



Bio Acetic Acid-Food Grade

Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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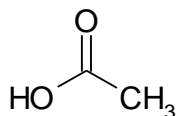
Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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

1.1. Product identifier

PRODUCT NAME	: Bio Acetic Acid-Food Grade
CAS RN	: 64-19-7
EC#	: 200-580-7
SYNONYMS	: Ethanoic acid, Methanecarboxylic acid, Acetic acid
SYSTEMATIC NAME	: Ethanoic acid
MOLECULAR FORMULA	: CH ₃ COOH
STRUCTURAL FORMULA	



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

- 1.2.1. Relevant identified uses
Used in food applications.

Uses advised against: None

1.3. Details of the supplier of the safety data sheet

Jubilant Ingrevia Limited

FACTORY AND REGISTERED OFFICE: Jubilant Ingrevia Limited., Bhartiagram, Gajraula, District: Amroha, Uttar Pradesh-244223, India
T +91-5924-267437 & +91-5924-267438

HEAD OFFICE: Jubilant Ingrevia Limited., Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 - India
T +91-120-4361000 - F +91-120-4234881 / 84 / 85 / 87 / 95 / 96 support@jubl.com - www.jubilantingrevia.com

1.4. Emergency telephone number

For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) Call

Chemtrec: 1-800-424-9300 (US),

1-703-527-3887 (Outside U.S.)

Chemtrec (India) : 000-800-100-7141

For ALL other emergencies call Emergency Control Room Gajraula at 99970 22412

SECTION 2: HAZARD(S) IDENTIFICATION

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion: Category 1B

Flammable Liquid: Category 3

Serious eye damage: Category 1

Corrosive to Metals: Category 1

Harmful to aquatic life: Category 3

2.2. Label Elements

Hazard Pictogram: GHS 05, GHS 02

Signal Word: Danger!



HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARDS STATEMENTS

- H314: Causes severe skin burns and eye damage.
- H226: Flammable liquid and vapour.
- H290: May be corrosive to metals.
- H402: Harmful to Aquatic life.

PRECAUTIONARY STATEMENTS

- P273: Avoid to the release to the environment.
- P210: Keep away from heat/ sparks/open flames/hot surfaces. No smoking.



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- 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.
- 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.
- P234: Keep only in original container.
- P305+P351+P338IF 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+331: 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.
- P390: Absorb spillage to prevent material damage.
- P370+P378: In case of fire use water 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	≥99.85%	Skin corrosion: Category 1B Metal corrosive: Category1 Flammable Liquid: Category 3 Serious eye damage: Category 1 Harmful to aquatic Life: Category 3

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Key symptoms

Acute effects

4.1.1 Route of exposure: Inhalation, skin, eye and ingestion.

4.1.2 Advice

- Rinse eyes cautiously with water for at least 15 minutes. Remove contact lenses if easy to do so. Continue rinsing. Seek medical attention.
- Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER or doctor/physician if you feel unwell.

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

Acute effects:

- **Eyes:** Severely irritating to eyes and eyelids. More than ordinary care should be used to prevent eye contact.
- **Skin:** HIGHLY CORROSIVE to skin .Extended contact with this material could be fatal. More than ordinary care should be used for skin.
- **Ingestion:** This material may be considered to be harmful via the oral route.
- **Inhalation:** Although data on inhalation toxicity are unavailable, it may be assumed that this material is toxic via inhalation. Symptoms of overexposure may include headache, nausea, disorientation, weakness and convulsions.

Chronic effects:

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

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

- **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. Monitor for respiratory distress. Apply artificial respiration if not breathing. Do not use mouth-to-mouth methods if victim ingested or inhaled the



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substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Toxic vapours may be released on thermal decomposition including nitrogen oxides, carbon monoxide and cyanide.

- **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

5.1. Extinguishing media

- *Appropriate extinguishing media:* Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water spray can be effective in cooling down the fire-exposed containers and knocking down the vapours. Water jets may be used to flush spills away and dilute the same to non-flammable mixtures fog or alcohol-resistant foam by directing streams to the periphery of the fires to prevent spread.

5.2. Special hazards arising from the substance or mixture

- Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide and carbon dioxide.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air. May travel considerable distance from source and flashback.

5.3. Advice for firefighters

- Evacuate the area and fight fires from a safe distance.
- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions or as per locally valid procedures.
- Fire-fighters must wear Self Contained Breathing Apparatus (SCBA).
- Chemical is water-soluble. Report any run-off of firewater's contaminated with this chemical as per local and federal procedures applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Avoid breathing vapors and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wipe up.
- Decontaminate all equipment.
- Use non-sparking tools.

6.1.2 For emergency personnel

- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Alert Emergency Responders and tell them location and nature of hazard.
- Shut off all possible sources of ignition and increase ventilation.
- Stop leaks if possible.
- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing vapors and contact with skin and eyes.
- Use non-sparking tools.

6.2. Environmental precautions

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.
- Wipe up.
- 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.

6.3. Methods and material for containment and cleaning up

- Clean up all tools and equipment.
- Decontaminate all equipment.

6.4. Reference to other sections

- For more information please refer to section 8 and 13.

SECTION 7: HANDLING AND STORAGE



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7.1. 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.

7.2. Conditions for safe storage, including any incompatibilities

- Store at ambient temperature in a dry and well ventilated place.
- Store away from incompatible materials.
- Keep container tightly closed.
- Keep securely closed when not in use.

7.3. Specific end use(s)

Use as a preservative in food applications.

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

• Exposure Limits Values

- Exposure Limits Conversion: 1ppm=2.494 mg/m³

PARAMETERS	TLV	TLV	STEL	STEL	STEL
	8 Hr	8Hr	15 min.	15 min.	5 min
	ppm	mg/m ³	ppm	mg/m ³	mg/m ³
US ACGIH TLV 2001	10	--	15	--	--
US OSHA (PELs)	10	25	--	--	--
NIOSH REL	10	25	15	37	--
MAK (DE)	--	25	--	--	50
OES (UK)	--	25	--	--	--
India (PEL)	10	25	--	--	--
EU OEL (Europe, 4/2004).	10	25	--	--	--

- Immediately Dangerous Life

Health (IDLH): 50ppm.

TEEL Values (US DOE) Rev. 20, 2004

- 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 their abilities to take protective action.
- TEEL3: 250 ppm
The maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing or developing life-threatening health effects.

8.1.2 Derived No-Effect-Levels (DNEL) / Predicted No-effect-concentration (PNEC)

- DNEL and PNEC data not available.

8.2. Exposure controls

8.2.1 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.

8.2.2. Personal Protection:

- Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
- **Hands:** Compatible gloves. (Butyl rubber gloves)



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- **Eyes:** Safety goggles/ Chemical Safety glasses and Face shield.
- **Clothing:** Boots and clothing to prevent contact.
- **Respirator:** Follow the OSHA respirator regulations found in 29CFR 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 use air-purifying respirator with full facepiece and organic vapor cartridge(s) or air-purifying full facepiece respirator with an organic vapor canister or a 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.
- For concentrations more than 10 times the occupational exposure level and less than the lower of either 100 times the occupational exposure level or the IDLH: Use Type C full face piece supplied-air respirator operated in positive-pressure or continuous flow mode.
- For concentrations > 100 times the occupational exposure level or greater than the IDLH level or unknown concentrations (such as in emergencies): 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 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

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

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

9.1 Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1	Appearance	Colorless liquid
2	Odor	Sour vinegar like odor. (NIOSH)
3	Odor threshold	24.3 ppm ASTM (1978) Odor is often not a good indicator for this chemical.
4	pH	Aq soln 1.0 molar= 2.4; molar= 2.9; 0.01 molar= 3.4
5	pKa (@25°C)	4.76
6	Melting point	16.7°C
7	Boiling point	118°C
8	Flash point	39°C (103°F)
9	Evaporation rate (n-BuAc=1)	0.97
10	Explosive limits	5.4-16%



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11	Vapor pressure	1.5 kPa @20°C
12	Relative Vapor density (air=1)	2.1
13	Relative density	1.0492 at 20 deg C
14	Solubility	Miscible in alcohol, acetone, glycerol, ether, carbon tetrachloride, benzene. Insoluble in CS ₂
15	Refractive Index	Not available
16	Log Kow (octanol/water)	-0.17 (ACS 1995)
17	Auto-ignition temperature	465°C
18	Decomposition temperature	Not available
19	Viscosity	1.056 mPa-s @ 25 deg C (CRC Handbook)
20	Surface Tension	Not Available
21	Static charge development	Not Available
22	Molecular Weight	60.1
23	Flammable material	Yes
24	Corrosive material	Yes
25	Explosive Material	No

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

- Acetic acid is colorless liquid with a sour vinegar odor. It is flammable liquid and a dangerous fire hazard. It is 100% soluble in water and is miscible in alcohol, acetone, glycerol, ether, carbon tetrachloride, benzene. It is insoluble in CS₂

10.2. Chemical stability

- Stable under normal temperature and pressures.

10.3. Possibility of hazardous reactions

- 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.

10.4. Conditions to avoid

- Keep away from heat, sparks and flame. Reactive with metals, oxidizing materials and bases (including amines). May react violently with PCl₃ if used to prepare to acid chloride.

10.5. Incompatible materials

- Reactive with metals, oxidizing materials and bases (including amines).

10.6. Hazardous decomposition products

- Thermal decomposition may produce carbon monoxide, carbon dioxides, oxides of nitrogen.

10.7. Hazardous Polymerization

- Not reported.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

a) Acute toxicity

Sr.No	Parameter	Test	Value	Effect	Ref.
1	Acute Toxicity	Oral Rat LD ₅₀	3310mg/kg	Not reported	RTECS#AF1225000200 602
		Dermal RBT LD ₅₀	1060 uL/kg	Not reported	RTECS#AF1225000200 602
		IHL Rat LD ₅₀	11.4 mg/L/4 Hr	Not reported	BASF (IUCLID feb 2000)
		HMN TDLo	1470µg/kg	Gastrointestinal -changes in structure or function of esophagus Gastrointestinal -ulceration or bleeding from small intestine Gastrointestinal -ulceration or bleeding from large intestine	RTECS#AF1225000200 602



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	IHL Rat LD50	5620ppm/ 1Hr	Sense Organs and Special Senses (Eye) - conjunctive irritation Sense Organs and Special Senses (Eye) -effect, not otherwise specified Blood - other changes	RTECS#AF1225000200 602
	LC50 Inhalation-Mouse 4hr	2.819 mg/l - vapor	Not reported	RTECS

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	Ref.
1	Skin corrosion /irritation	HMN Skin	50mg/24 hr	Mild	RTECS#AF1225000 200602
2	Skin corrosion /irritation	RBT Skin	525mg	Severe	RTECS#AF1225000 200602

c) Serious Eye Damage / Irritation:

Sr.No	Parameter	Test	Value	Effect	Ref.
1.	Eye damage/ irritation	RBT Eye		Highly irritating	Hoechst Ag (IUCLID feb 2000)

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 concentration 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 and in some cases asthmatic bronchitis and traces of erosion on the vestibular surface of teeth (incisors and canines). Following repeated exposures, workers may complain of digestive disorders **with pyrosis and constipation. Skin on palms of hands become dry, cracked and hyperkeratotic.(ILO 1998)**

e) Germ Cell Mutagenicity:

Sr.No	Parameter	Test	Value	Effect	Ref.
1	Genetic Toxicity	Ames Salmonella	Dose 100-6666 µG/PLATE	Negative	NTP ACETIC ACID 64197

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)

h) Aspiration hazard:

- No information available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Eco toxicity:

Fish

- Bluegill 96hr LC₅₀: 75 mg/l
- Pimephalus Promelas (Fathead Minnow)
- LC₅₀: (1;24;48;72;96 hr): (>315; 122; 92, 88; 88 mg/l)

Crustacea

- Daphnia Magna (pH 7)



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- 24 Hr (EC₀; EC₅₀; EC₁₀₀): 950; 6000; 7145 mg/l)
- Daphnia Magna 24Hr LC₅₀: 47 mg/l
- Artemia Salina 48 Hr LC₅₀: 32 mg/l
- 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)
- EC₅₀ Tobacco fumigation 41 mg/cu m/2 hr, effect: leaf injury (95% confidence interval 4-79) [Verschuieren, K. Handbook of Environmental Data on Organic Chemicals. Volumes 1-2. 4th ed. John Wiley & Sons. York, NY. 2001, p. 102]
Based on the estimated values it is expected that it may be toxic to invertebrates and algae at relatively low concentrations.

12.2. Persistence and degradability

- Photochemical degradation: OH rate constant: 7.4×10^{-13} cm³/molecule-sec. Half-life is about 22 days in air.
- Biological oxygen demand after 10 days (BOD₁₀) at 20 deg C is: 82% biological oxidation in fresh water and 88% biological oxidation in sea water [Verschuieren, K. Handbook of Environmental Data of Organic Chemicals. 3rd ed. New York, NY: Van Nostrand Reinhold Co., 1996, p 106].

Readily biodegradable.

- Inoculum: Activated sludge, not adapted.
- Concentration: 100mg/l
- Conditions: Aerobic, pH=7
- Result: 100% degradation after 140 hours.
- Ref: IUCLID dataset, 2000

Soil

- Using a modified OECD protocol, 75% and > 90% degradation of acetic acid was observed after 14 days using garden soil and sediment from the Rhine River as inocula, respectively. (HSDB, 40, 2005)

12.3. Bioaccumulative potential

- BCF = 3.162
- Log Kow = -0.17 Low potential to bioaccumulate.
Based on the Log Kow and Bioconcentration factor value it is expected to have low potential to concentrate in fatty tissue of fish and aquatic organisms.

12.4. Mobility in soil

- If released in air based on its vapor pressure of 1.5 kPa @20 degrees acetic acid should exist mostly in the air, where it will photodegrade with a half-life of 22 days approximately.
- Henry's Law constant = 1×10^{-7} atm-cu m/mol at 25 deg C, pH 4. indicates a tendency to stay in water rather than volatilize.
- Similarly Koc values ranging from 1 to 228 suggest that acetic acid is expected to have very high to moderate mobility in soil.

12.5. Results of PBT and vPvB assessment

- The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII

12.6. Other adverse effects

- **Environment Fate:**
Based on the environmental modeling, this material has a low potential to get moderate absorbed in the organic matter of soil and is slightly volatile from water bodies and based on the Log Kow and Bio concentration factor value it is expected to have low potential to concentrate in fatty tissue of fish and aquatic organisms.. Since this is an estimated result it is recommended that the material should not be disposed into the environment. The material should never be disposed into the sewage.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- Burn in a chemical incinerator equipped with an afterburner and scrubber.
- Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: TRANSPORT INFORMATION


- This substance is considered to be Hazardous for transport by Air/Rail/Road and Sea and thus regulated by IATA/ICAO/US DOT/IMO/IMDG.

S.No	Agency	UN Number	Proper Shipping name	Hazard Class	Packing Group
Land Transport	DOT	UN2789	Acetic acid	Class 8, Sub risk 3	II

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Maritime Transport	IMDG	UN2789	ACETIC ACID	Class 8, Sub risk 3	II
Air Transport	IATA	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

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

- **European Union Information**

Classification as per CLP Regulation 1272/2008:

- **Hazards Class and Category:** Skin Irrit. Cat. 1B; Eye Irrit. Cat. 1 ; Flam Liq Cat. 3
- **Hazard Statements:** H314; H226; H318

Acetic acid (CAS#: 64-19-7) is found on most regulatory lists;

Australia: AICS: Present

Canada: Present on the DSL

Canada - Saskatchewan Industrial Hazardous Substances

Canada Domestic Substances List (DSL)

Canada Ingredient Disclosure List (SOR/88-64)

European Union

Annex 1: 607-002-00-6

EC# 200-580-7

United States

- 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 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
- SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
- CERCLA Chemical: Yes CERCLA RQ lbs: 5000
- EPCRA EHS Chemical: No EPCRA TPQ lbs: Not applicable
- EPCRA 313 Chemical: No
- RTK: Pennsylvania, New York, New Jersey.

Water Hazard Class (Ger.)

- Class 1
- Kenn-Nr. 93
- Source Classification according to VwS, Annex 1 or 2
- NFPA: Health: 3 Flammability: 2 Reactivity: 0
- HMIS: Health: 3 Flammability: 2 Reactivity: 0

INDIA

- Acetic acid falls under Poisons Possession and Sale Rules, 2013, under the existing Poison Act, 1919 to regulate the sale of acids and other corrosive substances in India.

SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation : January 24, 2022
Chemical : Bio Acetic Acid-Food Grade



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b) A key or legend to aberrations and acronyms used in the safety data sheet

- 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.
- OELTWA= Occupational Exposure Limit Time Weighted Averages.
- 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.
- WHIMS= 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 Authorization and Restriction of Chemicals.
- CLP = Classification, Labelling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord European relative au transport international de marchandises.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- EmS = Emergency measures on Sea.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation.

c) Key Literature reference and sources for data

Biographical reference and data sources

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009.

SDS US (GHS HazCom 2012)

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.

(End of Safety Data Sheet)