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| Infosafe No™ | 1CH8U | Issue Date : September 2020 | RE-ISSUED by ABS |
|--------------|-------|-----------------------------|------------------|

Product Name : **iso-BUTYRIC ACID**

Classified as hazardous

**1. Identification**

|  |  |                     |
|--|--|---------------------|
| <b>GHS Product Identifier</b>                                  | iso-BUTYRIC ACID   |                     |
| <b>Company Name</b>  | CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)   |                     |
| <b>Address</b>   | 38 - 50 Bedford Street GILLMAN<br>SA 5013 Australia  |                     |
| <b>Telephone/Fax Number</b>                                    | Tel: (08) 8440-2000  |                     |
| <b>Emergency phone number</b>                                  | CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)   |                     |
| <b>Recommended use of the chemical and restrictions on use</b> | Antifungal agent in food and animal feed, varnishes, delimiting hides, manufacture of esters which are used in solvents, flavours and perfume bases, tanning agent and disinfecting agent. |                     |
| <b>Other Names</b>   | <u>Name</u>  | <u>Product Code</u> |
|  | iso-BUTYRIC ACID TG  | BT025               |
|  | 2-Methylpropanoic acid, Isopropylformic acid, 2-Methylpropionic acid   |                     |

**Other Information**

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

**2. Hazard Identification**

|  |   |
|--|---|
| <b>GHS classification of the substance/mixture</b> | Flammable Liquids: Category 3<br>Acute Toxicity - Dermal: Category 3<br>Acute Toxicity - Oral: Category 3 |
| <b>Signal Word (s)</b>                             | DANGER  |
| <b>Hazard Statement (s)</b>                        | H226 Flammable liquid and vapour.<br>H302 Harmful if swallowed.<br>H312 Harmful in contact with skin.     |
| <b>Pictogram (s)</b>                               | Flame, Exclamation mark   |



|   |  |
|---|--|
| <b>Precautionary statement – Prevention</b> | P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.<br>P233 Keep container tightly closed.<br>P240 Ground/bond container and receiving equipment.<br>P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.<br>P242 Use only non-sparking tools.<br>P243 Take precautionary measures against static discharge.<br>P264 Wash ... thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.  |
| <b>Precautionary statement – Response</b>   | P280 Wear protective gloves/protective clothing/eye protection/face protection.<br>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.<br>P330 Rinse mouth.<br>P302+P352 IF ON SKIN: Wash with plenty of soap and water.<br>P312 Call a POISON CENTER or doctor/physician if you feel unwell.<br>P363 Wash contaminated clothing before reuse.<br>P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.<br>P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. |



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**Precautionary statement – Storage** P403+P235 Store in a well-ventilated place. Keep cool.

**Precautionary statement – Disposal** P501 Dispose of contents/container to to an approved waste disposal plant.

**3. Composition/information on ingredients**

|                         |                  |            |                   |                      |                    |
|-------------------------|------------------|------------|-------------------|----------------------|--------------------|
| <b>Chemical</b>         | Liquid           |            |                   |                      |                    |
| <b>Characterization</b> |                  |            |                   |                      |                    |
| <b>Ingredients</b>      | <b>Name</b>      | <b>CAS</b> | <b>Proportion</b> | <b>Hazard Symbol</b> | <b>Risk Phrase</b> |
|                         | Iso-butyric acid | 79-31-2    | 100 %             |                      |                    |

**4. First-aid measures**

**Inhalation** If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**Ingestion** Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

**Skin** Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.

**Eye contact** Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

**First Aid Facilities** Maintain eyewash fountain and drench facilities in work area.

**Advice to Doctor** Treat symptomatically based on judgement of doctor and individual reactions of the patient.

**Other Information** For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

**5. Fire-fighting measures**

**Hazards from Combustion** Oxides of carbon.

**Products**

**Specific Methods** Small fire: Use dry chemical, CO2 or water spray.  
Large fire: Use water spray, fog or foam - Do NOT use water jets.  
If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.

**Specific hazards arising from the chemical** May be ignited by heat, sparks or flames. Vapours may form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Most vapours are heavier than air and will spread along the ground and collect in low or confined areas (drains, basements,tanks). Many liquids are lighter than water. Containers may explode when heated. Fire may produce irritating, poisonous or corrosive gases. Vapours from run-off may create an explosion hazard.

**Hazchem Code** 2X

**Precautions in connection with Fire** Wear SCBA and fully encapsulating, gas-tight suit when handling these substances. Structural firefighter's uniform is NOT effective for these materials.

**6. Accidental release measures**

**Spills & Disposal** Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 25m. All equipment in handling this product must be earthed. Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Vapour suppressing foam may be used to control vapours. Water spray may be used to knock down or divert vapours. Absorb spill with earth, sand or other non-combustible material. Use clean, non-sparking tools to collect material and place it in loosely-covered metal or plastic containers for later disposal.  
SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

**Personal Precautions** Avoid inhalation, contact with skin, eyes and clothing. Use in ventilated areas or in fumehood.

**Personal Protection** Wear protective clothing specified for normal operations (see Section 8)

**7. Handling and storage**

**Precautions for Safe Handling** Do not breath gas/gumes/vapours/spray. Avoid ingestion and inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Keep containers closed when not in use. Work in fumehood and use only with adequate ventilation. In case of insufficient ventilation, wear suitable



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respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Wear suitable protective clothing. Contaminated clothing should be removed and washed before re-use. Wash hands and face thoroughly after working with material. Ensure a high level of personal hygiene is maintained when using this product. That is; always wash hands before eating, drinking, smoking or using the toilet.

**Conditions for safe storage, including any incompatibilities** Store in cool place and out of direct sunlight. Store in well ventilated area. Store away from sources of heat or ignition. Store away from oxidizing agents. Keep containers closed at all times.

**Corrosiveness** Corrosive to metals such as iron, steel, brass, aluminum and lead.

**Storage Regulations** Refer Australian Standard AS 1940 - 'The storage and handling of flammable and combustible liquids'.

**8. Exposure controls/personal protection**

**Occupational exposure limit values** No exposure standards have been established for this product by Safe Work Australia.

**Appropriate engineering controls** Use with adequate ventilation. Local exhaust ventilation system may be required.

**Respiratory Protection** An approved respirator must be worn if the occupational exposure limit is likely to be exceeded. If significant mists, vapours or aerosols are generated an approved respirator is recommended, selected and used in accordance with AS/NZS 1715 and AS/NZS 1716. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

**Eye Protection** The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

**Hand Protection** Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

**Personal Protective Equipment** Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.

**Footwear** Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

**Body Protection** Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

**9. Physical and chemical properties**

**Form** Liquid

**Appearance** Colourless liquid.

**Odour** Unpleasant, pungent, butter-fat odour.

**Melting Point** -47 °C

**Boiling Point** 154.4 °C

**Solubility in Water** 210 g/L @ 20 °C

**Solubility in Organic Solvents** Soluble in alcohol and ether.

**Specific Gravity** 0.946-0.950 @ 20 °C

**pH** pH of 0.1 M solution: 2.9

**Vapour Pressure** 1 mm Hg (0.13 kPa) @ 14.7 °C

**Vapour Density (Air=1)** 3 (air = 1)

**Odour Threshold** Detectable at 8 ppm.

**Flash Point** 55°C Closed cup

**Flammability** Flammable liquid.

**Auto-Ignition Temperature** 501 °C



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| <b>Flammable Limits - Lower</b> | 2%   |
| <b>Flammable Limits - Upper</b> | 12.0%  |
| <b>Molecular Weight</b>         | 88.11  |
| <b>Other Information</b>        | CONVERSION FACTOR: 1 ppm = 3.6 mg/m <sup>3</sup> ; 1 mg/m <sup>3</sup> = 0.28 ppm @ 25 °C<br>CRITICAL TEMPERATURE: 336 °C<br>CRITICAL PRESSURE: 4052 kPa (40 atm)<br>ACIDITY (weak acid): pKa = 4.86<br>REFRACTIVE INDEX: 1.3930 @ 20 °C |

**10. Stability and reactivity**

|   |   |
|---|---|
| <b>Chemical Stability</b>                 | Stable.   |
| <b>Conditions to Avoid</b>                | Heat, flames, ignition sources and incompatibles.   |
| <b>Incompatible Materials</b>             | Bases, reactive metals and oxidising agents.  |
| <b>Possibility of hazardous reactions</b> | Vigorous reaction with bases may occur yielding heat and pressure. In contact with reactive metals, may produce flammable hydrogen gas. In contact with oxidising agents, may react violently or explosively. |
| <b>Hazardous Polymerization</b>           | Will not occur.   |

**11. Toxicological Information**

|                                  |  |
|----------------------------------|--|
| <b>Toxicology Information</b>    | Oral LD50 (rat): 2230 mg/kg<br>Dermal LD50 (rabbit): 475 mg/kg   |
| <b>Ingestion</b>                 | Harmful if swallowed. May cause irritation. Symptoms may include sore throat, abdominal pain, nausea and vomiting.   |
| <b>Inhalation</b>                | May cause nasal irritation, sore throat, coughing, hoarseness, difficulty breathing and lung edema.  |
| <b>Skin</b>                      | Harmful in contact with skin. May cause irritation, redness and pain. Prolonged exposures can cause burns, blistering and tissue destruction.                                    |
| <b>Eye</b>                       | Contact with vapour or dilute solutions may cause redness, pain and blurred vision. Direct contact with concentrated solutions may cause corneal burns; damage may be permanent. |
| <b>Respiratory sensitisation</b> | Not classified based on available information.   |
| <b>Skin Sensitisation</b>        | Not classified based on available information.   |
| <b>Germ cell mutagenicity</b>    | Not classified based on available information.   |
| <b>Carcinogenicity</b>           | Not classified based on available information.   |
| <b>Reproductive Toxicity</b>     | Not classified based on available information.   |
| <b>STOT-single exposure</b>      | Not classified based on available information.   |
| <b>STOT-repeated exposure</b>    | Not classified based on available information.   |
| <b>Chronic Effects</b>           | Repeated or prolonged skin contact may cause chronic dermatitis.   |
| <b>Mutagenicity</b>              | Not classified based on available information.   |

**12. Ecological information**

|                              |   |
|------------------------------|---|
| <b>Acute Toxicity - Fish</b> | LC50 rainbow trout - 286mg/l - 96hr                 |
| <b>Other Information</b>     | Do not allow to enter waters, waste water, or soil! |

**13. Disposal considerations**

|                                |  |
|--------------------------------|--|
| <b>Disposal Considerations</b> | Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations. |
|--------------------------------|--|

**14. Transport information**

|                              |   |
|------------------------------|---|
| <b>Transport Information</b> | Dangerous goods of Class 3 (Flammable Liquid) are incompatible in a placard load with any of the following: |
|------------------------------|---|



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| <b>U.N. Number</b>                | Class 1, Class 2.1, if both the Class 3 and Class 2.1 dangerous goods are in bulk, Class 2.3, Class 4.2, Class 5, Class 6, if the Class 3 dangerous goods are nitromethane, Class 7.<br>2529 |
| <b>UN proper shipping name</b>    | ISOBUTYRIC ACID  |
| <b>Transport hazard class(es)</b> | 3  |
| <b>Sub.Risk</b>                   | 8  |
| <b>Hazchem Code</b>               | 2X   |
| <b>Packaging Method</b>           | 3.8.3RT1   |
| <b>Packing Group</b>              | III  |
| <b>EPG Number</b>                 | 3B3  |
| <b>IERG Number</b>                | 17   |

**15. Regulatory information**

|                               |   |
|-------------------------------|---|
| <b>Regulatory Information</b> | Listed in the Australian Inventory of Chemical Substances (AICS). |
| <b>Poisons Schedule</b>       | Not Scheduled   |

**16. Other Information**

|   |   |
|---|---|
| <b>Literature References</b>                      | 'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.<br>National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'<br>Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'.<br>Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.<br>Safe Work Australia, 'Hazardous Chemical Information System'.<br>Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.<br>Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'. |
| <b>Contact Person/Point</b>                       | Paul McCarthy Ph. (08) 8440 2000 <b>DISCLAIMER STATEMENT:</b><br>All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.        |
| <b>Empirical Formula &amp; Structural Formula</b> | (CH <sub>3</sub> ) <sub>2</sub> CHCOOH<br>...End Of MSDS...   |

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