DUBL-CHEK Red Oxide No. 8

Callington Haven

Chemwatch: 4899-86
Version No: 2.1.1.1
Material Safety Data Sheet according to NOHSC and ADG requirements

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>DUBL-CHEK Red Oxide No. 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Not Available</td>
</tr>
<tr>
<td>CAS number</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Relevant identified uses of the substance or mixture and uses advised against

| Relevant identified uses | Used for non-destructive testing. |

Details of the manufacturer/importer

<table>
<thead>
<tr>
<th>Registered company name</th>
<th>Callington Haven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>30 South Street Rydalmere 2116 NSW Australia</td>
</tr>
<tr>
<td>Telephone</td>
<td>+61 2 9898 2788</td>
</tr>
<tr>
<td>Fax</td>
<td>+61 2 9684 4215</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.callingtonhaven.com">www.callingtonhaven.com</a></td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:sales@callhaven.com.au">sales@callhaven.com.au</a></td>
</tr>
</tbody>
</table>

Emergency telephone number

<table>
<thead>
<tr>
<th>Association / Organisation</th>
<th>Not Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency telephone numbers</td>
<td>1800 039 008 (24 hours),+61 3 9573 3112 (24 hours)</td>
</tr>
</tbody>
</table>

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

<table>
<thead>
<tr>
<th>CHEMWATCH HAZARD RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
</tr>
<tr>
<td>Flammability</td>
</tr>
<tr>
<td>Toxicity</td>
</tr>
<tr>
<td>Body Contact</td>
</tr>
<tr>
<td>Reactivity</td>
</tr>
<tr>
<td>Chronic</td>
</tr>
</tbody>
</table>

Legend:
0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Label elements

Not Applicable

Relevant risk statements are found in section 2

<table>
<thead>
<tr>
<th>Poisons Schedule</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Phrases</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Legend:

<table>
<thead>
<tr>
<th>Indication(s) of danger</th>
<th>Not Applicable</th>
</tr>
</thead>
</table>

SAFETY ADVICE

Not Applicable

Continued...
Other hazards

May produce discomfort of the eyes, respiratory tract and skin*.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances
See section below for composition of Mixtures

Mixtures

<table>
<thead>
<tr>
<th>CAS No</th>
<th>%[weight]</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>&gt;60</td>
<td>water conditioner, surfactant, rust preventative</td>
</tr>
<tr>
<td>12068-86-9</td>
<td>&lt;10</td>
<td>magnesium ferrate</td>
</tr>
</tbody>
</table>

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact
If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact
If skin or hair contact occurs:
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation
If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

Ingestion
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

Indication of any immediate medical attention and special treatment needed
- Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media
- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility
- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

Fire Fighting
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard
- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acid smoke.
- Mists containing combustible materials may be explosive.
- Combustion products include: carbon dioxide (CO2), metal oxides

SECTION 6 ACCIDENTAL RELEASE MEASURES

Continued...
Personal precautions, protective equipment and emergency procedures

**Minor Spills**
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Use dry clean up procedures and avoid generating dust.
- Place in a suitable, labelled container for waste disposal.

**Major Spills**
- Remove all ignition sources.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact with the substance, by using protective equipment and dust respirator.
- Prevent spillage from entering drains, sewers or water courses.
- Recover product wherever possible. Avoid generating dust.
- Sweep / shovel up.
- If required, wet with water to prevent dusting.
- Put residues in labelled plastic bags or other containers for disposal.
- Wash area down with large quantity of water and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

**SECTION 7 HANDLING AND STORAGE**

**Precautions for safe handling**

**Safe handling**
- Remove all ignition sources.
- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- When handling DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.

**Other information**
- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.

**Conditions for safe storage, including any incompatibilities**

**Suitable container**
- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

**Storage incompatibility**
- Avoid storage with oxidisers

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Control parameters**

**OCCUPATIONAL EXPOSURE LIMITS (OEL)**
- Not Available

**INGREDIENT DATA**
- Not Available

**EMERGENCY LIMITS**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TEEL-0</th>
<th>TEEL-1</th>
<th>TEEL-2</th>
<th>TEEL-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>DUBL-CHEK Red Oxide No. 8</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Original IDLH</th>
<th>Revised IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>water conditioner, surfactant, rust preventative</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>magnesium ferrate</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**Exposure controls**
- Appropriate engineering controls: General exhaust is adequate under normal operating conditions.

Continued...
Personal protection

Eye and face protection
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection
See Hand protection below

Hands/feet protection
- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

Body protection
See Other protection below

Other protection
- Overalls.
- Eyewash unit.

Thermal hazards
Not Available

Recommended material(s)

GLOVE SELECTION INDEX
Glove selection is based on a modified presentation of the: "Forsberg Clothing Performance Index". The effect(s) of the following substance(s) are taken into account in the computer-generated selection:
DUBL-CHEK Red Oxide No. 8 Not Available

<table>
<thead>
<tr>
<th>Material</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>* CPI - Chemwatch Performance Index</td>
<td></td>
</tr>
<tr>
<td>A: Best Selection</td>
<td></td>
</tr>
<tr>
<td>B: Satisfactory; may degrade after 4 hours continuous immersion</td>
<td></td>
</tr>
<tr>
<td>C: Poor to Dangerous;Choice for other than short term immersion</td>
<td></td>
</tr>
</tbody>
</table>
**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection
Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

<table>
<thead>
<tr>
<th>Required Minimum Protection Factor</th>
<th>Half-Face Respirator</th>
<th>Full-Face Respirator</th>
<th>Powered Air Respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P1 Air-line*</td>
<td>-</td>
<td>PAPR-P1</td>
</tr>
<tr>
<td>up to 10 x ES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>up to 50 x ES</td>
<td>Air-line**</td>
<td>P2</td>
<td>PAPR-P2</td>
</tr>
<tr>
<td>up to 100 x ES</td>
<td>-</td>
<td>P3</td>
<td>-</td>
</tr>
<tr>
<td>100+ x ES</td>
<td>-</td>
<td>Air-line**</td>
<td>PAPR-P3</td>
</tr>
</tbody>
</table>

* - Negative pressure demand ** - Continuous flow
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Divided Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>Not Available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH (as supplied)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting point / freezing point (°C)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Initial boiling point and boiling range (°C)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Solubility in water (g/L)</td>
<td>Parly Miscible</td>
</tr>
<tr>
<td>Vapour density (Air = 1)</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Relative density (Water = 1) 0.8
Partition coefficient n-octanol / water Not Available
Auto-ignition temperature (°C) Not Available
Decomposition temperature Not Applicable
Viscosity (cSt) Not Applicable
Molecular weight (g/mol) Not Applicable
Taste Not Applicable
Explosive properties Not Available
Oxidising properties Not Available
Surface Tension (dyn/cm or mN/m) Not Applicable
Volatile Component (%vol) Not Available
Gas group Not Available
pH as a solution(1%) Not Available
VOC g/L Not Available
Continued...
SECTION 10 STABILITY AND REACTIVITY

Reactivity
See section 7

Chemical stability
- Unstable in the presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Possibility of hazardous reactions
See section 7

Conditions to avoid
See section 7

Incompatible materials
See section 7

Hazardous decomposition products
See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled
Generated dust may be discomforting

Ingestion
The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g., liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

Skin Contact
Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (non-allergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

Eye
Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

Chronic
Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung. A prime symptom is breathlessness. Lung shadows show on X-ray.

DUBL-CHEK Red Oxide No. 8

<table>
<thead>
<tr>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

magnesium ferrate

<table>
<thead>
<tr>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral (rat) LD50: &gt;7000 mg/kg *</td>
<td>* Celba Geigy</td>
</tr>
<tr>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Not available. Refer to individual constituents.

Acute Toxicity
- Skin Irritation/Corrosion
- Serious Eye Damage/Irritation
- Respiratory or Skin sensitisation
- Mutagenicity

Carcinogenicity
- Reproductivity

STOT - Single Exposure
- STOT - Repeated Exposure

Aspiration Hazard

CMR STATUS
Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity
DO NOT discharge into sewer or waterways.

Persistence and degradability

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Continued...
Bioaccumulative potential

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Bioaccumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Mobility in soil

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Available</td>
</tr>
</tbody>
</table>

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

Labels Required

- Marine Pollutant: NO
- HAZCHEM: Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

SECTION 15 REGULATORY INFORMATION

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

- "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5",
- "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4",
- "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2",
- "Australia FAISD Handbook - First Aid Instructions, Warning Statements, and General Safety Precautions",
- "Australia Inventory of Chemical Substances (AICS)",
- "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6"

**magnesium ferrate(12068-86-9) is found on the following regulatory lists**

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.