



SAFETY DATA SHEET

Revision date: 23-Oct-2024

Revision Number 8

Section 1: Identification

Product identifier

Product Name CORDTEX DETONATING CORDS

Product Code(s) 000023868401

Other means of identification

Synonyms DETONATING CORDS, CORDTEX 3.6W, CORDTEX 5W, CORDTEX 5W U/G, CORDTEX 5P, CORDTEX 5G, CORDTEX 10P, CORDTEX 70P, CORDTEX PYROCORD, CORDTEX AP, CORDTEX 18, CORDTEX XTL NC, CORDTEX 10G, CORDTEX POWERSPLIT 10P

Recommended use of the chemical and restrictions on use

Recommended use Detonating cord for initiating charges. Restricted to professional users.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier

Orica New Zealand Limited
Street Address:
Brunnings Road
Carters Beach
Westport, 7892
New Zealand

Telephone Number: +64 3 788 8163

Emergency telephone number

Emergency Telephone 0 800 734 607 (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.

Section 2: Hazard identification

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classification

Explosives	Division 1.1 Type D
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Label elements



Signal word
Danger

Hazard statements

H201 - Explosive; mass explosion hazard

Precautionary Statements - Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep only in original packaging.
Ground and bond container and receiving equipment.
Do not subject to grinding/shock/friction.
Wear protective gloves/clothing and eye/face protection.

Precautionary Statements - Response

In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.

Precautionary Statements - Storage

Store in accordance with local regulations.

Precautionary Statements - Disposal

Refer to manufacturer/supplier for information on disposal/recovery/recycling.

Other hazards which do not result in classification

No information available.

Section 3: Composition/information on ingredients

Chemical name	CAS No.	Weight-%
Pentaerythritol tetranitrate (PETN)	78-11-5	10-80%
Ingredients determined not to be hazardous	-	to 100%

Additional information

Continuous PETN explosive core enclosed in plastic tapes and fibres with an outer sleeve of textiles or plastic.

Section 4: First-aid measures

Description of first aid measures

General advice

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Take a copy of the Safety Data Sheet when going for medical treatment.

Inhalation

Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, (trained personnel should) give oxygen. Get medical attention immediately if symptoms occur.

Eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin contact	Wash skin with soap and water. Get medical attention if irritation develops and persists.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Get medical attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
Effects of Exposure	No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Explosive material. Treat as for exposure to nitrates. May cause methemoglobinemia. PETN is a vasodilator. Maintain blood pressure by fluid administration. Shrapnel from detonation may cause burns, wounds and bruises.
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Section 5: Fire-fighting measures

Hazchem code E
Suitable Extinguishing Media

Suitable Extinguishing Media Do not fight fires involving explosives.

Unsuitable extinguishing media

Specific hazards arising from the chemical

Specific hazards arising from the chemical Explosive. May be ignited by heat, sparks or flames. May explode from friction, heat or contamination. Risk of explosion by shock or heating under confinement. On burning under confined or semi-confined conditions, some oxides of nitrogen and/or carbon will be present. Brown fumes indicate the presence of toxic oxides of nitrogen.

Hazardous combustion products Carbon oxides. Nitrogen oxides.

Special protective actions for fire-fighters

Special protective equipment and precautions for fire-fighters In the case of a small fire, if actual explosive is not burning, carefully remove as much explosive as possible to a safe distance. However, if explosive is burning, evacuate area immediately and allow to burn. DO NOT fight fire.

A major fire may involve a risk of explosion. An adjacent detonation may also involve the risk of explosion. Mass explosion hazard.

Section 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions Explosive material. Evacuate personnel to safe areas. ELIMINATE all ignition sources (no

smoking, flares, sparks or flames in immediate area). Do not subject to grinding/shock/friction. Use personal protective equipment as required. Avoid generation of dust. Do not breathe dust.

Other information

Refer to protective measures listed in Sections 7 and 8.

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 Ltd (Telephone: 0800 734 607 -- 24 hour service) or Orica International (Telephone: +61 3 9663 2130 -- 24 hour service Australia).

For emergency responders

Explosive material. Remove all sources of ignition. Use personal protection recommended in Section 8.

Environmental precautions**Environmental precautions**

Keep out of waterways. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Handle with care. Use non-sparking tools. Ground and bond containers when transferring material. Pick up and transfer to properly labeled containers. Avoid contamination with other substances. Keep in suitable, closed containers for disposal.

Precautions to prevent secondary hazards**Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage**Precautions for safe handling****Advice on safe handling**

Handle with care. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Do NOT subject the material to impact, friction between hard surfaces nor to any form of heating. Avoid contact with skin and eyes. Keep out of reach of children. Avoid contamination with other substances. Protect ends of cords from contact with moisture and oil.

General hygiene considerations

Contaminated work clothing should not be allowed out of the workplace. Do not get in eyes, on skin, or on clothing. Wash hands before breaks and immediately after handling the product.

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

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 in accordance with local regulations. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Store away from other materials. Protect from physical damage. Keep/store only in original container. Protect from moisture.

Incompatible materials Incompatible with combustible materials. Incompatible with oxidizing agents. Incompatible with strong acids and bases. Reducing agents. Permanganates. Nitrites. Chlorates. Chlorides.

Section 8: Exposure controls/personal protection

Control parameters

Exposure Limits No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority.

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

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.



Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Protective gloves.

Skin and body protection Overalls. Protective shoes or boots.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state Solid
Appearance Flexible cords with outer coverings of textiles and plastics. White powder core.
Color Various
Odor Odourless
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known

Melting point / freezing point	141.3°C (for PETN)	None known
Boiling point / boiling range	No data available	None known
Flash point	Not applicable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.77 (for PETN)	None known
Water solubility	Insoluble in water.	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	>150°C (for PETN)	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	Explosive; mass explosion hazard.	

Other information**Particle characteristics****Section 10: Stability and reactivity****Reactivity**

Reactivity Explosive.

Chemical stability

Stability Explosive properties. Risk of explosion by shock, friction, fire or other sources of ignition. Heating, particularly under confinement, may cause an explosion. May cause a mass explosion. Detonation may occur from impact, friction, or excessive heating.

Explosion data

Sensitivity to mechanical impact Yes.

Sensitivity to static discharge Yes.

Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization does not occur.

Possibility of hazardous reactions A major fire may involve a risk of explosion. An adjacent detonation may also involve the risk of explosion. Mass explosion hazard. Explosion may result due to shock, friction, fire or other sources of ignition. Detonation may occur from heavy impact or excessive heating. Explosion creates the potential for shrapnel.

Conditions to avoid

Conditions to avoid Heat. Keep away from open flames, hot surfaces and sources of ignition. static discharge (electrostatic discharge). Do not subject to grinding/shock/friction. Contact with other chemicals. Avoid contact with combustible substances. Protect from moisture. Avoid impact with solid surfaces or other boosters. Avoid contamination of the material.

Incompatible materials

Incompatible materials Incompatible with combustible materials. Incompatible with oxidizing agents. Incompatible with strong acids and bases. Reducing agents. Permanganates. Nitrites. Chlorates. Chlorides.

Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Nitrogen oxides.

Section 11: Toxicological information**Acute toxicity****Information on likely routes of exposure**

Product Information No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

Inhalation May cause irritation of respiratory tract. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Eye contact May cause irritation.

Skin contact Not an expected route of exposure. Repeated or prolonged exposure may cause irritation of eyes and skin. Shrapnel from detonation may cause burns, wounds and bruises.

Ingestion Not an expected route of exposure. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause a lowering of blood pressure (hypotension). Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

Symptoms No information available.

Acute toxicity**Numerical measures of toxicity**

No information available

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Pentaerythritol tetranitrate (PETN)	= 1660 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Based on available data, the classification criteria are not met. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	New Zealand	IARC
Pentaerythritol tetranitrate (PETN) - 78-11-5	-	Group 2A

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Chronic effects: PETN is absorbed slowly through the lungs and gastrointestinal tract but not appreciably through the skin. Vasodilatory agent, therefore causes dilation of the blood vessels and a reduction in blood pressure. Exposure to high doses may cause methaemoglobinaemia. Negative in AMES test for mutagenicity.

Data used to identify the health effects Refer to Section 16 for Key literature references and sources for data used to compile the SDS.

Section 12: Ecological information

Ecotoxicity

Aquatic ecotoxicity

Keep out of waterways.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Pentaerythritol tetranitrate (PETN)	-	LC50: =926mg/L (96h, Pimephales promelas)	-

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Pentaerythritol tetranitrate (PETN)	2.04

Mobility in soil

Mobility No information available.

Other adverse effects

No information available.

Section 13: Disposal considerations**Waste treatment methods****Waste from residues/unused products**

Dispose of in accordance with federal, state and local regulations.
 Dispose of waste in accordance with environmental legislation.
 Dispose of product in packaging in a way that is consistent with the EPA Consolidation 30 April 2021 of the Hazardous Substances (Disposal) Notice 2017 and the Act.
 Treat the substance using a method that changes the characteristics or composition of the substance so that the substance is no longer a hazardous substance; or export the substance from New Zealand as waste.

Small quantities of damaged or deteriorated explosives may be destroyed by inclusion in a blast hole containing good explosive (s).
 For large quantities of damaged or deteriorated explosives notify Orica Australia Pty Ltd and/or Orica New Zealand Pty Ltd..

Contaminated packaging

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from.
 Packages may only be reused or recycled if:
 - the substance has a physical hazard other than corrosive to metal, and has been treated to remove any residual contents of the hazardous substance;
 - or for substances that have a health or environmental hazard, or corrosive to metal, the contents of the residue in the package are below the threshold for the substance to be classified as hazardous in the Hazardous Substances (Hazard Classification) Notice 2020.

Section 14: Transport information**ROAD AND RAIL TRANSPORT**

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

UN number or ID number
Proper shipping name
Transport hazard class(es)
Hazchem code

0065
 CORD, DETONATING
 1.1D
 E

IATA

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.

IMDG

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

UN number

0065

UN proper shipping name	CORD, DETONATING
Transport hazard class(es)	1.1D
IMDG EMS Fire	F-B
IMDG EMS Spill	S-X

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available

Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

Section 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

EPA New Zealand HSNO approval code or group standard HSR100192

National regulations See section 8 for national exposure control parameters

Certified handlers, tracking and controlled substance license requirements Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain explosives, vertebrate toxic agents and fumigants. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

Other Regulations Tracking is required for this material.

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

NZIoC	Contact supplier for inventory compliance status.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.
TCSI	Contact supplier for inventory compliance status.

Legend:

NZIoC - New Zealand Inventory of Chemicals

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIIC- Australian Inventory of Industrial Chemicals
TCSI - Taiwan Chemical Substance Inventory

Section 16: Other information

Prepared By This Safety Data Sheet has been prepared by IXOM Operations Pty Ltd (Toxicology and SDS Services).
Revision date: 23-Oct-2024
Reason(s) For Issue: Revised Primary SDS
 Addition/Change of synonymous name(s)

Revision Note:

***Indicates updated data since last publication.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:
 PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
 vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
 STOT: Specific Target Organ Toxicity
 ATE: Acute Toxicity Estimate
 LC50: 50% Lethal Concentration
 LD50: 50% Lethal Dose

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
**	Hazard Designation	+	Sensitizers
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

1.1D

Disclaimer

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.

End of Safety Data Sheet