

1. IDENTIFICATION

Product Name	Rubber Antioxidant 6PPD
Other Names	Sinorgchem 6PPD (Non-hazardous)
Uses	Antioxidant - Suitable for use in the formulation of natural and synthetic rubber, and as a stabiliser for synthetic polymers.
Chemical Family	No Data Available
Chemical Formula	C ₁₈ H ₂₄ N ₂
Chemical Name	N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Signal Word None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine	C18H24N2	793-24-8	>=97 %
1,4-Benzenediamine, N-phenyl-	No Data Available	101-54-2	<=1 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	If swallowed: Rinse mouth. Call a Poison Centre or doctor/physician if you feel unwell. Never give anything by mouth to an unconscious person.
Eye	Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
Skin	Skin contact: Wash with plenty of soap and water. If skin irritation or rash occurs, get medical advice/attention. Take off contaminated clothing and wash before reuse.
Inhaled	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician if experiencing respiratory symptoms, or if you feel unwell. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Symptomatic treatment.
Medical Conditions Aggravated by Exposure	May cause an allergic skin reaction in susceptible individuals.

5. FIRE FIGHTING MEASURES

General Measures	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. If safe to do so, move undamaged containers from fire area.
Flammability Conditions	Combustible. May burn but does not ignite readily.
Extinguishing Media	Suitable: Carbon dioxide, dry powder, foam or water fog.
Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	Gives off irritating or toxic fumes (or gases) in a fire. Decomposition products may include: Carbon oxides and Nitrogen oxides.
Special Fire Fighting Instructions	Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Personal Protective Equipment	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece, operated in positive pressure mode.
Flash Point	204 °C No Data Available

Lower Explosion Limit	
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	No action shall be taken involving any personal risk or without suitable training. Ventilate enclosed spaces before entering. Do not touch or walk through spilled material.
Clean Up Procedures	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. If necessary, moisten first to prevent dusting. Dispose of via a licensed waste disposal contractor.
Containment	Stop leak if safe to do so. Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	No information available.
Environmental Precautionary Measures	Avoid dispersal of spill material and runoff; and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised/unprotected personnel away.
Personal Precautionary Measures	Use appropriate personal protective equipment (see Section 8).

7. HANDLING AND STORAGE

Handling	Ensure that eyewash stations and safety showers are close to the workstation. Handle in accordance with good industrial hygiene and safety practice. Ensure good ventilation at the workplace. Use appropriate personal protective equipment. Do not get in eyes, on skin or clothing. Do not ingest. Avoid breathing dust. Keep away from heat and sources of ignition. Avoid release to the environment.
Storage	Store in a cool, dry and well-ventilated area. Avoid direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Keep away from strong oxidising agents, acids and nitrosating agents. Use appropriate containment to avoid environmental contamination. - Storage at temperatures above 30 degC is NOT recommended.
Container	Keep in the original container or an approved alternative made from a compatible material. Empty containers or liners may retain some product residues; follow label warnings even after container is emptied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Contains no substances with occupational exposure limit values. ACGIH TLV (8 hr) TWA = 10 mg/m ³ (total dust).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure/dust concentrations below any recommended or statutory limits. Monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Personal Protection Equipment	Skin/body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Dependent on the degree of potential exposure, chemical boots and full protective clothing may be required. Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure. Recommended: Safety glasses with side-shields. Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. For <1 hr (breakthrough time): PVC, nitrile rubber or Polychloroprene (CR) gloves. Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Recommended: Dust mask. May cause an allergic skin reaction. Persons with a history of skin sensitisation problems should not be employed in

Special Hazards Precautions	any process in which this product is used.
Work Hygienic Practices	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove potentially contaminated clothing, using appropriate techniques. Contaminated work clothing should be washed separately before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Pastilles
Odour	Aromatic
Colour	Grey-purple to purple-brown
pH	No Data Available
Vapour Pressure	0.064 mmHg @ 162°C; 0.250 mmHg @ 180°C; - 1.0 mmHg @ 200°C; 4.0 mmHg @ 227°C (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	380 °C
Melting Point	>=45 °C
Freezing Point	>=45 °C
Solubility	Insoluble - 1.1 ppm 23°C
Specific Gravity	No Data Available
Flash Point	204 °C
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	0.986 - 1.000 g/cm ³
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	Log Pow = 4.68 (CAS No. 793-24-8)
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	33 mPa.s (@ 60 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Combustible. May burn but does not ignite readily.
Reactions That Release Gases or Vapours	The substance decomposes on burning producing toxic fumes including Carbon oxides and Nitrogen oxides.

Release of Invisible Flammable Vapours and Gases No information available.

10. STABILITY AND REACTIVITY

Chemical Stability Material is stable under normal conditions.

Conditions to Avoid Take precautionary measures against static discharges.

Materials to Avoid Incompatible materials: Strong oxidising agents, acids and nitrosating agents.

Hazardous Decomposition Products Gives off irritating or toxic fumes (or gases) in a fire. Decomposition products may include: Carbon oxides and Nitrogen oxides.

Hazardous Polymerisation No information available.

11. TOXICOLOGICAL INFORMATION

General Information Routes of exposure: Ingestion, Inhalation, Skin and eye contact.
Effects of short-term exposure: The substance is mildly irritating to the eyes and skin. May cause an allergic skin reaction in susceptible individuals.
Effects of long term exposure: Repeated or prolonged contact may cause skin sensitisation in susceptible individuals.

Acute

Other Acute toxicity:
- Dermal, Rabbit LD50: >7,940 mg/kg bw

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity No information available.

Persistence/Degradability No information available.

Mobility No information available.

Environmental Fate Avoid dispersal of spilt material and runoff; and contact with soil, waterways, drains and sewers.

Bioaccumulation Potential Log Pow = 4.68

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Dispose of contents/container in accordance with local/regional/national regulations. Collect and reclaim residual waste, or dispose in sealed containers at a licensed waste disposal site. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Special Precautions for Land Fill Empty containers or liners may retain some product residues; follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG

Proper Shipping Name	Rubber Antioxidant 6PPD
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (Malaysia)

ADR

Proper Shipping Name	Rubber Antioxidant 6PPD
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Rubber Antioxidant 6PPD
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	Rubber Antioxidant 6PPD
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea Transport

IMDG

Proper Shipping Name	Rubber Antioxidant 6PPD
Class	No Data Available
Subsidiary Risk(s)	No Data Available

UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

Air Transport

IATA

Proper Shipping Name	Rubber Antioxidant 6PPD
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined

Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	DMBPPD1800, DMBPPD1805
Revision	1
Revision Date	14 Oct 2016
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ Milligrams per Cubic Metre Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present. mm Millimetre mmH₂O Millimetres of Water mPa.s Millipascals per Second N/A Not Applicable NIOSH National Institute for Occupational Safety and Health NOHSC National Occupational Health and Safety Commission OECD Organisation for Economic Co-operation and Development Oz Ounce PEL Permissible Exposure Limit Pa Pascal ppb Parts per Billion ppm Parts per Million ppm/2h Parts per Million per 2 Hours ppm/6h Parts per Million per 6 Hours psi Pounds per Square Inch R Rankine RCP Reciprocal Calculation Procedure STEL Short Term Exposure Limit TLV Threshold Limit Value tne Tonne</p>

TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight