



Safety Data Sheet (SDS)

Revision / Review Date: 9/18/14

1. Chemical Product and Company Identification

Product Name:	6PPD
Distributed By:	HB Chemical 1665 Enterprise Parkway Twinsburg Oh 44087 Phone - 330-920-8023
MSDS Prepared By (w Suppliers Input):	HB Chemical
Chemical Name / Family:	Antioxidant
CAS No.	793-24-8
Product Use:	Antioxidant for tire, belt, insulated wire.
OSHA Status	Not Hazardous

For emergency health, safety, and environmental information, calls 330-920-8023

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

2. Hazard(s) Identification

<u>Warning:</u>	May produce an allergic reaction.
<u>Signs and Symptoms of Exposure:</u>	May cause skin irritation and or dermatitis. May cause eye irritation Harmful if swallowed.
<u>Potential health effects:</u>	Acute toxicity
<u>Eye Contact:</u>	May cause eye irritation. Symptoms include swelling and redness .
<u>Skin Contact:</u>	May be harmful in contact with skin. Repeated or prolonged skin contact may cause allergic reaction with susceptible persons.
<u>Ingestion:</u>	Harmful if swallowed.
<u>Inhalation:</u>	May be harmful if inhaled.
<u>Chronic effects:</u>	repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.
<u>Main symptoms:</u>	Pain, redness swelling of skin or eyes.
<u>Aggravated Medical Conditions:</u>	Allergies. Skin disorders. Respiratory disorders.

Interactions with other Chemicals:

Irritants. Sensitizers. Epoxies.

Environmental hazard:

Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment. See section 12 for additional Ecological information.

3. Composition / Information on Ingredients

Chemical Name:

N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine

CAS #:

793-24-8

Weight %:

98.5- 100

4. First Aid Measures

General advise:

When symptoms persist or in all cases of doubt seek medical advice. If unconscious place in recovery position and get medical attention immediately. Show this SDS to the doctor in attendance.

Inhalation:

Remove to fresh air. If not breathing five artificial respiration. If breathing is difficult, give oxygen. Call a physician. Keep victim warm and quiet. Loosen tight clothing such as a collar, tie, belt or waistband. Maintain an open airway. Persons who have inhaled vapors or smoke fumes have to be put under medical observation for least 48 hours due to the delayed appearance of poisoning.

Eyes:

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if symptoms occur.

Skin:

Wash off immediately with soap and plenty of water. Remove contaminated clothing and shoes. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before reuse. Thoroughly clean shoes before reuse.

Ingestion:

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Keep victim warm and quiet. Loosen tight clothing such as a collar, tie, belt or waistband. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Maintain an open airway. If not breathing, give oxygen. Call a physician immediately.

Notes to physician:

Treat symptomatically. Persons who have inhaled vapors or smoke fumes have to be put under medical observation for at least 48 hours, due to delayed appearance of poisoning.

5. Fire-Fighting Measures

Flammable properties:

Not flammable.

Flash point/method:

202 °C / 396° F / Closed cup

Suitable Extinguishing Media:

Water Spray. Foam. Dry powder. Carbon dioxide (CO₂)

Special Fire Fighting Procedures:

As in any fire, wear self-contained breathing apparatus and full protective gear.

Explosion Data:

Sensitivity to Mechanical impact; None.
Sensitivity to static discharge; None.

Specific hazards arising from the chemical:

Thermal decomposition can lead to release of irritating gases and vapors. In the event of the fire and/or explosion do not breath fumes. May cause sensitization by inhalation and skin contact.

6. Accidental Release Measures

Personal precautions:

No action shall be taken involving any personal risk or without suitable training. Do not touch or walk through spilled material. Avoid contact with skin, eye and clothing. Wear personal protective equipment.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Clean up spill immediately. Prevent product and washing from entering drains, sewers or surface water due to high toxicity to aquatic organisms. Local authorities should be advised if significant spillages cannot be contained.

Methods for containment:

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up:

Wear impervious personal protective equipment to protect eyes, skin and clothing. If material is in the liquid state, absorb liquid with inert material. Scoop, sweep or shovel solids and place in a closed container for proper disposal. Isolate spill and stop leak where safe. Do NOT spread spilled product with waters. Spilled material may stain and discolor surfaces. Reclaim or dispose of in accordance with local, state, and federal regulations

7. Handling and Storage:

Advice on safe handling:

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

Technical measures/Storage Conditions:

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from contact with oxidizing materials. Keep in properly labeled containers. Use appropriate containment to avoid environmental contamination. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with local regulations.

8. Exposure Controls / Personal Protection

Exposure Guidelines:

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
N-1,3-dimethylbutyl-N'-phenyl-p-phenylene diamine	3 mg/m ³ (1) 10 mg/m ³ (3)	5 mg/m ³ (1) 15 mg/m ³ (3)	Not available

Engineering measures:

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Apply technical measures to comply with the occupational exposure limits. If this product contains ingredients with exposure limits, personal, workplace atmosphere of biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Respiratory Protection:

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Protective Gloves:

Impervious gloves

Eye Protection:

Safety glasses with side-shields.

Skin and Body Protection:

Lightweight protective clothing.

Hygiene measures:

When using do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Physical Form: Solid

Appearance & Odor: Pastilles, purple, brown/Aromatic

<u>Property</u>	<u>Values</u>	<u>Remarks • Methods</u>
pH	No information available	
Melting point/freezing point	49 °C / 121 °F	1013 hPa
Boiling point/boiling range	163 - 165 °C / 325 °F	1.33 hPa
Flash point	202 °C / 396 °F	Closed cup
Evaporation Rate	No information available	
Specific gravity	1.0	60 °C
Flammability (solid, gas)	Not flammable	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower flammability limit	No information available	
Vapor Pressure	0.0000066 hPa	25 °C
Vapor density	No information available	
Water solubility	1 mg/l	50 °C
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	4.68	
Autoignition temperature	No information available	
Decomposition temperature	> 200 °C	
Viscosity, kinematic	No information available	
Viscosity, dynamic	No information available	
Explosive properties	Not explosive	
Oxidizing properties	Not oxidizing	

9.2 Other Information

Molecular weight 268.44

Density 986 - 1,000 kg/m³

10. Stability and Reactivity

Stability: Stable under recommended storage and handling conditions (see section 7)

Incompatibility (Materials to Avoid): Strong oxidizing agents

Conditions to Avoid: Temperatures, above 200°C / 392°F

Hazardous decomposing products: None known based on information supplied.

Hazardous Polymerization: Hazardous polymerization does not occur

11. Toxicological Information

Acute toxicity:

Product Information:

LD50 dermal: See table below

Inhalation:

May be harmful if inhaled.

Eyes:

May cause irritation.

Skin:

May be harmful in contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion:

Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine	893 mg/kg (Rat)	> 7940 mg/kg (Rabbit)	No data available

Chronic Toxicity:

Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

Carcinogenicity:

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. Oral carcinogenicity test (rat): not carcinogenic

Sensitization:

Skin sensitizer: Guinea pig.

Germ cell mutagenicity:

Not mutagenic (in vitro, in vivo).

Reproductive toxicity:

Did not affect reproductive performance or post-natal development in animal studies.

Teratogenicity:

No evidence of teratogenicity in animal studies.

Target organ effects:

Skin

12. Ecological Information

Acute aquatic toxicity:

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
N-1,3-dimethylbutyl-N'-phenyl-p-phenylene diamine	0.23 mg/l	0.028 mg/l	0.23 mg/l

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Ecotoxicity

Chemical name	log Pow
N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine	4.68

13. Disposal Considerations

Waste disposal methods:

This material as supplied, is not a hazardous waste according to Federal regulation (40CFR 261). Dispose of in accordance with federal, state and local regulations.

Contaminated packaging:

Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT Not regulated

Note Not listed as a hazardous material per 49 CFR 172.101

IMDG

UN/ID no	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine)
Hazard Class	9
Packing group	III
EmS No.	F-A, S-F
Special Provisions	
Marine pollutant	yes

IATA

UN/ID no	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine)
Hazard Class	9
Packing group	III
Special Provisions	none

Note Subject to ICAO/IATA Environmentally Hazardous Substance marking requirement (IATA 7.1.6.3)

TDG

See DOT

15. Regulatory Information

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	no
Fire Hazard	no
Sudden release of pressure hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

International Regulations**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class

D2B Toxic materials

Materials causing other toxic effects

International Inventories

TSCA (US)	Complies
DSL/NDSL (Canada)	Complies
EINECS/ELINCS (EU)	Complies
ENCS (Japan)	Complies
IECSC (China)	Complies
KECL (Korea)	Complies
PICCS (Philippines)	Complies
AICS (Australia)	Complies

16. Other Information

NFPA
HMIS

Health hazard 2
Health hazard 2

Flammability 1
Flammability 1

Stability 0
Physical hazard 0

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the users responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.