

Material Safety Data Sheet

Infosafe No. 5CA1Q Issue Date: March 2004 ISSUED by CASTROL
Product Name: MOLUB-ALLOY 936 SF HEAVY

Not classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name

MOLUB-ALLOY 936 SF HEAVY

Product Use

Mining applications including lubrication of all types of open gears, rails and rollers, racks and pinions, dipper sticks and other slides on shovels and draglines.

Company Name

Castrol Australia Pty. Limited (ABN 87 008 459 407)

Address

132 McCredie Road, Guildford,
NSW, 2161 Australia

Emergency Tel.

1800 638 556

Telephone Number/Fax

Tel: (02) 9795 4800 Fax: (02) 9795 4910

Other Information

Castrol Technical Help Line 1300 557 998 (Local call)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Petroleum resins	64742-16-1	30-35 %
	Distillates, petroleum, hydrotreated heavy naphthenic	64742-52-5	25-30 %
	Graphite	7782-42-5	15-20 %
	Distillates, petroleum, petroleum residues vacuum	68955-27-1	5-10 %
	Carbon black	1333-86-4	1-5 %
	Octadecanoic acid, 12-hydroxy-, monolithium salt	7620-77-1	1-5 %

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Hydrocarbon waxes, petroleum, hydrotreated microcrystalline	64742-60-5	1-5 %
Distillates petroleum, hydrotreated light naphthenic	64742-53-6	1-5 %

3. HAZARDS IDENTIFICATION

Not Classified as hazardous according to NOHSC criteria.
Not Classified as a dangerous good according to the ADG Code.

Risk phrases:
Not applicable

Safety phrases:
Not applicable

4. FIRST AID MEASURES

Inhalation

Remove the source of contamination or move the victim to fresh air. Ensure airways are clear and have qualified person give oxygen through a facemask if breathing is difficult. If irritation develops and persists, seek medical attention.

Ingestion

DO NOT induce vomiting. Immediately wash out mouth with water. Seek medical attention.

Skin

Remove contaminated clothing. Wash gently and thoroughly with water and non-abrasive soap. Ensure contaminated clothing is washed before re-use or discard. If irritation develops, seek medical attention.

Eye

If contact with the eye(s) occurs, wash with copious amounts of water, holding eyelids(s) open. Take care not to rinse contaminated water into the non-affected eye. If irritation develops and persists, seek medical attention.

First Aid Facilities

Eye wash and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media

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Carbon dioxide, foam or dry chemical.

Do NOT use water jets. Cool fire exposed containers with water spray.

Specific Hazards

Combustible C2 liquid. Fire-exposed container may rupture/explode.

Slightly flammable to flammable in presence of open flames, sparks and static discharge, of shocks, of heat, of oxidising materials

Hazardous

Combustion Products

Oxides of carbon, oxides of nitrogen and oxides of sulfur.

Precautions in

connection with Fire

Self-Contained Breathing Apparatus (S.C.B.A) and full protective clothing should be worn to minimise exposure.

6. ACCIDENTAL RELEASE MEASURES

SMALL- 20 LITRES OR LESS

Soak up on Castrol Diatomaceous Earth or similar inert oil absorbent. Arrange for disposal through an approved facility.

LARGE- GREATER THAN 20 LITRES

Remove all sources of ignition. Increase ventilation. Evacuate all unnecessary personnel. Wear full protective equipment and clothing to minimise exposure. If possible contain the spill. Place inert, non-combustible absorbent material onto spillage. Use clean non-sparking tools to collect the material and place into a suitable labelled container. If large quantities of this material enter the waterways contact the Environmental Protection Authority, or your local Waste Management Authority.

7. HANDLING AND STORAGE

Handling

Repeated or prolonged contact with this material should be avoided in order to lessen the possibility of skin disorders. It is essential that all who come into contact with this material maintain high standards of personal hygiene ie. washing hands prior to eating, drinking or going to the toilet. Build-up of mists in the working atmosphere must be prevented.

Misuse of empty containers can be hazardous. Do not cut, weld, heat or drill containers. Residue may ignite with explosive violence if heated sufficiently. Do not pressurise or expose to open flame or heat. Keep container closed and bung in place.

Storage

Combustible C2 liquid for storage and handling purposes. Store in a cool, dry, well-ventilated area, out of direct sunlight. Avoid sparks, flames, and other ignition sources. Store away from incompatible materials such as materials that support combustion (oxidising materials). Reference should be made to Australian Standard AS1940- The storage and handling of flammable and combustible liquids.

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8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits	Name	mg/m ³ (STEL)	ppm (STEL)	mg/m ³ (TWA)	ppm (TWA)	TWA Footnote
	Graphite			3		(As respirable dust)
	Carbon black			3		

Other Exposure Information

No value assigned for this specific material by the Australian National Occupational Health and Safety Commission (NOHSC). However, the recommended Exposure Standards for graphite and carbon black are listed above. The exposure standard for oil mist is listed below. As with all chemicals, exposure should be kept to the lowest possible levels.

SUBSTANCE	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Oil mist, mineral	-	5	-	10

Respiratory Protection

Avoid breathing of vapours or mists. Where ventilation is inadequate and vapours or mists are generated the use of an approved respirator with organic vapour/particulate filter complying with AS/NZS 1715 and AS/NZS 1716 is recommended; however final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715- Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716- Respiratory Protective Devices.

Eye Protection

Safety glasses or face shield as appropriate. Final choice of appropriate eye/face protection will vary according to individual circumstances including methods of handling or engineering controls as determined by appropriate risk assessments. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337- Eye Protectors for Industrial Applications.

Hand Protection

Impervious gloves recommended. Final choice of appropriate glove type will vary according to individual circumstances, including methods of handling or engineering controls as determined by appropriate risk assessments. Refer to AS/NZS 2161 Occupational protective gloves- Selection, use and maintenance.

Body Protection

Wear appropriate protective clothing including chemical resistant apron where clothing is likely to be contaminated.

Eng. Controls

Where vapours or mists are generated and exposure standards are exceeded, the use of respiratory protection, or a local exhaust ventilation system is recommended.

Other Information

No biological limit allocated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Black solid (Grease).

Odour

Characteristic odour.

Melting Point

Not available

Boiling Point

Not available

Solubility in Water

Insoluble in cold water.

Specific Gravity

(H₂O=1)

0.999 to 1.009

pH Value

Not available

Vapour Pressure

Not available

Vapour Density

(Air=1)

Not available

Evaporation Rate

Not available

Viscosity

Not available

Volatile Component

Not available

Flash Point

158°C Open Cup.

Flammability

Combustible C2 liquid. Remove all sources of heat and ignition.

Flammable Limits LEL

Not available

Flammable Limits UEL

Not available

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions of storage and handling.

Hazardous

Polymerization

Will not occur.

Hazardous

Decomposition

Products

Oxides of carbon, oxides of sulfur and oxides of nitrogen.

Hazardous Reaction

Reactive with oxidising agents, acids and alkalis.

Conditions to Avoid

Heat, direct sunlight, open flames or other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Toxicology

Information

This product contains less than 3% DMSO extract as measured by IP 346.

Classified 2B (Possible for humans) by IARC [Carbon Black]. This product contains carbon black with less than 0.1% of absorbed PAHs (polynuclear aromatic hydrocarbons).

Hydrogen sulfide gas may accumulate in storage tanks of bulk transport compartments containing this material. Contact with eyes causes painful conjunctivitis, sensitivity to light, tearing and clouding of vision. Inhalation of low concentrations causes a runny nose with a loss of sense of smell, labored breathing and shortness of breath. Direct contact with skin causes pain and redness. Other symptoms of exposure include profuse salivation, nausea, vomiting, diarrhoea, giddiness, headache, dizziness, confusion, rapid breathing, rapid heart rate, sweating, weakness, sudden collapse, unconsciousness and death due to respiratory paralysis. Cardiac neurological effects have also been reported. Prolonged breathing (greater than one hour) of concentrations of hydrogen sulfide around 50ppm can produce eye and respiratory tract irritation. Levels of 250 to 600ppm will result in fluid in the lungs, and concentrations around 1000ppm will cause unconsciousness and death in a short period of time. Since the sense of smell becomes insensitive to this toxic, colorless gas, odor cannot be relied upon as an indicator of concentrations of the gas. Always exercise caution when working around closed containers.

Inhalation

May cause irritation to the mucous membrane and upper airways, where material is

heated and is used in poorly ventilated areas. Symptoms may include headache, dizziness and nausea.

Ingestion

May cause irritation of the gastrointestinal system. Symptoms may include nausea, vomiting and diarrhoea.

Skin

May cause irritation in contact with the skin to sensitive individuals, which can result in redness and itchiness.

Eye

May cause eye irritation, resulting in redness, stinging and lachrymation.

Chronic Effects

Prolonged or repeated contact with this material may result in skin irritation possibly dermatitis.

Reproductive**Toxicity**

No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic or embryotoxic.

Mutagenicity

No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen.

12. ECOLOGICAL INFORMATION

Environ. Protection

Prevent this material from entering the environment.

Mobility

No data available for this specific product.

Persistence /**Degradability**

No data available for this specific product.

Bioaccumulation

No data available for this specific product.

Ecotoxicity

No data available for this specific product.

13. DISPOSAL CONSIDERATIONS

Dispose of waste according to federal, Environmental Protection Authority, state and local regulations. Assure conformity with all applicable regulations.

14. TRANSPORT INFORMATION

Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

U.N. Number

None Allocated

Proper Shipping Name

None Allocated

DG Class

None Allocated

Hazchem Code

None Allocated

Packing Group

None Allocated

15. REGULATORY INFORMATION

Poisons Schedule

S7

16. OTHER INFORMATION

Contact Person/Point

For information concerning details on this Safety Data Sheet contact your local Technical Services Manager on the following numbers:-

Sydney: (02) 9795 4800
Melbourne: (03) 9268 4200
Brisbane: (07) 3850 9300
Adelaide: (08) 8347 6200
Perth: (08) 9268 9288

Castrol Technical Help Line 1300 557 998 (Local call)

IMPORTANT DISCLAIMER

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24 HOUR EMERGENCY CONTACT

1 800 638 556

24 HOUR EMERGENCY CONTACT (New Zealand Only)

0800 154 666

SDS History

MSDS review: March 2004.

MSDS superseded: September 1998.

...End Of MSDS...