Infosafe No™	1CH3H	Issue Date : December 2018	RE-ISSUED by CHEMSUPP

Product Name : **AMYL ALCOHOL (iso)**

Classified as hazardous

1. Identification

GHS Product Identifier: AMYL ALCOHOL (iso)

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Recommended use of the chemical and restrictions on use: Solvent, photographic chemicals, organic synthesis, pharmaceutical products, determination of fat in milk, microscopy and laboratory reagent.

Other Names

Name	Product Code
AMYL ALCOHOL (iso) LR	AL015
Isopentyl alcohol	
Isobutyl carbinol, 3-Methyl-1-butanol	
AMYL ALCOHOL (iso) AR	AA015

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

GHS classification of the substance/mixture: Flammable Liquids: Category 3
Acute Toxicity - Inhalation: Category 4
Specific Targart Organ Toxicity - Single Exposure Category 3 (respiratory tract irritation)

Signal Word (s): WARNING

Hazard Statement (s): H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
AUH066 Repeated exposure may cause skin dryness or cracking

Pictogram (s): Flame, Exclamation mark



Precautionary statement – Prevention: P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response: P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P370+P378 In case of fire: Use foam, dry chemical, CO_2 or water spray for extinction.

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Precautionary statement – Storage	P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical Characterization Liquid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Isoamyl alcohol	123-51-3	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. Immediately obtain 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 immediate medical advice.
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 safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	Oxides of carbon.
Specific Methods	Caution: Use of water spray when fighting fire may be inefficient. Small fire: Use foam, dry chemical, CO2 or water spray. Large fire: Use foam, fog or water spray - 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	FLAMMABLE: This product has a low flash point. Will be easily ignited by heat, sparks or flames. Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Many vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks). Many liquids are lighter than water. Containers may explode on heating. Fire will produce irritating, poisonous or corrosive gases. Vapours from run-off may create an explosion hazard.
Hazchem Code	•2YE
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 50m. All equipment used when handling the product must be earthed. Do NOT touch or walk through spilled material. 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 vapour clouds. Absorb with earth, sand or other non-combustible material. Use clean, non-sparking tool to collect absorbed material and place it into loosely-covered metal or plastic containers for later disposal. SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Personal Precautions	Remove ignition sources Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled

drum or overdrum.

7. Handling and storage

Precautions for Safe Handling Take precautionary measures against static discharges. All electrical equipment must be flameproofed. Avoid prolonged or repeated contact with skin, eyes and clothing . Do not breath fumes which may accumulate in the vapour head-space of containers. Wear suitable protective clothing. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

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

Storage Regulations Refer Australian Standard AS 1940-2017 'The storage and handling of flammable and combustible liquids'.

Unsuitable Materials Various plastics, rubber.

8. Exposure controls/personal protection

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Isoamyl alcohol	452	125	361	100	

Other Exposure Information 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.
A time weighted average (TWA) has been established for Isoamyl alcohol (Safe Work Australia) of 361 mg/m3, (100 ppm). The corresponding STEL level is 452 mg/m3,(125 ppm). The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.

Appropriate engineering controls In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.

Respiratory Protection Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. 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 Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

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 Wear suitable protective clothing to prevent skin contact. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hygiene Measures Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form Liquid

Appearance Clear, colourless liquid.

Odour	Disagreeable odour.
Melting Point	-117 °C
Boiling Point	132.0 °C
Solubility in Water	Soluble in water (25 g/L 20 °C).
Solubility in Organic Solvents	Miscible with ethanol and ether.
Specific Gravity	0.81
pH	~7 (25 g/l, H2O, 20 °C); Neutral.
Vapour Pressure	2 mm Hg (20 °C)
Vapour Density (Air=1)	3.0
Odour Threshold	0.042 ppm
Partition Coefficient: n-octanol/water	log Pow: 1.35
Flash Point	43 °C (C.C.)
Flammability	FLAMMABLE.
Auto-Ignition Temperature	350 °C
Flammable Limits - Lower	1.2 vol%
Flammable Limits - Upper	8 vol%
Molecular Weight	88.15
Other Information	REFRACTIVE INDEX: 1.4075 (20 °C) DIELECTRICITY CONSTANT: 14.7 (20 °C) EL. DIPOLE MOMENT: 1.7 Debye (20 °C) TASTE: Pungent

10. Stability and reactivity

Chemical Stability	Stable. Heat and sunlight can contribute to instability.
Conditions to Avoid	Light. Heat, flames, ignition sources and incompatibles.
Incompatible Materials	Strong oxidising agents, acid chlorides, acid anhydrides, alkali metals, alkaline earth metals, fluorine, oxygen and reducing agents.
Hazardous Decomposition Products	Oxides of carbon. May produce acrid smoke and irritating fumes when heated to decomposition.
Possibility of hazardous reactions	Contact with strong oxidising agents increases the risk of fire and explosion. Contact with reducing agents and hydrogen trisulfide causes a vigorous reaction and explosion.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): > 5000 mg/kg.
Acute Toxicity - Dermal	LD50 (rabbit): > 3000 mg/kg.
Ingestion	May be harmful if swallowed. Absorption of large quantities my cause the following symptoms: weakness, pain, burning sensations in the chest and stomach, abdominal pain, headache, dizziness, nausea, CNS disorders, feeling of drunkenness or intoxication, inability to move, unconsciousness, coma.
Inhalation	Harmful by inhalation. Vapour causes irritation of the mucous membranes in the nose, throat and respiratory tract. Symptoms include of headache, difficulting in breathing, chest pains, coughing, dizziness, nausea, vomiting, feelings of drunkenness and unconsciousness. Exposure to high concentrations may result in a narcotic effect, central nervous system distrubances and death.
Skin	May cause skin irritation. Symptoms include redness and pain.

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Eye	Vapours are irritating to eyes. Contact with liquid may cause severe pain and irritation.
Chronic Effects	Drying and cracking of the skin may result from repeated or prolonged exposure.
Mutagenicity	No evidence of mutagenic properties.

12. Ecological information

Persistence and degradability	Readily biodegradable.
Mobility	No data avaliable.
Bioaccumulative Potential	Distribution: log P(o/w): 1.35. Bioaccumulation is not expected.
Acute Toxicity - Fish	LC50 Oncorhynchus mykiss (rainbow trout): 700 mg/l; 96 h (IUCLID)
Acute Toxicity - Daphnia	IC50 Desmodesmus subspicatus (green algae): 493 mg/l; 72 h (IUCLID)
Other Information	Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Disposal Considerations	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

Transport Information	Dangerous goods of Class 3 (Flammable Liquid) are incompatible in a placard load with any of the following: 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.
U.N. Number	1105
UN proper shipping name	PENTANOLS
Transport hazard class(es)	3
Hazchem Code	•2YE
Packing Group	III
EPG Number	3A1
IERG Number	16

15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	Not Scheduled

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Chemical Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best

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Empirical Formula & Structural Formula C5 H11 OH

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