

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Revision: 18.05.2009

Printing date 18.05.2009

**1 Identification of substance****Product details**

Trade name

**Acetic acid, glacial**

Stock number:

36289

Manufacturer/Supplier:

Alfa Aesar  
Shore Road  
Port of Heysham Industrial Park  
Heysham Lancashire LA3 2XY  
United Kingdom

Office Tel: +44 (0) 1524 850506

Informing department:

Product safety department.

Emergency information:

Call Carechem 24 at +44 (0) 1865 407333

**2 Hazards identification**

Hazard designation:



C Corrosive

Information pertaining to particular dangers for man and environment

R 10 Flammable.

R 35 Causes severe burns.

GHS label elements

**Danger**

3.2/1A - Causes severe skin burns and eye damage.

**Warning**

2.6/3 - Flammable liquid and vapour.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/ equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

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 or doctor/physician.

Specific treatment (see label).

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Prevention:

Response:

Storage:

Disposal:

**3 Composition/information on ingredients**

Chemical characterization:

Designation: (CAS#)

Acetic acid (CAS# 64-19-7), 100%

Identification number(s):

EINECS Number:

200-580-7

Index number:

607-002-00-6

**4 First aid measures**

General information

Instantly remove any clothing soiled by the product.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek immediate medical advice.

**5 Fire fighting measures**

Suitable extinguishing agents

Carbon dioxide  
Fire-extinguishing powder  
Foam

Special hazards caused by the material, its products of combustion or flue gases:

Can be released in case of fire:

Carbon monoxide (CO)

Wear self-contained breathing apparatus.

Wear full protective suit.

Protective equipment:

**6 Accidental release measures**

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

Keep away from ignition sources.

Additional information:

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**7 Handling and storage**

Handling

Information for safe handling:

Keep containers tightly sealed.

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**Information about protection against explosions and fires:**

Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.

Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.

**Storage Requirements to be met by storerooms and containers:**

No special requirements.

**Information about storage in one common storage facility:**

Do not store together with oxidizing and acidic materials.  
Do not store together with alkalis (caustic solutions).

**Further information about storage conditions:**

Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
Store in a locked cabinet or with access restricted to technical experts or their assistants.

**8 Exposure controls and personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Components with critical values that require monitoring at the workplace:**

Acetic acid	ppm
ACGIH TLV	10; 15-STEL
Austria MAK	10
Belgium TWA	10; 15-STEL
Denmark TWA	10
Finland TWA	10; 15-STEL (skin)
France VLE	10
Germany MAK	10
Hungary TWA	10 mg/m <sup>3</sup> ; 20 mg/m <sup>3</sup> -STEL
Japan OEL	10
Korea TLV	10; 15-STEL
Netherlands MAC-TGG	25 mg/m <sup>3</sup>
Norway TWA	10
Poland TWA	5 mg/m <sup>3</sup> ; 35 mg/m <sup>3</sup> -STEL
Russia TWA	10; 5 mg/m <sup>3</sup> -STEL (skin)
Sweden NGV	5; 10-KTV
Switzerland TWA	10; 20-KZG-W
United Kingdom TWA	10; 15-STEL
Russia	10-STEL
Denmark	10-STEL
Finland	10-STEL
Hungary	10 mg/m <sup>3</sup> -STEL
Poland TWA	5 mg/m <sup>3</sup>
Sweden	10-STEL
USA PEL	10
Additional information:	No data

**Additional information:****Personal protective equipment General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.  
Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.

**Breathing equipment:**

Use breathing protection with high concentrations.

**Eye protection:**

Safety glasses  
Tightly sealed safety glasses.  
Full face protection

**Body protection:**

Face protection  
Protective work clothing.

**9 Physical and chemical properties:****General Information**

<b>Form:</b>	Liquid
<b>Colour:</b>	Colourless
<b>Smell:</b>	Pungent, makes eyes water

**Change in condition**

<b>Melting point/Melting range:</b>	16.6°C
<b>Boiling point/Boiling range:</b>	118.1°C
<b>Sublimation temperature / start:</b>	Not determined

**Flash point:**

40°C

**Ignition temperature:**

426.6°C

**Decomposition temperature:**

Not determined

**Critical values for explosion:**

<b>Lower:</b>	5.4 Vol %
<b>Upper:</b>	16.0 Vol %

**Steam pressure at 20°C:**

15.2 hPa

**Density at 20°C**1.049 g/cm<sup>3</sup>**Solubility in / Miscibility with**

**Water:** Fully miscible

**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

**Materials to be avoided:**

Acids  
Bases  
Oxidizing agents

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**Dangerous reactions:**  
**Dangerous products of decomposition:**

Amines  
Alcohols  
Metal powders  
Water/moisture  
No dangerous reactions known  
Carbon monoxide and carbon dioxide

**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	3310 mg/kg (rat)
Inhalative	LC50/1H	5620 ppm/1H (mouse)
Irritation of skin	mild	50 mg/24H (human)
	severe	50 mg/24H (rabbit) 525 mg (rabbit)

**Primary irritant effect:****on the skin:**

Caustic effect on skin and mucous membranes.  
Irritant for skin and mucous membranes.

**on the eye:**

Strong caustic effect.  
Irritant effect.

**Sensitization:**

No sensitizing effect known.

**Other information (about experimental toxicology):**

Mutagenic effects have been observed on tests with laboratory animals.  
Reproductive effects have been observed on tests with laboratory animals.  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**Additional toxicological information:****12 Ecological information:****General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.  
Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations****Product:****Recommendation**

Consult state, local or national regulations for proper disposal.  
Hand over to disposers of hazardous waste.  
Must be specially treated under adherence to official regulations.

**Uncleaned packagings:****Recommendation:**

Disposal must be made according to official regulations.

**Recommended cleaning agent:**

Water, if necessary with cleaning agent.

**14 Transport information****Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

**ADR/RID-GGVS/E Class:** 8 (CF1) Corrosive substances.  
**Kemler Number:** 83  
**UN-Number:** 2789  
**Packaging group:** II  
**Label:** 8+3  
**Designation of goods:** 2789 ACETIC ACID, GLACIAL  
**Limited quantities (LQ):** LQ22  
**Transport category:** 2  
**Tunnel restriction code:** D/E

**Maritime transport IMDG/GGVSea:**

**IMDG/GGVSea Class:** 8  
**UN Number:** 2789  
**Label:** 8+3  
**Packaging group:** II  
**Correct technical name:** ACETIC ACID, GLACIAL

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 8  
**UN/ID Number:** 2789  
**Label:** 8+3  
**Packaging group:** II  
**Correct technical name:** ACETIC ACID, GLACIAL

**UN "Model Regulation":**

UN2789, ACETIC ACID, GLACIAL, 8 (3), II

**15 Regulatory information****Designation according to EC guidelines:****Code letter and hazard designation of product:**

C Corrosive

**Risk phrases:**

10 Flammable.

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**Safety phrases:**

35 Causes severe burns.

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**National regulations****Information about limitation of use:**

Employment restrictions concerning young persons must be observed.

For use only by technically qualified individuals.

**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing data specification sheet:** Health, Safety and Environmental Department.**Contact:** Zachariah Holt**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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