



Infosafe No™	1CHA0	Issue Date : January 2016	RE-ISSUED by CHEMSUPP
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Product Name : **CALCIUM CARBIDE**

Classified as hazardous

1. Identification

GHS Product Identifier	CALCIUM CARBIDE	
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)	
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia	
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001	
Recommended use of the chemical and restrictions on use	Generation of acetylene gas for welding, chloroethylenes, vinyl acetate monomer, acetylene chemicals, reducing agent and laboratory reagent.	
Other Names	Name	Product Code
	CALCIUM CARBIDE Lump TG Acetylenogen	CT166
Other Information	EMERGENCY CONTACT NUMBER: +61 08 8440 2000 Business hours: 8:30am to 5:00pm, Monday to Friday.	

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	Substances and Mixtures which, in contact with water, emit flammable gases: Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H260 In contact with water releases flammable gases which may ignite spontaneously.
Pictogram (s)	Flame



Precautionary statement – Prevention	P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire. P231+P232 Handle under inert gas. Protect from moisture. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement – Response	Skin P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Fire P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Precautionary statement – Storage	P402+P404 Store in a dry place. Store in a closed container.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical Characterization	Solid
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Calcium carbide	75-20-7	100 %
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4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately, avoid becoming a casualty. Make patient comfortable, keep warm and at rest until fully recovered. If breathing is difficult (or develops a bluish skin discolouration), supply oxygen by a qualified person. Apply artificial respiration with a respiratory medical device if not breathing. Do not use mouth to mouth resuscitation. Seek medical attention if effects persist.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek immediate medical advice.
Skin	Quickly but gently, wipe material off skin. Remove contaminated clothing and wash affected skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	Remove contact lenses. Do NOT flush with water. Carefully remove particles with cotton applicator. Seek immediate medical assistance.
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 a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	May liberate toxic fumes in fire such as calcium oxide.
Specific Methods	DO NOT USE WATER OR FOAM. Small fire: Use dry chemical, soda ash, lime or sand. If safe to do so, move undamaged containers from fire area. Large fire: Use DRY sand, dry chemical, soda ash or lime or withdraw and let fire burn. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.
Specific hazards arising from the chemical	Produces flammable substances (acetylene gas) on contact with water. May ignite on contact with water or moist air. Can react vigorously or explosively on contact with water. May be ignited by heat, sparks or flame. May re-ignite after fire is extinguished.
Hazchem Code	4W
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Structural firefighter's uniform may provide limited protection.

6. Accidental release measures

Spills & Disposal	ELIMINATE all ignition sources (no smoking, flares, sparks or flames) within at least 25m. Do not touch or walk through spilled material. Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. DO NOT GET WATER inside containers or in contact with substance. Small spill Cover with DRY earth, sand or other non-combustible material followed by plastic sheet to minimize spreading or contact with rain. Large Spill SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Personal Precautions	Evacuate the area of all non-essential personnel. Remove ignition sources. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)

7. Handling and storage

Precautions for Safe Handling	Avoid substance contact and generation and inhalation of dust.
Conditions for safe storage, including any incompatibilities	Keep dry - reacts with water; may lead to drum rupture. Store away from sources of heat or ignition. Keep containers closed at all times. Store away from flammable materials.
Storage Regulations	Refer Australian Standard AS/NZS 5026-2012 'The storage and handling of Class 4 dangerous goods'. Refer Australian Standard AS/NZS 2243.10:2004 'Safety in laboratories - Storage of chemicals'.

8. Exposure controls/personal protection



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Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m ³ for dusts when limits have not otherwise been established.
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.
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. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
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	Flame retardant protective clothing. 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	Solid
Appearance	Grayish-black, irregular lumps or granules.
Odour	Garlic-like, foul odour.
Melting Point	1700 - 2300 °C (approx.)
Solubility in Water	Decomposes in water with formation of acetylene and calcium hydroxide and evolution of heat.
Specific Gravity	2.20 @ 20 °C
pH	12.48 at 20g/l.
Flammability	Flammable on contact with water.
Auto-Ignition Temperature	390°C
Flammable Limits - Lower	Acetylene gas: 2.5 %
Flammable Limits - Upper	Acetylene gas: 82 %
Explosion Properties	Produces highly explosive acetylene gas on contact with water or moisture.
Molecular Weight	64.10

10. Stability and reactivity

Chemical Stability	Stable if kept dry.
Conditions to Avoid	Exposure to moisture, heat, flames and sparks.
Incompatible Materials	Water, acids, oxidising agents, unalloyed copper, silver and mercury.
Hazardous Decomposition Products	Highly flammable and explosive acetylene gas and corrosive calcium hydroxide are formed on contact with water. Hydrated lime, acetylene and heat are generated during the reaction with water.
Possibility of hazardous reactions	In contact with water, rapidly evolves acetylene, ignited by the heat of the reaction. Acetylene forms highly explosive compounds with salts of some heavy metals. Reacts vigorously with acids.



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11. Toxicological Information

Toxicology Information	No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. If mishandled or overexposed to this product the following symptom or effects may occur.
Ingestion	Harmful if swallowed. May cause internal irritation and flatulence.
Inhalation	Causes irritation and/or burns to the respiratory system.
Skin	Causes irritation and/or burns to the skin.
Eye	May cause irritation, burns and serious damage to the eye.
Carcinogenicity	Not listed in the IARC Monographs.
Mutagenicity	No evidence of mutagenic properties.

12. Ecological information

Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention. Calcium carbide reacts with water to form calcium hydroxide.
Persistence and degradability	Methods for the determination of biodegradability are not applicable to inorganic substances.
Environmental Fate	Behaviour in environmental compartments: Concentration in organisms is not to be expected.
Information on Ecological Effects	Harmful effect due to pH shift.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Dangerous goods of Class 4.3 (Dangerous When Wet) are incompatible in a placard load with any of the following: Class 1, Class 2.1, Class 5, Class 7, Class 8.
U.N. Number	1402
UN proper shipping name	CALCIUM CARBIDE
Transport hazard class(es)	4.3
Hazchem Code	4W
Packaging Method	3.8.4.1
Packing Group	II
EPG Number	4E3
IERG Number	26

15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	Not Scheduled

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons No. 6', Commonwealth of Australia, February 2015. 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 for 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.
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Safety Data Sheet

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**Contact
Person/Point**

Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Substances 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)]'.

Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**

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