

An ISO 9001: 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel: + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Acetic acid glacial, 99.9985%

Product Code: A 4726 CAS No: 64-19-7

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

Use: Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification OTTO CHEMIE PVT LTD

101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,

Chinchpada, Vasai East, Waliv, Maharashtra 401208.

Email info@ottokemi.com

1.4. Emergency telephone number

Phone no.: + 91 22 2207 0099 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3), H226 Skin corrosion (Sub-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 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word Danger Hazard statement(s)

H226 Flammable liquid and vapor.

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

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.

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.

Supplemental Hazard

Statements

none

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word Danger

Hazard statement(s)

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

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.

P305 + P351 + P338 +

P310

IF IN EYES: Rinse cautiously with water for several minutes.

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. Supplemental Hazard Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Glacial acetic acid

Formula: C2H4O2

Molecular weight: 60,05 g/mol

CAS-No.: 64-19-7 EC-No.: 200-580-7 Index-No.: 607-002-00-6

Component Classification Concentration

acetic acid CAS-No. EC-No. Index-No. 64-19-7 200-580-7 607-002-00-6

Flam. Liq. 3; Skin Corr. 1A; Eye Dam. 1; H226,

H314, H318

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; 10 - < 25 %: Eye Irrit. 2, H319; 10 - < 25

%: Skin Irrit. 2, H319; 10 - < 25

- < 90 %: Skin Corr. 1B,

H314; >= 90 %: Skin

Corr. 1A, H314; >= 90 %:

3, H226;

<= 100 %

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

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001: 2015 & GMP Certified Company

101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel: + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO2) 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.

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.

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⁺, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

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.

Moisture sensitive.

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

SECTION 8: Exposure controls/personal protection

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

Otto Chemie Pvt Ltd - provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy.

This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product

An ISO 9001: 2015 & GMP Certified Company

101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel: + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

8.1 Control parameters

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

Application Area Routes of

exposure

Health effect Value

Workers Inhalation Acute local effects 25 mg/m3

Workers Inhalation Long-term local effects 25 mg/m3

Workers Skin contact Long-term local effects 10mg/kg BW/d

Consumers Inhalation Acute local effects 25 mg/m3

Consumers Inhalation Long-term local effects 25 mg/m3

Predicted No Effect Concentration (PNEC)

Compartment Value

Soil 0,478 mg/kg

Sea water 0,3058 mg/l

Fresh water 3,058 mg/l

Sea sediment 1,136 mg/kg

Fresh water sediment 11,36 mg/kg

Sewage treatment plant 85 mg/l

Aquatic intermittent release 30,58 mg/l

8.2 Exposure controls

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

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU)

2016/425 and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm Break through time: 480 min

Splash contact

Material: Nature latex/chloroprene Minimum layer thickness: 0,6 mm

Break through time: 32 min

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Flame retardant antistatic protective clothing.

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.

Control of environmental exposure

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

otto chemie pvt ltd

An ISO 9001: 2015 & GMP Certified Company

101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel: + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

liquid

colorless

stinging

463 °C

16,2 °C - lit.

117 - 118 °C - lit.

39 °C - closed cup

2,5 at 50 g/l at 20 °C

No data available

20,79 hPa at 25 °C

No data available

No data available

No data available

No data available

none

1,049 g/cm3 at 25 °C - lit.

Upper explosion limit: 19,9 %(V)

Viscosity, kinematic: 1,17 mm2/s at 20 °C

Distillable in an undecomposed state at normal pressure.

log Pow: -0,17 at 25 °C - Bioaccumulation is not expected.(ECHA)

602,9 g/l at 25 °C at 1.013 hPa - completely soluble

Lower explosion limit: 4 %(V)

Not applicable

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state

b) Color

c) Odor

d) Melting point/freezing point

Melting point/range: e) Initial boiling point and boiling range

f) Flammability (solid,gas)

g) Upper/lower

flammability or explosive limits

h) Flash point

i) Autoignition temperature

j) Decomposition temperature

k) pH

I) Viscosity

Viscosity, dynamic:

m) Water solubility

n) Partition coefficient: n-octanol/water

o) Vapor pressure

p) Density

Relative density

q) Relative vapor density

r) Particle characteristics

s) Explosive properties

t) Oxidizing properties

9.2 Other safety information

Surface tension 28,8 mN/m at 10,0 °C

Relative vapor Density 2,07

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: No data available

10.4 Conditions to avoid

Heating

10.5 Incompatible materials

Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides,

permanganates, for example potassium permanganate, Amines, Alcohols, Nitric acid

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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: (IUCLID)

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company

101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel: + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

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

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: Micronucleus test

Species: Rat

Cell type: Bone marrow

Application Route: inhalation (vapor)
Method: Mutagenicity (micronucleus test)

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 11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain

components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU)

2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: AF1225000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts. Symptoms include: hematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, pancreatitis, hematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse, shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis, fissures, corneal erosion, opacification, iritis, conjunctivitis, and possible blindness.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - >

1.000 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001: 2015 & GMP Certified Company

101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel: + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

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 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)

12.2 Persistence and degradability

Biodegradability Result: 99 % - Readily biodegradable.

(OECD Test Guideline 301D)

Remarks: (HSDB)

Result: 95 % - Readily eliminated from water

(OECD Test Guideline 302B) Biochemical Oxygen Demand (BOD)

880 mg/g

Remarks: (Lit.)

Ratio BOD/ThBOD 76 %

Remarks: (IUCLID)

12.3 Bioaccumulative potential:No data available

12.4 Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent,

bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 2789 IMDG: 2789 IATA: 2789 14.2 UN proper shipping name ADR/RID: ACETIC ACID, GLACIAL IMDG: ACETIC ACID, GLACIAL IATA: Acetic acid, glacial 14.3 Transport hazard class(es) ADR/RID: 8 (3) IMDG: 8 (3) IATA: 8 (3)

14.4 Packaging group ADR/RID: II IMDG: II IATA: II 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user Tunnel restriction code : (D/E)

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.



An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

Further information: No data available

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No.

1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous

substances

: FLAMMABLE LIQUIDS

: FLAMMABLE LIQUIDS

Other regulations

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

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

