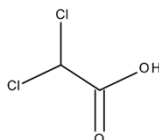


MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form : Substance
:
:
EC no : 201-207-0
CAS No : 79-43-6
Product code : 3272D
Chemical structure :



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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (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 [CLP]

Acute toxicity (dermal), H311
Category 3
Skin corrosion/irritation, H314
Category 1
Carcinogenicity, Category H351
2
Hazardous to the aquatic H400
environment — Acute
Hazard, Category 1

Full text of classification categories and H statements : see section 16

Dichloroacetic acid Extra Pure

Safety Data Sheet

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS06

GHS08

GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H351 - Suspected of causing cancer
H400 - Very toxic to aquatic life

Precautionary statements (CLP) : P273 - Avoid release to the environment
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
P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%
Dichloroacetic acid Extra Pure	(CAS No) 79-43-6 (EC no) 201-207-0	100

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

Dichloroacetic acid Extra Pure

Safety Data Sheet

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Take off contaminated clothing. Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting because of corrosive effects. If you feel unwell, seek medical advice.

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

- Symptoms/injuries : Causes severe skin burns and eye damage.
- Symptoms/injuries after skin contact : Toxic in contact with skin.
- Chronic symptoms : Suspected carcinogen.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry chemical, CO₂, dry sand, or alcohol-resistant foam.
- Unsuitable extinguishing media : Carbon dioxide (CO₂). Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Stop release. Ventilate area.

6.2. Environmental precautions

Very toxic to aquatic life.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin, eyes and clothing. Do not breathe vapours. Handle carefully.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Dichloroacetic acid Extra Pure

Safety Data Sheet

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place. Keep cool. Protect from sunlight.

Incompatible products : Oxidizing agent. Strong bases. Strong acids.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Wear appropriate mask

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Molecular mass : 128.94 g/mol

Colour : Colourless to Light yellow.

Odour : No data available

Odour threshold : No data available

pH : 1.2 at 129 g/l at 20 °C

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 9 - 11 °C

Freezing point : No data available

Boiling point : 194 °C

Flash point : 113 °C

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Vapour pressure at 50 °C : 0.19 mm Hg

Relative vapour density at 20 °C : 4.45

Dichloroacetic acid Extra Pure

Safety Data Sheet

Relative density	: No data available
Density	: 1.563 g/cm ³ at 25 °C
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

May be corrosive to metals. Heating may cause a fire.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Open flame. Heat. Sparks.

10.5. Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Dermal: Toxic in contact with skin.
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 1.2 at 129 g/l at 20 °C
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 1.2 at 129 g/l at 20 °C
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

Dichloroacetic acid Extra Pure

Safety Data Sheet

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 1764
UN-No. (IMDG)	: 1764
UN-No.(IATA)	: 1764
UN-No.(ADN)	: Not regulated
UN-No. (RID)	: Not regulated

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: DICHLOROACETIC ACID
Proper Shipping Name (IMDG)	: DICHLOROACETIC ACID
Proper Shipping Name (IATA)	: DICHLOROACETIC ACID
Proper Shipping Name (ADN)	: Not regulated

Dichloroacetic acid Extra Pure

Safety Data Sheet

Proper Shipping Name (RID)	: Not regulated
Transport document description (ADR)	: UN 1764 DICHLOROACETIC ACID, 8, II, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1764 DICHLOROACETIC ACID, 8, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1764 DICHLOROACETIC ACID, 8, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 8
Danger labels (ADR)	: 8



IMDG

Transport hazard class(es) (IMDG)	: 8
Danger labels (IMDG)	: 8



IATA

Transport hazard class(es) (IATA)	: 8
Hazard labels (IATA)	: 8



ADN

Transport hazard class(es) (ADN)	: Not regulated
----------------------------------	-----------------

RID

Transport hazard class(es) (RID)	: Not regulated
----------------------------------	-----------------

14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: Not regulated
Packing group (RID)	: Not regulated

14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

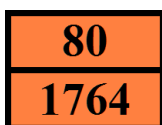
Dichloroacetic acid Extra Pure

Safety Data Sheet

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: C3
Limited quantities (ADR)	: 1L
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T8
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2X

- Transport by sea

Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
IBC special provisions (IMDG)	: B20
Tank instructions (IMDG)	: T8
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: A

- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
ERG code (IATA)	: 8i

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Dichloroacetic acid Extra Pure

Safety Data Sheet

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Dichloroacetic acid Extra Pure is not on the REACH Candidate List

Dichloroacetic acid Extra Pure is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 2, hazardous to water (Classification according to VwVwS, Annex 3; WGK No 243)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Skin Corr. 1	Skin corrosion/irritation, Category 1
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H351	Suspected of causing cancer
H400	Very toxic to aquatic life

Dichloroacetic acid Extra Pure

Safety Data Sheet

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product