SAFETY DATA SHEET

Revision date: 23-Jan-2023

Revision Number 6

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name ACETIC ACID 90% OR GREATER

Product Code(s) 000000032464

Other means of identification

UN number 2789

Synonyms Acetic Acid; AAACE00001; Acetic Acid 90%; Acetic Acid 90% Technical Grade; Acetic Acid Food Grade 90%; Acetic Acid Glacial 99% Food Grade; Acetic Acid Glacial; Glacial Acetic Acid; Ethanoic Acid; Ethylic Acid; Methane Carboxylic Acid; Acetic Acid BP; Acetic Acid 99%; Natural Acetic Acid; Acetic Acid Food Grade; AAACE74040; Acetic Acid Glacial 98%.

Recommended use of the chemical and restrictions on use

Recommended use Food applications.

Uses advised against No information available.

Supplier

Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia
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Australia

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Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

Corrosive to metals	Category 1
Flammable liquids	Category 3
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

SIGNAL WORD
Danger

Label elements

Corrosion
Flame

Hazard statements
H226 - Flammable liquid and vapor
H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage

Precautionary Statements - Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Keep only in original container
Ground/bond container and receiving equipment
Use explosion-proof electrical, ventilating, lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Do not breathe fume, gas, mist, vapours, spray
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Wear protective gloves / protective clothing / eye protection / face protection
Precautionary Statements - Response
Specific treatment (see First aid on this SDS)
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 or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.
Absorb spillage to prevent material damage
Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool
Store locked up
Store in corrosion resistant container with a resistant inner liner
Precautionary Statements - Disposal
Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification
General Hazards

Poisons Schedule (SUSMP) 6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	CAS No.	Weight-%
Acetic acid	64-19-7	>=90%
Water	7732-18-5	to 100%

4. FIRST AID MEASURES

Description of first aid measures

General advice For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation Remove to fresh air. Oxygen or artificial respiration if needed. Seek immediate medical attention/advice.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

Ingestion Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Get immediate medical advice/attention.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Alcohol resistant foam is the preferred firefighting medium but, if it is not available, fine water spray or water fog can be used.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Corrosive hazard. Wear protective gloves/clothing and eye/face protection. Flammable. Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). Pay attention to flashback.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Hazchem code •2P

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. Avoid contact with skin, eyes, and clothing. Do not breathe vapor or mist. Evacuate personnel to safe areas. Do not touch or walk through spilled material. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Stop leak if you can do it without risk. Take precautionary measures against static discharges. Use personal protective equipment as required. Wash thoroughly after handling.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use only non-sparking tools.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes, and clothing. Do not breathe vapor or mist. Ensure adequate ventilation. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use personal protection equipment. Wash thoroughly after handling. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from foodstuffs and sources of heat or ignition. Keep container closed when not in use.

This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.

Incompatible materials Strong alkalis. Oxidizing agents. Metals. Bases. Amines.

Poisons Schedule (SUSMP) 6

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Acetic acid: 8hr TWA = 25 mg/m^3 (10 ppm), 15 min STEL = 37 mg/m^3 (15 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls

Engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location. Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.

Eye/face protection Tight sealing safety goggles. If splashes are likely to occur:. Face protection shield.

Skin and body protection Boots. Apron. Overalls.

Hand protection Elbow-length impervious gloves.

Respiratory protection If determined by a risk assessment an inhalation risk exists, wear an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Color	Colourless
Odor	Strong , Acrid / Pungent , Vinegar -like
Odor threshold	24.3 ppm

Property	**Values**	**Remarks • Method**
pH	2.4 @ 60 g/L	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	17°C	None known
Boiling point / boiling range	118°C	None known
Flash point	39°C	CC (closed cup)
Evaporation rate	0.97 (n-Butyl acetate=1)	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	19.9% vol	
Lower flammability or explosive limits	4.0% vol	
Vapor pressure	21 hPa @25°C; 77 hPa @50°C.	None known
Vapor density	2.07 (air=1)	None known
Relative density	1.045 @25°C	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	-0.17 (n-Octanol/water)	None known
Autoignition temperature	463°C	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	1.056 mPa.s @25°C	None known

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Corrosive to metals.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Possibility of hazardous reactions

Possibility of hazardous reactions Heating can cause expansion or decomposition of the material, which can lead to the containers exploding.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid

Conditions to avoid Heat, flames and sparks.

Incompatible materials

Incompatible materials Strong alkalis. Oxidizing agents. Metals. Bases. Amines.

Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

Inhalation May cause irritation.

Eye contact Causes serious eye damage.

Skin contact Contact causes severe skin irritation and possible burns.

Ingestion Can burn mouth, throat, and stomach.

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.

Numerical measures of toxicity - Product Information
No information available.

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes burns. Classification is based on mixture calculation methods based on component data.

Serious eye damage/eye irritation Causes serious eye damage. Classification is based on mixture calculation methods based on component data.

Respiratory or skin sensitization Not a skin sensitizer. Classification is based on mixture calculation methods based on component data.

Germ cell mutagenicity Not mutagenic in AMES Test. Classification is based on mixture calculation methods based on component data.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Chronic effects: Chronic overexposure to acetic acid may result in pharangitis, catarrhal bronchitis, and

erosion of the teeth.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Keep out of waterways.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Acetic acid	-	LC50: =79mg/L (96h, Pimephales promelas) LC50: =75mg/L (96h, Lepomis macrochirus)	-	EC50: =65mg/L (48h, Daphnia magna) EC50: =47mg/L (24h, Daphnia magna)

Persistence and degradability

Persistence and degradability Readily biodegradable.

Bioaccumulative potential

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
Acetic acid	-0.31

Mobility

Mobility in soil No information available.

Other adverse effects

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

ADG

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

UN number 2789
Proper shipping name ACETIC ACID SOLUTION
Hazard class 8
Subsidiary hazard class 3
Packing group II
Hazchem code •2P

IATA

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN number	2789
UN proper shipping name	ACETIC ACID SOLUTION
Transport hazard class(es)	8
Subsidiary hazard class	3
Packing group	II

IMDG
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number	2789
UN proper shipping name	ACETIC ACID SOLUTION
Transport hazard class(es)	8
Subsidiary hazard class	3
Packing group	II
IMDG EMS Fire	F-E
IMDG EMS Spill	S-C
Marine pollutant	No

15. REGULATORY INFORMATION

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

National regulations

Australia
Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)
Poisons Schedule (SUSMP) 6

National pollutant inventory
Subject to reporting requirement

Chemical name	National pollutant inventory
Acetic acid - 64-19-7	10 tonne/yr Threshold category 1

International Inventories

AIIC	All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.

Legend:
AIIC- Australian Inventory of Industrial Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

Supplier Safety Data Sheet 10/ 2022

Reason(s) For Issue: 5 Yearly Revised Primary SDS

Issuing Date: 23-Jan-2023

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

Revision Note:
The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris and Australian Botanical Products.

End of Safety Data Sheet