup>3</sup> 8 tunteina STEL: 10 ppm 15 minuutteina STEL: 25 mg/m <sup>3</sup> 15 minuutteina

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## Acetic acid

Component	Austria	Denmark	Switzerland	Poland	Norway
Acetic acid	STEL: 20 ppm 15 Minuten STEL: 50 mg/m <sup>3</sup> 15 Minuten TWA: 10 ppm 8 Stunden TWA: 25 mg/m <sup>3</sup> 8 Stunden	TWA: 10 ppm 8 timer TWA: 25 mg/m <sup>3</sup> 8 timer	STEL: 20 ppm 15 Minuten STEL: 50 mg/m <sup>3</sup> 15 Minuten MAK: 10 ppm 8 Stunden MAK: 25 mg/m <sup>3</sup> 8 Stunden	NDSch: 30 mg/m <sup>3</sup> 15 minutach TWA: 15 mg/m <sup>3</sup> 8 godzinach	TWA: 10 ppm 8 timer TWA: 25 mg/m <sup>3</sup> 8 timer STEL: 20 ppm 15 minutter. STEL: 37.5 mg/m <sup>3</sup> 15 minutter.

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Acetic acid	TWA: 25.0 mg/m <sup>3</sup> STEL : 37.0 mg/m <sup>3</sup>	TWA: 10 ppm 8 satima. TWA: 25 mg/m <sup>3</sup> 8 satima.	TWA: 10 ppm 8 hr. TWA: 25 mg/m <sup>3</sup> 8 hr. STEL: 15 ppm 15 min STEL: 37 mg/m <sup>3</sup> 15 min	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	TWA: 25 mg/m <sup>3</sup> 8 hodinách. Ceiling: 35 mg/m <sup>3</sup>

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Acetic acid	TWA: 10 ppm 8 tundides. TWA: 25 mg/m <sup>3</sup> 8 tundides. STEL: 10 ppm 15 minutites. STEL: 25 mg/m <sup>3</sup> 15 minutites.	TWA: 10 ppm 8 hr TWA: 25 mg/m <sup>3</sup> 8 hr	STEL: 15 ppm STEL: 37 mg/m <sup>3</sup> TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	STEL: 25 mg/m <sup>3</sup> 15 percekben. TWA: 25 mg/m <sup>3</sup> 8 órában.	TWA: 10 ppm 8 klukkustundum. TWA: 25 mg/m <sup>3</sup> 8 klukkustundum. Ceiling: 20 ppm Ceiling: 50 mg/m <sup>3</sup>

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Acetic acid	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	TWA: 10 ppm 8 Stunden TWA: 25 mg/m <sup>3</sup> 8 Stunden	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	TWA: 10 ppm 8 ore TWA: 25 mg/m <sup>3</sup> 8 ore

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Acetic acid	Skin notation MAC: 5 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	TWA: 10 ppm 8 urah TWA: 25 mg/m <sup>3</sup> 8 urah	STV: 10 ppm 15 minuter STV: 25 mg/m <sup>3</sup> 15 minuter LLV: 5 ppm 8 timmar. LLV: 13 mg/m <sup>3</sup> 8 timmar.	TWA: 10 ppm 8 saat TWA: 25 mg/m <sup>3</sup> 8 saat

### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

### Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography

MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Derived No Effect Level (DNEL) Workers

Route of exposure	Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Oral Dermal Inhalation				
	25 mg/m <sup>3</sup>		25 mg/m <sup>3</sup>	

Predicted No Effect Concentration (PNEC) See values below.

Fresh water 3,058mg/l  
Fresh water sediment 11,36mg/kg

## Acetic acid

Marine water	0.03058 mg/L
Marine water sediment	1.136 mg/kg
Water Intermittent	30.58 mg/kg
Microorganisms in sewage treatment	85mg/l
Soil (Agriculture)	0,478mg/kg

**8.2. Exposure controls****Engineering Measures**

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

**Personal protective equipment**

**Eye Protection** Tightly fitting safety goggles or Face-shield (European standard - EN 166)

**Hand Protection** Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Butyl rubber	> 480 minutes	0.5 mm	EN 374	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.

**Skin and body protection** Long sleeved clothing

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced..  
**Recommended Filter type:** Particulates filter conforming to EN 143, Acid gases filter, Type E, Yellow, conforming to EN14387.

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141  
When RPE is used a face piece Fit Test should be conducted.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Prevent product from entering drains.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Appearance	Colorless	
Physical State	Liquid.	
Odor	vinegar-like	
Odor Threshold	No data available	
pH	< 2.5	10 g/L aq.sol.

## Acetic acid

<b>Melting Point/Range</b>	16 - 16.5°C / 60.8 - 61.7°F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	117 - 118°C / 242.6 - 244.4°F	
<b>Flash Point</b>	40°C / 104°F	<b>Method</b> - No information available.
<b>Evaporation Rate</b>	0.97 (Butyl Acetate = 1.0)	
<b>Flammability (solid,gas)</b>	Not applicable	Liquid
<b>Explosion Limits</b>	<b>Lower</b> 4 vol% <b>Upper</b> 19.9 vol%	
<b>Vapor Pressure</b>	1.52 kPa @ 20 °C	
<b>Vapor Density</b>	2.10 (Air = 1.0)	(Air = 1.0)
<b>Specific Gravity / Density</b>	1.048	
<b>Bulk Density</b>	Not applicable	Liquid
<b>Water Solubility</b>	miscible	
<b>Solubility in other solvents</b>	No information available.	
<b>Partition Coefficient (n-octanol/water)</b>	<b>Component</b> Acetic acid	<b>log Pow</b> -0.2
<b>Autoignition Temperature</b>	427 - °C / 800.6 - °F	
<b>Decomposition temperature</b>	No data available	
<b>Viscosity</b>	1.53 mPa.s @ 25 °C	
<b>Explosive Properties</b>	No information available.	explosive air/vapour mixtures possible
<b>Oxidizing Properties</b>	No information available.	

**9.2. Other information**

<b>Molecular Formula</b>	C2 H4 O2
<b>Molecular Weight</b>	60.05

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

None known, based on information available.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

**10.4. Conditions to avoid**

Incompatible products, Excess heat, Keep away from open flames, hot surfaces and sources of ignition.

**10.5. Incompatible materials**

Strong oxidizing agents. Strong bases. Metals.

**10.6. Hazardous decomposition products**Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Thermal decomposition can lead to release of irritating gases and vapors.**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Acetic acid

**SECTION 11: TOXICOLOGICAL INFORMATION****Product Information****(a) acute toxicity;****Oral**

Based on available data, the classification criteria are not met

**Dermal**

Based on available data, the classification criteria are not met

**Inhalation**

Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetic acid	3310 mg/kg ( Rat )	1060 mg/kg ( Rabbit )	11.4 mg/L ( Rat ) 4 h

**(b) skin corrosion/irritation;**

Category 1 A

**(c) serious eye damage/irritation;**

Category 1

**(d) respiratory or skin sensitization;****Respiratory**

Based on available data, the classification criteria are not met

**Skin**

Based on available data, the classification criteria are not met

**(e) germ cell mutagenicity;**

On basis of test data Based on available data, the classification criteria are not met

Not mutagenic in AMES Test

**(f) carcinogenicity;**

Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;****Reproductive Effects**

Based on available data, the classification criteria are not met

Experiments have shown reproductive toxicity effects on laboratory animals.

**(h) STOT-single exposure;**

Based on available data, the classification criteria are not met

**(i) STOT-repeated exposure;**

Based on available data, the classification criteria are not met

**Target Organs**

Eyes, Respiratory system, Skin, Teeth, Gastrointestinal tract (GI), Liver, Kidney, Blood.

**(j) aspiration hazard;**

Based on available data, the classification criteria are not met

**Other Adverse Effects**

See actual entry in RTECS for complete information

**Symptoms / effects,  
both acute and delayed**

Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

**SECTION 12: ECOLOGICAL INFORMATION****12.1. Toxicity****Ecotoxicity effects**

The product contains following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Acetic acid	Pimephales promelas: LC50 = 88 mg/L/96h Lepomis macrochirus: LC50 = 75 mg/L/96h	EC50 = 95 mg/L/24h		Photobacterium phosphoreum: EC50 = 8.8 mg/L/15 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/25 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/5 min



Acetic acid

**12.2. Persistence and degradability** Expected to be biodegradable  
**Persistence** Miscible with water, Persistence is unlikely, based on information available.  
**Degradation in sewage treatment plant** Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**12.3. Bioaccumulative potential**  
 Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Acetic acid	-0.2	No data available

**12.4. Mobility in soil** The product is water soluble, and may spread in water systems. . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

**12.5. Results of PBT and vPvB assessment**  
 No data available for assessment

**12.6. Other adverse effects**  
**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste from Residues / Unused Products** Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)** According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

**Other Information** Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

**14.1. UN number** UN2789  
**14.2. UN proper shipping name** ACETIC ACID, GLACIAL  
**14.3. Transport hazard class(es)** 8  
**Subsidiary Hazard Class** 3  
**14.4. Packing group** II

### ADR

**14.1. UN number** UN2789  
**14.2. UN proper shipping name** ACETIC ACID, GLACIAL  
**14.3. Transport hazard class(es)** 8  
**Subsidiary Hazard Class** 3  
**14.4. Packing group** II

### IATA

**14.1. UN number** UN2789

Acetic acid

<b>14.2. UN proper shipping name</b>	ACETIC ACID, GLACIAL
<b>14.3. Transport hazard class(es)</b>	8
<b>Subsidiary Hazard Class</b>	3
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No hazards identified
<b>14.6. Special precautions for user</b>	No special precautions required
<b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories X = listed

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Acetic acid	200-580-7	-		X	X	-	X	X	X	X	X

### National Regulations

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Acetic acid	WGK 1	Class II : 0.50 kg/h (Massenstrom) Class II : 0.10 g/m <sup>3</sup> (Massenkonzentration)

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

Take note of Dir 94/33/EC on the protection of young people at work

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

### 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

### Full text of R-phrases referred to under sections 2 and 3

R10 - Flammable

R35 - Causes severe burns

### Full text of H-Statements referred to under sections 2 and 3

H226 - Flammable liquid and vapor

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japan Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**Acetic acid****WEL** - Workplace Exposure Limit**ACGIH** - American Conference of Industrial Hygiene**DNEL** - Derived No Effect Level**RPE** - Respiratory Protective Equipment**LC50** - Lethal Concentration 50%**NOEC** - No Observed Effect Concentration**PBT** - Persistent, Bioaccumulative, Toxic**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code**OECD** - Organisation for Economic Co-operation and Development**BCF** - Bioconcentration factor**TWA** - Time Weighted Average**IARC** - International Agency for Research on Cancer**PNEC** - Predicted No Effect Concentration**LD50** - Lethal Dose 50%**EC50** - Effective Concentration 50%**POW** - Partition coefficient Octanol:Water**vPvB** - very Persistent, very Bioaccumulative**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association**MARPOL** - International Convention for the Prevention of Pollution from Ships**ATE** - Acute Toxicity Estimate**VOC** - Volatile Organic Compounds**Key literature references and sources for data**

Suppliers safety data sheet,

Chemadvisor - LOLI,

Merck index,

RTECS

**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

**Creation Date** 05-May-2009**Revision Date** 24-Oct-2013**Revision Summary****Reason for revision** (M)SDS sections updated, 8.**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

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**End of Safety Data Sheet**