



## SAFETY DATA SHEET

### Acetic acid 99.85%

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010, COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Product name	Acetic acid 99.85%
REACH registration number	01-2119475328-30-XXXX
CAS number	64-19-7
EC number	200-580-7

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

Identified uses	Not available.
Uses advised against	Not available.

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

Supplier	OR of LOTTE BP Chemical: KIST Europe Universitaet des Saarlandes Campus E71 66123 Saarbruecken Germany +49 681 9382 334 +49 681 9382 319 reach.it@kist-europe.de
Manufacturer	LOTTE BP Chemical 63-15, Sanggae-ro, Chungryang-eup, Ulju-gun, Ulsan 44987, Korea Tel: +82 52 279 1190-6

##### 1.4. Emergency telephone number

Emergency telephone	+49 551 19240 GIZ-Nord, Goettingen, Germany (English only)
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#### SECTION 2: Hazards identification

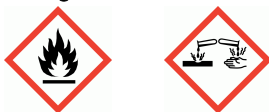
##### 2.1. Classification of the substance or mixture

###### Classification (EC/1272/2008)

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Skin Corr. 1A - H314
Environmental hazards	Not Classified

##### 2.2. Label elements

EC number	200-580-7
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**Acetic acid 99.85%****Pictogram****Signal word**

Danger

**Hazard statements**

H226 Flammable liquid and vapour.

H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe vapour/ spray.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/ shower.

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

P310 Immediately call a POISON CENTER/ doctor.

**Supplementary precautionary statements**

P233 Keep container tightly closed.

P240 Ground/ bond container and receiving equipment.

P241 Use explosion-proof electrical equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash contaminated skin thoroughly after handling.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P321 Specific treatment (see medical advice on this label).

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

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

P405 Store locked up.

P501 Dispose of contents/ container in accordance with national regulations.

**2.3. Other hazards****SECTION 3: Composition/information on ingredients****3.1. Substances**

<b>Product name</b>	Acetic acid 99.85%
<b>REACH registration number</b>	01-2119475328-30-XXXX
<b>CAS number</b>	64-19-7
<b>EC number</b>	200-580-7

**SECTION 4: First aid measures****4.1. Description of first aid measures**

<b>General information</b>	Get medical attention immediately.
<b>Inhalation</b>	IF INHALED: For breathing difficulties, oxygen may be necessary. Remove person to fresh air and keep comfortable for breathing.
<b>Ingestion</b>	IF SWALLOWED: Rinse mouth thoroughly with water. Do not induce vomiting. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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<b>Skin contact</b>	IF ON SKIN (or hair): Remove contaminated clothing immediately and wash skin with soap and water. Rinse with water. Wash contaminated clothing before reuse. Following contact with hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat and cover with clean cotton sheeting or gauze. If adhesive bonding occurs, do not force skin apart. Wash skin thoroughly with soap and water.
<b>Eye contact</b>	IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

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

**General information** Not available.

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

**Notes for the doctor** Not available.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use dry powder, dry sand or dry earth to extinguish.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

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

**Specific hazards** The product is flammable. Flammable liquid and vapour. Vapours may form explosive mixtures with air. Vapours may accumulate on the floor and in low-lying areas. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Heating may cause an explosion.

**Hazardous combustion products** Carbon monoxide (CO).

### 5.3. Advice for firefighters

**Protective actions during firefighting** Evacuate area. Fight fire from safe distance or protected location. Move containers from fire area if it can be done without risk. Do not allow water to enter the container as it will react with the product. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

**Special protective equipment for firefighters** Use protective equipment appropriate for surrounding materials.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Evacuate area. Keep unnecessary and unprotected personnel away from the spillage. Do not touch or walk into spilled material. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Avoid inhalation of dust and vapours. Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate. Do not handle broken packages without protective equipment.

### 6.2. Environmental precautions

**Environmental precautions** Avoid the spillage or runoff entering drains, sewers or watercourses. Do not discharge into drains or watercourses or onto the ground. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

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

**Methods for cleaning up** Stop leak if safe to do so. Contain and absorb spillage with sand, earth or other non-combustible material. Absorb spillage to prevent material damage. Approach the spillage from upwind. Avoid the spillage or runoff entering drains, sewers or watercourses. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Use only in well-ventilated areas. Avoid breathing gas, fume, vapours or spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Read label before use. Loosen closure cautiously before opening. Wear appropriate clothing to prevent repeated or prolonged skin contact. Do not enter storage areas or confined spaces unless adequately ventilated. Empty containers or liners may retain some product residues and hence be potentially hazardous. Do not pressurise, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition.

**Advice on general occupational hygiene** Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

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

**Storage precautions** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Store in a cool and well-ventilated place. Store locked up. Store in corrosive resistant container with a resistant inner liner. Keep away from food and drink.

### 7.3. Specific end use(s)

**Specific end use(s)** Not available.

## SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

**Biological limit values** Not available.

### 8.2. Exposure controls

#### Protective equipment



**Appropriate engineering controls**

Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure.

**Eye/face protection**

Eye wash facilities and emergency shower must be available when handling this product. Chemical splash goggles and face shield.

**Hand protection**

It is recommended that chemical-resistant, impervious gloves are worn. It is recommended that gloves are made of the following material: Butyl rubber.

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<b>Other skin and body protection</b>	Wear protective clothing.
<b>Hygiene measures</b>	When using do not eat, drink or smoke.
<b>Respiratory protection</b>	Wear a respirator fitted with the following cartridge: Acid gas filter. Wear a full facepiece, supplied-air respirator. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.
<b>Environmental exposure controls</b>	Avoid the spillage or runoff entering drains, sewers or watercourses.

**SECTION 9: Physical and Chemical Properties****9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Acetic acid.
<b>pH</b>	2.47
<b>Melting point</b>	17°C
<b>Initial boiling point and range</b>	118°C
<b>Flash point</b>	39°C
<b>Evaporation rate</b>	0.97
<b>Upper/lower flammability or explosive limits</b>	Upper flammable/explosive limit: 16 % Lower flammable/explosive limit: 5.4 %
<b>Vapour pressure</b>	15.7 mm Hg @ 25°C
<b>Solubility(ies)</b>	100 g / 100 ml
<b>Partition coefficient</b>	log Kow: -0.17
<b>Auto-ignition temperature</b>	427°C
<b>Viscosity</b>	1.22 cP @ 20°C

**9.2. Other information**

<b>Molecular weight</b>	60.05
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**SECTION 10: Stability and reactivity****10.1. Reactivity**

<b>Reactivity</b>	Flammable/combustible materials. May be corrosive to metals.
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**10.2. Chemical stability**

<b>Stability</b>	Stable at normal ambient temperatures. May polymerise.
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**10.3. Possibility of hazardous reactions**

<b>Possibility of hazardous reactions</b>	May cause fire or explosion; strong oxidiser. Toxic and corrosive gases or vapours.
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**10.4. Conditions to avoid**

**Acetic acid 99.85%**

**Conditions to avoid** Keep away from heat, sparks and open flame. Avoid heat, flames and other sources of ignition.

**10.5. Incompatible materials**

**Materials to avoid** Amines. Oxidising agents. Some metals. Peroxides. Alkalis.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO).

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 3,310.0

**Species** Rat

**Acute toxicity - dermal**

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 1,060.0

**Species** Rabbit

**Acute toxicity - inhalation**

**Acute toxicity inhalation (LC<sub>50</sub> gases ppmV)** 16,000.0

**Species** Rat

**Skin corrosion/irritation**

**Skin corrosion/irritation** Slightly irritating.

**Serious eye damage/irritation**

**Serious eye damage/irritation** Slightly irritating.

**Respiratory sensitisation**

**Respiratory sensitisation** Not available.

**Skin sensitisation**

**Skin sensitisation** Not available.

**Germ cell mutagenicity**

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

**Genotoxicity - in vivo** Based on available data the classification criteria are not met.

**Carcinogenicity** Based on available data the classification criteria are not met.

**NTP carcinogenicity** Not listed.

**Reproductive toxicity**

**Reproductive toxicity - fertility** Not available.

**Reproductive toxicity - development** Developmental toxicity: - NOAEL: 1600 mg/kg, Oral, Rat

**Specific target organ toxicity - single exposure**

**STOT - single exposure** Not available.

**Acetic acid 99.85%****Specific target organ toxicity - repeated exposure**

**STOT - repeated exposure** NOAEL 290 mg/kg/day, Oral, Rat

**Target organs** Not specified.

**Aspiration hazard**

**Aspiration hazard** Not available.

**SECTION 12: Ecological Information****12.1. Toxicity**

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: >300.82 mg/l, Onchorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: >300.82 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: >300.82 mg/l, Algae

**Acute toxicity - microorganisms** NOEC, 16 hours: 1150 mg/l, Pseudomonas putida

**Chronic toxicity - fish early life stage** NOEC, 21 days: 34.3 mg/l, Onchorhynchus mykiss (Rainbow trout)

**Chronic toxicity - aquatic invertebrates** NOEC, 21 days: 31.4 mg/l, Daphnia magna

**12.2. Persistence and degradability**

**Biodegradation** The substance is readily biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential** The product is not bioaccumulating.

**Partition coefficient** log Kow: -0.17

**12.4. Mobility in soil**

**Mobility** Not available.

**Adsorption/desorption coefficient** Koc 1.153

**Henry's law constant** 0.21 Pa m<sup>3</sup>/mol @ 25°C

**12.5. Results of PBT and vPvB assessment**

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

**12.6. Other adverse effects**

**Other adverse effects** Not applicable.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**General information** Dispose of waste product or used containers in accordance with local regulations

**SECTION 14: Transport information****14.1. UN number**

**UN No. (ADR/RID)** 2789

**Acetic acid 99.85%**

UN No. (IMDG) 2789

UN No. (ICAO) 2789

**14.2. UN proper shipping name**

Proper shipping name (ADR/RID) ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION

Proper shipping name (IMDG) ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION

Proper shipping name (ICAO) ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION

Proper shipping name (ADN) ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION

**14.3. Transport hazard class(es)**

ADR/RID class 8

ADR/RID subsidiary risk 3

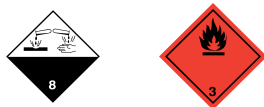
ADR/RID label 8 &amp; 3

IMDG class 8

IMDG subsidiary risk 3

ICAO class/division 8

ICAO subsidiary risk 3

**Transport labels****14.4. Packing group**

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

**14.5. Environmental hazards**

Environmentally hazardous substance/marine pollutant

No.

**14.6. Special precautions for user**

EmS F-E, S-C

Emergency Action Code 2P

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code****SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU legislation** Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

**Authorisations (Title VII Regulation 1907/2006)** No specific authorisations are known for this product.



## Acetic acid 99.85%

**Restrictions (Title VIII Regulation 1907/2006)** No specific restrictions on use are known for this product.

### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Revision comments</b>	This is first issue.
<b>Issued by</b>	KIST Europe
<b>Revision date</b>	07/05/2018
<b>SDS number</b>	20629
<b>Hazard statements in full</b>	H226 Flammable liquid and vapour. H314 Causes severe skin burns and eye damage.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.