

DISTRIBUTED BY
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SAFETY DATA SHEET
According to EC-directive 2001/58/EC

6PPD(4020)

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product label name N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine
Supplier Trigonal Concourse Inc
4F, Golden Plaza,
20 Hongkong Middle Road, Qingdao 266071,
China
Tel/Fax. + 86 (532) 85760953

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product is to be considered as a substance in conformance to EC directives.
Information on hazardous ingredients

Chemical description N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine

Composition / information on ingredients

Number	% w/w	CAS-number	Chemical name	
1	95	793-24-8	N-1,3-Dimethylbutyl-N'-phenyl-1,4-phenylenediamine	
Number	EC-number	Annex-1 number	Symbol(s)	Risk-phrase(s)
1	212-344-0		N Xi	R43 R50/53

Other information Formula: C18H24N2.

3. HAZARDS IDENTIFICATION

May cause sensitization by skin contact.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects Repeated contact may cause skin sensitization.

First aid

General In all cases of doubt, or when symptoms persist, seek medical attention
Inhalation Bring victim into fresh air. Always seek medical advice in case of significant exposure.
Skin Remove all contaminated clothing immediately. Wash off with plenty of soap and water.
Seek medical advice if irritation develops. Launder clothes before reuse.
Eye Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion Rinse mouth, give water to drink.

Advice to physician No specific recommendations.

5. FIRE-FIGHTING MEASURES

Extinguishing media waterspray, water mist, foam, dry chemical powder. CO2

Unsuitable extinguishing media none known

Special exposure hazards Emits toxic fumes under fire conditions.

Hazardous decomposition/combustion products carbon monoxide (CO), nitrous gases (NOx).

Protective equipment

Wear self contained breathing apparatus.

Other information

Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions For personal protection see Section 8.

Environmental precautions Avoid discharge into the environment.

Methods for cleaning up Collect as much as possible in a clean container for (preferable) reuse or disposal.

7. HANDLING AND STORAGE

Handling Avoid contact with skin. Avoid dust generation.

Fire and explosion prevention No specific recommendations.

Storage requirements Store in a dry and cool place. Keep container tightly closed.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls Avoid dust generation. Ensure good ventilation and local exhaustion of the working area.

Exposure limits

Name

N-1,3-Dimethylbutyl-N'-phenyl-1,4 OES-TWA 5.0 mg/m³ (Respirable dust)
-phenylenediamine

Personal protection

Respiratory Avoid breathing dust. In case of dust formation use dust mask.
Hand Wear protective gloves.
Eye Wear safety goggles.
Skin and body Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance pastilles
Colour brown, purple
Odour faint, aromatic
Boiling point/range not determined (> 300 °C)
Melting point/range approx. 45 °C
Flash point not determined (> 200 °C)
Flammability not determined
Autoignition temperature not determined (approx. 500 °C)
Explosive properties not determined
Explosion limits not determined
Oxidizing properties not applicable
Vapour pressure not determined (approx. 9 mBar at 200 °C)
Density approx. 1095 kg/m³
Bulk density 560-580 kg/m³
Solubility in water 0.0011 kg/m³ (25 °C)
Solubility in other solvents Ethyl acetate, acetone, Methylenechloride
pH value approx. 7 (10 g/l, Aqueous dispersion)
Partition coefficient 4.77
n-octanol/water
Relative vapour density (air=1) not applicable
Viscosity not applicable

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid Heating > 100 °C: May catch fire.
Materials to avoid strong oxidising agents.
Hazardous decomposition products Thermal decomposition products: carbon monoxide (CO), nitrous gases (NOx).

11. TOXICOLOGICAL INFORMATION

Name N-1,3-Dimethylbutyl-N'-phenyl-1,4-phenylenediamine
Acute toxicity
Oral LD50 rat: 3580 mg/kg.
Dermal LD50 rabbit: > 7940 mg/kg.
Irritation
Skin Overall mean EU skin irritation scores:
Redness: 0.0.
Swelling: 0.0.
Eye Overall mean EU eye irritation scores:
Conjunctival redness: 1.1.
Conjunctival swelling: 0.7.
Iris lesions: 0.0.
Cornea opacity: 0.0.

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Sensitization	Prolonged or repeated skin contact (Human experience): Sensitizing (skin)
Genotoxicity	Not mutagenic (in vitro, in vivo)
Other toxicological information	Oral carcinogenicity test (rat): not carcinogenic. Oral reprotoxicity test (rat): no adverse treatment related effects.

12. ECOLOGICAL INFORMATION

Name	N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine
Ecotoxicity fish	96h-LC50 (Lepomis macrochirus): 0.4 mg/l. 96h-LC50 (Oncorhynchus mykiss): 0.14 mg/l. 96h-LC50 (Pimephales promelas): 0.45 mg/l.
daphnia	48h-EC50 (Daphnia magna): 0.82 mg/l.
algae	96 h-EC50 (Cell count): 0.6 mg/l.
Fate	
Degradation Biotic	Shake flask CO2 evolution assay, CO2 evolution: 60 %.
Bioaccumulation	Bio Concentration Factor (BCF): 490 (calculated).

13. DISPOSAL CONSIDERATIONS

Product	Avoid discharge into the environment. This material and its container must be disposed of as hazardous waste. Small quantities: According to local regulations. Large quantities: Consult Flexsys for special advice.
Contaminated packaging	According to local regulations.
Other information	Waste code number: Please refer to your specific industry in the European Waste Catalogue.

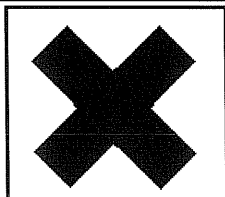
14. TRANSPORT INFORMATION

<i>Land transport (ADR/ RID)</i>			
ADR class	9	ADR Classification Code	M7
RID class	9	ADR/RID packing group	III
Hazard Identification No.	90	Substance Identification No.	3077
TREM-Card	3077912c02	UN number	3077
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (N-1,3-Dimethylbutyl-N'-phenyl-1,4-phenylenediamine) Environmentally hazardous substance, solid, n.o.s. (N-1,3-Dimethylbutyl-N'-phenyl-1,4-phenylenediamine)		
<i>Sea transport (IMDG-code/ IMO)</i>			
IMO/IMDG code	not relevant	Class	none
Packing group	not relevant	UN number	none
EMS	not relevant	Subsidiary Risk	not relevant
Marine pollutant	no		
Proper Shipping Name	not relevant		
<i>Air transport (ICAO-TI/ IATA-DGR)</i>			
ICAO-TI/IATA-DGR		UN number	3077
Class	9	Packing group	III
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (N-1,3-Dimethylbutyl-N'-phenyl-1,4-phenylenediamine)		

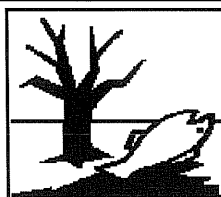
15. REGULATORY INFORMATION

Chemical description	N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine
Labelling according to EC directives	
EC-number	See section 2
Classification based on	Tests

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IRRITANT (Xi)



DANGEROUS FOR THE ENVIRONMENT (N)

Symbol(s)

R(isk) phrase(s)

R 43 May cause sensitization by skin contact
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S(afety) phrase(s)

S 22 Do not breathe dust
S 24 Avoid contact with skin
S 37 Wear suitable gloves
S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets

Wassergefährdungsklasse (WGK)

2 (VwVwS Anhang 3, Nr. 6616)

16. OTHER INFORMATION

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.