MATERIAL SAFETY DATA SHEET

Acetic Acid

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

1.1 Product Identifier

Particular	Details
PRODUCT NAME	Acetic acid, Glacial
CAS RN	64-19-7
EC#	200-580-7
SYNONYMS	Ethanoic acid, Methanecarboxylic acid
SYSTEMATIC NAME	Ethanoic acid
MOLECULAR FORMULA	CH_3COOH
STRUCTURAL FORMULA	$HO–C(=O)–CH_3$

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

1.2.1 Relevant Identified Uses

- Used in the manufacture of chemicals such as:
    - Vinyl Acetate Monomer
    - Acetic Anhydride
    - Acetate Esters
    - Chloroacetic Acid
- Used as a solvent in the manufacture of terephthalic acid and other applications.
- Used in the:
    - Textile Industry
    - Pharmaceutical Industry
    - Photographic Industry
    - Dyestuff Industry
    - Pesticide Industry
    - Rubber Industry

- Used to make specialty chemicals such as Sorbic Acid.

Uses Advised Against

None.

1.3 Details of the Supplier of the Safety Data Sheet

COSMO CHEMISTRY

Office No. 713, Millennium Business Hub,
Sarthana Jakatnaka, Varachha Main Road,
Surat, Gujarat, India – 395006
Phone : +91 979797 7958
e-mail : info@cosmochemistry.com

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the Substance or Mixture

GHS-US Classification

Hazard	Classification
Skin Corrosion	Category 1B
Metal Corrosive	Category 1
Flammable Liquid	Category 3
Serious Eye Damage	Category 1
Acute Toxicity (Inhalation)	Category 4
Harmful to Aquatic Life	Category 3

2.2 Label Elements

Hazard Pictogram

GHS 05 (Corrosive) and **GHS 02** (Flammable)

Signal Word

DANGER

HAZARD AND PRECAUTIONARY STATEMENTS

Hazard Statements

- **H314:** Causes severe skin burns and eye damage.
- **H290:** May be corrosive to metals.

- **H226:** Flammable liquid and vapour.
- **H318:** Causes serious eye damage.
- **H332:** Harmful if inhaled.
- **H412:** Harmful to aquatic life with long lasting effects.

Precautionary Statements

- **P273:** Avoid release to the environment.
- **P280:** Wear protective gloves/protective clothing/eye protection/face protection.
- **P260:** Do not breathe dust/fume/gas/mist/vapours/spray.
- **P264:** Wash hands thoroughly after handling.
- **P261:** Avoid breathing fume/mist/vapors/spray.
- **P271:** Use only outdoors or in a well-ventilated area.
- **P234:** Keep only in original container.
- **P210:** Keep away from heat, sparks, open flames and hot surfaces. No smoking.
- **P233:** Keep container tightly closed.
- **P240:** Ground/bond container and receiving equipment.
- **P241:** Use explosion proof electrical/ventilating/lighting equipment.
- **P242:** Use only non-sparking tools.
- **P243:** Take precautionary measures against static discharge.
- **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.
- **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.
- **P363:** Wash contaminated clothing before reuse.
- **P304 + P340:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- **P321:** Specific treatment reference to supplemental first aid instruction, if immediate specific measures are required.
- **P312:** Call a POISON CENTER or doctor/physician.
- **P390:** Absorb spillage to prevent material damage.
- **P370 + P378:** In case of fire use Manufacturer/supplier specified appropriate media for extinction.

- **P405:** Store locked up.
- **P406:** Store in a corrosive resistant container with a resistant inner liner.
- **P403 + P235:** Store in a well-ventilated place. Keep cool.
- **P501:** Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical	CAS #	Purity	GHS-US Classification
Acetic Acid	64-19-7	~100%	Skin Corrosion Category 1B, Metal Corrosive Category 1, Flammable Liquid Category 3, Serious Eye Damage Category 1, Acute Toxicity Inhalation Category 4, Harmful to Aquatic Life Category 3

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Key Symptoms

Acute Effects

- **Eyes:** Redness, pain, burns, loss of vision.
- **Skin:** Pain, redness, burns.
- **Inhalation:** Sore throat, cough, burning sensation, shortness of breath, labored breathing. Symptoms may be delayed and may be aggravated by physical exertion.
- **Ingestion:** Abdominal pain, burning sensation, diarrhea, shock or collapse, sore throat or vomiting.

Chronic Effects

Workers exposed for 7–12 years at concentrations of 60 ppm, plus 1 hour daily at 100–200 ppm had conjunctivitis, bronchitis, pharyngitis, and erosion of exposed teeth.

First Aid Measures

Eyes

- If in eyes rinse cautiously with water for at least 15 minutes.
- Remove contact lenses if easy to do so.
- Continue rinsing.
- Seek medical attention.

Skin

- Immediately take off all contaminated clothing.
- Wash thoroughly with water for at least 15 minutes.
- Wash contaminated clothes before reuse.
- Seek immediate medical attention.

Inhalation

- Remove to fresh air and keep at rest in a position comfortable for breathing.
- Call a physician if you feel unwell.

Ingestion

- If swallowed call a poison center if you feel unwell.
- Rinse mouth.
- Do NOT induce vomiting by use of emetics.
- Seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Appropriate Extinguishing Media

- Alcohol resistant foam
- Dry chemical powder
- Carbon dioxide
- Water spray or fog (for large fires)
- Water in direct jets may be ineffective to extinguish.
- Water in flooding quantities may be used.

Special Protective Equipment and Precautions for Fire Fighters

- Fire fighters must wear Self Contained Breathing Apparatus (SCBA) and full protective clothing.
- The chemical is corrosive on contact.
- Report any run-off of firewaters contaminated with this chemical as per local and federal procedures applicable.

Unusual Fire and Explosion Hazard

- Toxic vapors may be released on thermal decomposition including carbon monoxide and carbon dioxide.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air and may accumulate in low-lying areas like basements and drains.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Minor Spills

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing vapors and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wear protective clothing, boots, impervious gloves and safety glasses.
- Wipe up.
- Decontaminate all equipment.

Major Spill

- Alert Emergency Responders and tell them location and nature of hazard.
- Shut off all possible sources of ignition and increase ventilation.
- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Clear area of personnel and move upwind.
- Stop leaks if possible.
- Prevent, by any means available, spillage from entering drains or water and watercourses.
- Collect recoverable product into labeled containers for recycling, recovery or disposal.
- Contain spill with sand, earth or vermiculite.
- Spread area with lime or absorbent material, and leave for at least 1 hour before washing.
- Clean up all tools and equipment.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

- Do not breathe vapor or mist.
- Wear protective gloves/clothing and eye/face protection.

- Wash thoroughly after handling.
- Ground and secure containers when dispensing or pouring product.
- Avoid contact with incompatible materials.
- When handling, **DO NOT** eat, drink or smoke.
- Launder contaminated clothing before re-use.
- If on skin or hair, **IMMEDIATELY** remove all contaminated clothing and rinse/shower with plenty of water.
- Use in a well ventilated place.
- Use protective clothing commensurate with exposure levels.

Storage

- Store in a cool, well ventilated place.
- Store away from incompatible materials.
- Keep container tightly closed.
- Keep securely closed when not in use.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Exposure Limits

1 ppm = 2.494 mg/m³

Chemical Name	Regulatory Bodies	TLV (8 Hr) ppm	TLV (8 Hr) mg/m³	STEL (15 min.) ppm	STEL (15 min.) mg/m³	STEL (5 min.) mg/m³
Acetic Acid	US ACGIH TLV (2001)	10	-	15	-	-
Acetic Acid	US OSHA (PELs)	10	25	-	-	-
Acetic Acid	NIOSH REL	10	25	15	37	-
Acetic Acid	MAK (DE)	-	25	-	-	50
Acetic Acid	OES (UK)	-	25	-	-	-
Acetic Acid	India (PEL)	10	25	-	-	-
Acetic Acid	EU OEL (Europe, 4/2004)	10	25	-	-	-

TEEL Values (US DOE) Rev. 20, 2004

Values	Concentration	Health Effects
TEEL 0	5 ppm	No average appreciable risk of health effects
TEEL 1	5 ppm	Mild transient health effects or clearly defined objectionable odor
TEEL 2	35 ppm	Irreversible or other serious health effects or symptoms that could impair abilities to take protective action
TEEL 3	250 ppm	Maximum concentration in air below which nearly all individuals could be exposed without experiencing or developing life-threatening health effects

Immediately Dangerous to Life and Health (IDLH): 50 ppm

Exposure Controls

Appropriate Engineering Controls

- Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.
- Local ventilation is usually preferred.
- Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Hands

Compatible gloves (Butyl rubber gloves).

Eyes

Safety goggles/Chemical Safety glasses and Face shield.

Clothing

Boots and clothing to prevent contact.

Respiratory Protection

Follow the OSHA respirator regulations found in **29 CFR 1910.134** or European Standard **EN 149**.

Always use a **NIOSH** or **European Standard EN 149** approved respirator when necessary.

1–10 Times OEL

Use:

- Air-purifying respirator with full facepiece and organic vapor cartridge(s), or
- Air-purifying full facepiece respirator with an organic vapor canister, or
- Full facepiece powered air-purifying respirator fitted with organic vapor cartridge(s).

The air purifying element must have an end of service life indicator, or a documented change-out schedule must be established. Otherwise, use supplied air if in doubt.

More Than 10 Times OEL and Less Than:

- 100 times the occupational exposure level, or
- The IDLH value

Use:

Type C full face piece supplied-air respirator operated in positive-pressure or continuous flow mode.

More Than 100 Times OEL or Greater Than IDLH or Unknown Concentrations

Use:

Self-contained breathing apparatus with full face piece in positive-pressure mode or Type C positive-pressure full face piece supplied-air respirator with an auxiliary positive-pressure self-contained breathing apparatus (SCBA) escape system.

Escape Respirators

Escape respirators are designed to be used only in an emergency and only to escape from a dangerous area to a safe area, typically designed for one-time use for a short period, typically **15 minutes to 1 hour**.

Protective Material

Material	Grade
BUTYL; NEOPRENE; NITRILE+PVC; PE; SARANEX-23; TEFLON; PE/EVAL/PE; PVC	A
NATURAL RUBBER; NITRILE; BUTYL/NEOPRENE; NATURAL + NEOPRENE	B
NAT + NEOPR + NITRILE	C

Material Grade Description

- **A:** Best Selection.
- **B:** Satisfactory; may degrade after 4 hours continuous immersion.
- **C:** Poor to Dangerous Choice for other than short-term immersion.

General Industrial Hygiene

- Use in a flame proof area.
- Wash thoroughly after handling.
- The material is an acid and corrosive to both skin and several metals.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Sr. No.	Parameter	Typical Value
1	Appearance	Colorless liquid
2	Odor	Sour vinegar like odor. (NIOSH)
3	pH	Aq. soln 1.0 molar = 2.4; 0.1 molar = 2.9; 0.01 molar = 3.4
4	pKa (@25°C)	4.76
5	Melting Point	16.7°C
6	Boiling Point	118°C
7	Flash Point	39°C (103°F)
8	Evaporation Rate (n-BuAc = 1)	0.97
9	Explosive Limits	5.4 – 16%
10	Vapor Pressure	1.5 kPa @ 20°C
11	Relative Vapor Density (Air = 1)	2.1
12	Relative Density	1.0492 at 20°C
13	Solubility	Miscible in alcohol, acetone, glycerol, ether, carbon tetrachloride and benzene. Insoluble in CS_2
14	Refractive Index	Not available
15	Log Kow (octanol/water)	-0.17 (ACS 1995)
16	Auto-ignition Temperature	485°C
17	Decomposition Temperature	Not available
18	Viscosity	1.056 mPa-s @ 25°C (CRC Handbook)
19	Surface Tension	Not Available
20	Static Charge Development	Not Available
21	Molecular Weight	60.1
22	Flammable Material	Yes
23	Corrosive Material	Yes

Sr. No.	Parameter	Typical Value
24	Explosive Material	No

Note: The numbering in the original SDS skips Sr. No. 3 and continues from 4. The values have been reproduced exactly as provided in the document.

SECTION 10: STABILITY AND REACTIVITY

Stability

This chemical is stable.

Conditions to Avoid

- Keep away from heat, sparks and flame.
- Reactive with metals, oxidizing materials and bases (including amines).
- May react violently with PCl_3 if used to prepare acid chloride.

Incompatible Chemicals

Reactive with:

- Metals
- Oxidizing materials
- Bases (including amines)

Hazardous Decomposition

When heated to decomposition it emits irritating fumes. *(Lewis, R.J. Sax's Dangerous Properties of Industrial Materials. 9th ed. Volumes 1–3. New York, NY: Van Nostrand Reinhold, 1996. p. 12).*

These may include:

- Toxic fumes of Carbon Monoxide.

Hazardous Polymerization

Not reported.

SECTION 11: TOXICOLOGICAL INFORMATION (Beginning)

11.1 Information on Toxicological Effects

a) Acute Toxicity

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

a) Acute Toxicity

Sr. No.	Parameter	Test Value	Effect	Reference
1	Acute Toxicity (Oral)	Rat LD_{50}: 3310 mg/kg	Not reported	RTECS# AF1225000200602
2	Acute Toxicity (Dermal)	Rabbit LD_{50}: 1060 µL/kg	Not reported	RTECS# AF1225000200602
3	Acute Toxicity (Inhalation)	Rat LD_{50}: 11.4 mg/L / 4 Hr	Not reported	BASF (IUCLID Feb. 2000)
4	Human (TDLo)	1470 µg/kg	Gastrointestinal changes in structure or function of esophagus, ulceration or bleeding from small intestine and large intestine	RTECS# AF1225000200602
5	Acute Toxicity (Inhalation)	Rat LD_{50}: 5620 ppm / 1 Hr	Eye conjunctival irritation, blood changes and effects not otherwise specified	RTECS# AF1225000200602

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b) Skin Corrosion / Irritation

- Acetic acid is corrosive and harmful on skin contact.
- Repeated or prolonged contact with skin may cause dermatitis.

Sr. No.	Parameter	Test Value	Effect	Reference
1	Skin Corrosion / Irritation	Human Skin – 50 mg / 24 hr	Mild	RTECS# AF1225000200602
2	Skin Corrosion / Irritation	Rabbit Skin – 525 mg	Severe	RTECS# AF1225000200602

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c) Serious Eye Damage / Irritation

Sr. No.	Parameter	Test Value	Effect	Reference
1	Eye Damage / Irritation	Rabbit Eye	Highly Irritating	Hoechst AG (IUCLID Feb. 2000)

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d) Respiratory or Skin Sensitization

- Long-term exposure can lead to chronic inflammation of the respiratory tract. *(CCOHS 1984).*

- **Long-term exposure can lead to darkening of the skin and erosion of tooth enamel.**
- **Repeated or prolonged contact with skin may cause dermatitis.**
- **The substance may have effects on the gastrointestinal tract resulting in digestive disorders including pyrosis and constipation. *(IPCS, CEC; International Chemical Safety Card on Acetic Acid, October 1997).***

Workers exposed for a number of years to concentrations of up to 200 ppm have been found to suffer from:

- **Palpebral edema with hypertrophy of the lymph nodes.**
- **Conjunctival hyperanaemia.**
- **Chronic pharyngitis.**
- **Chronic catarrhal bronchitis.**
- **In some cases asthmatic bronchitis.**
- **Traces of erosion on the vestibular surface of teeth (incisors and canines).**

Following repeated exposures, workers may complain of:

- **Digestive disorders.**
- **Pyrosis.**
- **Constipation.**

The skin on palms of hands becomes:

- **Dry**
- **Cracked**
- **Hyperkeratotic**

(ILO, 1998).

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e) Germ Cell Mutagenicity

Sr. No.	Parameter	Test Value	Effect	Reference
1	Genetic Toxicity (Ames Salmonella)	Dose: 100–6666 µg/Plate	Negative	NTP Acetic Acid 64197

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f) Carcinogenicity

- **Not listed by NTP, IARC and OSHA.**
- **Not present on the EU CMR list.**
- **According to information presently available, Acetic Acid has been tested and not found to be carcinogenic.**

g) Reproductive Toxicity

According to present information Acetic Acid is not believed to possess a reproductive hazard. *(NJ Hazardous Substance Fact Sheet RTK 004 Rev. 1998).*

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h) Aspiration Hazard

No information available.

SECTION 12: ECOLOGICAL INFORMATION

a) Toxicity

Ecotoxicity – Fish

- **Bluegill (96 Hr LC_{50}): 75 mg/L**

Pimephales promelas (Fathead Minnow)

Exposure Period	LC_{50}
1 Hr	>315 mg/L
24 Hr	122 mg/L
48 Hr	92 mg/L
72 Hr	88 mg/L
96 Hr	88 mg/L

Crustacea

Daphnia Magna (pH 7)

Parameter	Value
EC_0 (24 Hr)	950 mg/L
EC_{50} (24 Hr)	6000 mg/L
EC_{100} (24 Hr)	7145 mg/L

Additional Data:

- **Daphnia Magna (24 Hr LC_{50}): 47 mg/L**
- **Artemia Salina (48 Hr LC_{50}): 32 mg/L**

Additional Information:

- **Harmful to aquatic organisms. *(IPCS 1999).***

- **High concentrations will produce pH levels toxic to oxidizing bacteria, inhibiting oxygen demand.** ***(Environment Canada 1981, HSDB HSN 40 20050624).***
- **EC_{50} Tobacco fumigation: 41 mg/cu.m/2 hr**
    - **Effect: Leaf injury** ***(95% confidence interval 4–79).***

(Verschueren, K. Handbook of Environmental Data on Organic Chemicals, 4th Edition, 2001, p.102.)

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods

- **EPA Hazardous Waste Code(s): D002**
- **Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws.**
- **It is recommended that the waste products should not be disposed into the sewage.**
- **Disposal regulations may also apply to empty containers and equipment rinsates.**

SECTION 14: TRANSPORT INFORMATION

This substance is considered hazardous for transport by:

- **Air**
- **Rail**
- **Road**
- **Sea**

and is regulated by:

- **IATA**
- **ICAO**
- **ADR**
- **RID**
- **IMO**
- **IMDG**

Transport Agency	UN Number	Proper Shipping Name	Hazard Class	Packing Group
ADR/RIC (Land Transport)	UN2789	Acetic Acid	Class 8 (Sub Risk 3)	II
IMDG (Maritime Transport)	UN2789	Acetic Acid	Class 8 (Sub Risk 3)	II
IATA (Air Transport)	UN2789	Acetic Acid	Class 8 (Sub Risk 3)	II

Hazard Label

Hazard Class 8 (Corrosive)
Sub Risk Class 3 (Flammable)

Environmental Hazards

It is expected that this chemical is a marine pollutant and is harmful to the aquatic environment.

SECTION 15: REGULATORY INFORMATION

European Union Information

Classification as per CLP Regulation 1272/2008

Acetic Acid Glacial (CAS#: 64-19-7) is found on most regulatory lists.

Canada

- **Present on the DSL.**
- **Canada – Saskatchewan Industrial Hazardous Substances.**
- **Canada Domestic Substances List (DSL).**
- **Canada Ingredient Disclosure List (SOR/88-64).**

European Union

Particular	Details
Annex 1	607-002-00-6
EC Number	200-580-7

United States

TSCA Inventory

Listed on TSCA Inventory.

Clean Air Act

- **CAS# 64-19-7 does not contain any hazardous air pollutants.**
- **This material does not contain any Class 1 or Class 2 ozone depletory substances.**

Clean Water Act

- **US CWA (Clean Water Act) – List of Hazardous Substances.**
- **US CWA (Clean Water Act) – Reportable Quantities of Designated Hazardous Substances.**

SARA 311 / 312

Parameter	Status
Acute Hazard	Yes
Chronic Hazard	Yes
Fire Hazard	Yes
Pressure Hazard	No

CERCLA

Parameter	Status
CERCLA Chemical	Yes
CERCLA RQ (lbs)	5000

EPCRA

Parameter	Status
EHS Chemical	No
EPCRA TPQ (lbs)	Not Applicable
EPCRA 313 Chemical	No

RTK Lists

- Pennsylvania
- New York
- New Jersey

Water Hazard Class (Germany)

Parameter	Value
Class	1
Kenn-Nr.	93
Source	Classification according to VwVwS, Annex 1 or 2

NFPA Ratings

Parameter	Rating
Health	3
Flammability	2
Reactivity	0

HMIS Ratings

Parameter	Rating
Health	3
Flammability	2
Reactivity	0

SECTION 16: OTHER INFORMATION

a) Compilation Information of Safety Data Sheet

Particular	Details
Date of Compilation	March 30, 2021
Chemical	Acetic Acid
CAS #	64-19-7
File Name	0051Gj Ghs10 Div.1 SDS Acetic Acid
Revision Date	January 05, 2025
Revision	10

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b) Key or Legend to Abbreviations and Acronyms Used in the Safety Data Sheet

Abbreviation	Meaning
PBT	Persistent Bioaccumulative and Toxic
vPvB	Very Persistent and Very Bioaccumulative
SCBA	Self Contained Breathing Apparatus
NIOSH REL	National Institute for Occupational Safety and Health Recommended Exposure Limit
OSHA PEL	Occupational Safety and Health Administration Permissible Exposure Limit

Abbreviation	Meaning
OEL TWA	Occupational Exposure Limit Time Weighted Average
IDLH	Immediately Dangerous to Life or Health
UEL	Upper Explosive Limit
LEL	Lower Explosive Limit
RTECS	Registry of Toxic Effects of Chemical Substances
NTP	National Toxicology Program
IARC	International Agency for Research on Cancer
EPA	Environmental Protection Agency
TSCA	Toxic Substances Control Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
SARA	Superfund Amendments and Reauthorization Act
NFPA	National Fire Protection Association
WHMIS	Workplace Hazardous Materials Information System
DSL/NDSL	Domestic/Non-Domestic Substances List
CSR	Chemical Safety Report
BCF	Bio Concentration Factor
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
LD / LC	Lethal Dose / Lethal Concentration
GHS	Globally Harmonised System
ADR	Accord européen relatif au transport international de marchandises
IMDG-Code	International Maritime Code for Dangerous Goods
EmS	Emergency Measures on Sea
ICAO	International Civil Aviation Organization

Abbreviation Meaning

IATA/DGR International Air Transport Association / Dangerous Goods Regulation

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c) Key Literature References and Sources for Data

Bibliographical References and Data Sources

- **CLP REG (Regulation) (EC) No. 1272/2008, last modification by Regulation (EC) No. 790/2009.**
- **DIR 67/548/EWG, last modification by DIR 2009/2/EC.**
- **REG (EC) No. 1907/2006, last modification by REG (EC) No. 453/2009.**
- **SDS US (GHS HazCom 2012).**

Disclaimer

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.