

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: PRIMACORD - 40 RDX NYLON RIBBON

Recommended Use of the Chemical and Restrictions on Use Detonating cord for initiating charges under high temperature conditions (up to 150°C).

Supplier: Orica Australia Pty Ltd
ABN: 99 004 117 828
Street Address: 1 Nicholson Street
Melbourne 3000
Australia

Telephone Number: +61 3 9665 7111
Facsimile: +61 3 9665 7937
Emergency Telephone: **AUSTRALIA: 1 800 033 111 (ALL HOURS)**
INTERNATIONAL AUSTRALIA: +61 3 9663 2130 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Code for the Transport of Explosives by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Explosives - Division 1.1
Acute Oral Toxicity - Category 3
Specific target organ toxicity (single exposure) - Category 1
Specific target organ toxicity (repeated exposure) - Category 2

SIGNAL WORD: DANGER



Hazard Statement(s):

H201 Explosive; mass explosion hazard.
H301 Toxic if swallowed.
H370 Causes damage to organs.
Central nervous system, oral.
H373 May cause damage to organs through prolonged or repeated exposure.
Central nervous system, oral.

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Precautionary Statement(s):

Prevention:

- P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
- P250 Do not subject to grinding, shock, friction, impact, electrical energy from extraneous source (lighting, static electricity, stray currents, galvanic electricity or electromagnetic radiation) or any form of heating.
- P260 Do not breathe mist, vapours, spray.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves, protective clothing, eye and face protection.

Response:

- P370+P380 In case of fire: Evacuate area.
- P372 Explosion risk in case of fire.
- P373 DO NOT fight fire when fire reaches explosives.
- P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
- P330 Rinse mouth.
- P314 Get medical advice/attention if you feel unwell.

Storage:

- P401 Store in accordance with AS2187.1 in a well ventilated magazine.
- P405 Store locked up.

Disposal:

- P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): None allocated.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Product Description: Continuous RDX explosive core (dyed pink) enclosed in plastic tapes and fibres with an outer sleeve of black plastic.

Components	CAS Number	Proportion	Hazard Codes
Cyclonite (RDX, Cyclotrimethylenetrinitramine)	121-82-4	30-60%	H201, H301, H370, H373
Non hazardous component(s)	-	to 100%	-

4. FIRST AID MEASURES

Construction of the product normally prevents contact with explosive component, however, in the event of exposure: For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin Contact:

If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. A component of this material can be absorbed through the skin with resultant toxic effects. Seek immediate medical assistance.

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**Eye Contact:**

If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion:

Immediately rinse mouth with water. If swallowed, give a glass of water to drink. Get to a doctor or hospital quickly.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Explosive material. Shrapnel from detonation may cause burns, wounds and bruises - treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Do not fight fires involving explosives.

Hazchem or Emergency Action Code: E**Specific hazards arising from the chemical:**

Explosive material. Avoid all ignition sources. Risk of explosion by shock, friction, fire or other sources of ignition. On burning will emit toxic fumes, including those of oxides of carbon and oxides of nitrogen .

Special protective equipment and precautions for fire-fighters:

Explosive material. Severe explosive hazard when shocked or exposed to heat. Confinement of burning material may result in detonation. Heating of material may result in detonation. In case of small fire where the actual explosive is not involved, carefully remove explosive to a safe distance, otherwise evacuate area immediately and allow to burn. Do NOT fight fire. Mass explosion hazard.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Shut off all possible sources of ignition. Avoid friction and impact. Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contact.

If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Handle with care. Collect and seal in properly labelled containers. Use a spark-free shovel.

In the case of a transport accident notify the Police, Regulatory Authorities and Orica Australia Pty Ltd (Telephone: 1800 033 111 -- 24 hour service) and/or Orica New Zealand Limited (Telephone: 0800 734 607 -- 24 hour service) or Orica International: (Telephone: +61 3 9663 2130 -- 24 hour service Australia).

7. HANDLING AND STORAGE

Precautions for safe handling:

Handle with care. Do NOT subject the material to impact, friction between hard surfaces nor to any form of heating. Take precautionary measures against static discharges. Avoid skin and eye contact. Keep out of reach of children. Protect ends of cords from contact with moisture, and oil.

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Conditions for safe storage, including any incompatibilities:

Store material in a well ventilated magazine suitably licensed for Class 1.1D Explosives. Store material in a well ventilated magazine suitably licensed for the explosives hazard classification. Do not store with other explosives products that have an incompatible explosives hazard classification (for example detonators must not be stored with blasting/high explosives). Store away from sources of heat or ignition. Protect containers from physical damage. Store away from incompatible materials described in Section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Cyclonite: 8hr TWA = 1.5 mg/m³, Sk

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

`Sk' (skin) Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

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.

Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Natural ventilation should be adequate under normal use conditions.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES.



Wear overalls, safety glasses and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Article . Plastic covered cord.
Colour: Black (Outer covering)
Odour: Odourless
Solubility: Insoluble in water.
Specific Gravity: 1.82 @ 20°C (for RDX)

Product Name: PRIMACORD - 40 RDX NYLON RIBBON
Substance No: 000024564101

Issued: 15/08/2018
Version: 4

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Relative Vapour Density (air=1):	N Av
Vapour Pressure (20 °C):	N Av
Flash Point (°C):	Not applicable.
Flammability Limits (%):	N Av
Autoignition Temperature (°C):	N Av
Melting Point/Range (°C):	190 min (for RDX)
Boiling Point/Range (°C):	N Appl
Decomposition Point (°C):	205 °C
pH:	N Appl
Evaporation Rate:	N Appl

10. STABILITY AND REACTIVITY

Reactivity:	Explosive.
Chemical stability:	Explosive material. Avoid ignition sources, static electricity discharge and friction. Avoid shock and mechanical impact between hard surfaces. Avoid heat exposure.
Possibility of hazardous reactions:	Explosive material. Explosion may result due to shock, friction, fire and other sources of ignition. Detonation may occur from heavy impact or excessive heating, particularly under confinement. Explosion creates the potential for shrapnel. Hazardous polymerisation will not occur.
Conditions to avoid:	Avoid exposure to heat. Avoid exposure to shock, friction, fire and other sources of ignition. Avoid impact. Avoid electrostatic discharge and impingement. Avoid exposure to moisture.
Incompatible materials:	Incompatible with oxidising agents. Incompatible with acids. Incompatible with alkalis. Incompatible with combustible materials. Incompatible with other chemicals .
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

The construction of these articles should prevent any chemical contamination. No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain, convulsions and loss of consciousness. May cause headache and dizziness.
Eye contact:	May be an eye irritant. May cause physical irritation.
Skin contact:	Contact with skin may result in irritation. May cause skin sensitisation in sensitive individuals. Repeated or prolonged skin contact may lead to allergic contact dermatitis. Component/s of this material can be absorbed through the skin with resultant toxic effects. Shrapnel from detonation may cause burns and wounds to the skin and eyes.
Inhalation:	Not a likely route of exposure due to the physical form of the product. Material may be irritant to the mucous membranes of the respiratory tract (airways).

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Acute toxicity: No LD50 data available for the product. However, for constituent(s) cyclotrimethylenetrinitramine (RDX) (1):

Oral LD50 (rat): 100 mg/kg

Oral LD50 (mice): 59 mg/kg

Respiratory or skin sensitisation: RDX may cause skin sensitisation in sensitive individuals.

Chronic effects: No information available for the product.

Specific Target Organ Toxicity (STOT) - single exposure: May cause damage to central nervous system.

Specific Target Organ Toxicity (STOT) - repeated exposure: May cause damage to central nervous system.

Workers exposed to oral doses of the component RDX (unspecified amounts) have experienced convulsions, disorientation, nausea, restlessness, muscle twitching and lethargy. (2)

Rats exposed to an oral dose of 40 mg/kg/day for six months developed myocardial degeneration, blood disorders, renal dysfunction, enlarged adrenals and cataracts. (2) May affect liver, kidneys and central nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.

Bioaccumulative potential: Not expected to bioconcentrate or bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations. For small quantities: Place in a blast hole and explode during blasting. Large quantities should be returned to Orica Australia Pty Ltd or be disposed of in conjunction with the relevant State Dangerous Goods Branch.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Code for the Transport of Explosives by Road and Rail; DANGEROUS GOODS.



UN No: 0065
Transport Hazard Class: 1.1 D Explosive
Proper Shipping Name or Technical Name: CORD, DETONATING
Hazchem or Emergency Action Code: E

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

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Substance No: 000024564101

Issued: 15/08/2018
Version: 4

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UN No: 0065
Transport Hazard Class: 1.1 D Explosive
Proper Shipping Name or Technical Name: CORD, DETONATING

IMDG EMS Fire: F-B
IMDG MFAG: S-X

Air Transport

TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in Passenger and Cargo Aircraft, and Cargo Aircraft Only.

15. REGULATORY INFORMATION

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Explosives - Division 1.1
Acute Oral Toxicity - Category 3
Specific target organ toxicity (single exposure) - Category 1
Specific target organ toxicity (repeated exposure) - Category 2

Hazard Statement(s):

H201 Explosive; mass explosion hazard.
H301 Toxic if swallowed.
H370 Causes damage to organs.
Central nervous system, oral.
H373 May cause damage to organs through prolonged or repeated exposure.
Central nervous system, oral.

Poisons Schedule (SUSMP): None allocated.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

(1) 'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2018.

(2) Toxicology Profile for RDX; Agency for Toxic Substances and Disease Registry; US Department of Health and Human Services; 06/1995

This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

Reason(s) for Issue:

5 Yearly Revised Primary SDS
Alignment to Safe Work Australia requirements
Alignment to GHS requirements
Minor Text Changes

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This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since The Supplier cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Supplier representative or The Supplier at the contact details on page 1.

The Supplier's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.