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## MATERIAL SAFETY DATA SHEET

: According to EC-directive 2001/58/EC

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Rubber Antioxidant 4020(6PPD)

HS Code: 29215190.90

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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<b>Product label name</b>	N- (1,3-dimethylbutyl)-N'-phenyl-p-phenylene diamine Qingdao YLSCH Industry&Trade Co.,Ltd
<b>Supplier</b>	Room 501,2-3 Unit. No.8,Zhengzhou Road, Qingdao,China. TEL: +86 18661665800
<b>Emergency telephone</b>	TEL: +86 18661665800
<b>Intended use</b>	Rubber Antioxidant

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

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<b>Chemical name</b>	N- (1,3-dimethylbutyl)-N'-phenyl-p-phenylene diamine
<b>CAS NO.</b>	793-24-8
<b>Chemical description</b>	Dark brown to violet pellet
<b>TSCA NO.</b>	none
<b>EINECS NO.</b>	none
<b>Other information</b>	C <sub>15</sub> H <sub>18</sub> N <sub>2</sub>

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### 3. HAZARDS IDENTIFICATION

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May cause long-term adverse effects in the aquatic environment.

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### 4. FIRST AID MEASURES

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<b>Symptoms and effects</b>	Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. Repeated contact may cause skin sensitization.
<b>First aid</b>	
<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention.

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<b>Inhalation</b>	Move to fresh air. If symptoms persist, seek medical advice.
<b>Skin</b>	Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse.
<b>Eye</b>	Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
<b>Ingestion</b>	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.
<b>Advice to physician</b>	Treat symptomatically. Monitor respiratory system function.

## 5. FIRE-FIGHTING MEASURES

<b>Extinguishing media</b>	Waterspray, water mist, foam, dry chemical powder, CO <sub>2</sub>
<b>Unsuitable extinguishing media</b>	Waterjet
<b>Special exposure hazards</b>	Emits toxic fumes under fire conditions.
<b>Hazardous decomposition/ Combustion products</b>	Carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> ), nitrous gases (NO <sub>x</sub> ).
<b>Protective equipment</b>	Wear self contained breathing apparatus.
<b>Other information</b>	Do not allow run-off from fire fighting to enter drains or water courses.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	For personal protection see Section 8. Avoid dust generation.
<b>Environmental precautions</b>	Avoid discharge into the environment. Collect as much as possible in a clean container for
<b>Methods for cleaning up</b>	(preferable) reuse or disposal.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin and eyes. Avoid dust generation. Take precautionary measures against static discharges.
<b>Fire and explosion prevention</b>	Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition.
<b>Storage requirements</b>	Store in a dry and cool place. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Do not double stack.

**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-p-phenylene diamine

**Personal protection**

**Respiratory** Avoid breathing dust. In case of insufficient ventilation, wear suitable respiratory equipment.

**Hand** Wear suitable gloves.

**Eye** Wear safety goggles.

**Skin and body** Wear suitable protective clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Dark brown to violet granule	<b>Colour</b>	Dark brown to violet
<b>Odour</b>	Amine-like	<b>Boiling point</b>	161°C
<b>Final Melting point</b> ≥	46-51°C	<b>Flash point</b>	303°F/150.5°C
<b>Flammability</b>	Solid:substance:not (in)flammable.	<b>Explosion limits</b>	----
<b>Explosive properties</b>	Dust:dust-explosion hazard	<b>Decomposition temperature</b>	----
<b>Oxidizing properties</b>	not applicable	<b>Vapour pressure</b>	0.00343mmHg(25°C)
<b>Density</b>	0.986-1.000g/cm3(60°C)	<b>Bulk density</b>	----
<b>Solubility in water</b>	insoluble	<b>Solubility in other solvents</b>	Oil acetone benzene and toluene
<b>pH value</b>	----	<b>Partition coefficient</b>	Log Pow = 3.5
<b>Residues (150um)% Max</b>	0.5	<b>Heating Loss % Max</b>	----
<b>Viscosity</b>	----	<b>Assay content % ≥</b>	95
<b>Strrength of grain (N)</b>	8-10	<b>Zinc content %</b>	----

**10. STABILITY AND REACTIVITY**

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

**Conditions to avoid** Temperatures above 300°C. Avoid contact with strong oxidants

**Materials to avoid** Strong oxidizers.

**Hazardous decomposition products** Thermal decomposition products: carbon monoxide (CO), carbon dioxide(CO<sub>2</sub>),nitrous gases (NO<sub>x</sub>).

## 11. TOXICOLOGICAL INFORMATION

<b>Name</b>	N- (1,3-dimethylbutyl)-N'-phenyl-p-phenylene diamine
<b>Acute toxicity</b>	
<b>Oral LG50</b>	rat: 900mg/kg.
<b>Dermal LD50</b>	rabbit: >7940mg/kg.
<b>Irritation</b>	
<b>Skin</b>	May cause an allergic skin reaction.
<b>Eye</b>	May cause redness, swelling, painand tearing.

## 12. ECOLOGICAL INFORMATION

<b>Name</b>	N- (1,3-dimethylbutyl)-N'-phenyl-p-phenylene diamine
<b>Ecotoxicity</b>	
<b>Fish</b>	96h-LC50 (Rainbow trout): 0.34 mg/l. 96h-LC50 (Bluegill sunfish): 0.43 mg/l. 96h-LC50 (Fathead minnow): 0.41mg/l.
<b>Daphnia</b>	48h-EC50 (Daphnia magna): 1.10 mg/l.
<b>Algae</b>	96h-EC50 (Cell number): 0.50 mg/l.
<b>Fate</b>	
<b>Degradation Biotic</b>	Not readily biodegradable.

## 13. DISPOSAL CONSIDERATIONS

<b>Product</b>	Avoid discharge into the environment Small quantities: According to local regulations. Large quantities: Consult YLSCH Chemical for special advice.
<b>Contaminated packaging</b>	According to local regulations. Waste code number: Please refer to your specific industry
<b>Other information</b>	in the European Waste Catalogue.

**14. TRANSPORT INFORMATION****Land transport (ADR/ RID)**

<b>ADR class</b>	----	<b>RID class</b>	----
<b>ADR/RID packing group</b>	----	<b>Hazard Identification No.</b>	----
<b>Substance Identification No.</b>	----	<b>UN number</b>	----

**Proper Shipping Name**

Environmentally hazard us substance, solid, n.o.s.  
(N- (1,3-dimethylbutyl)-N'-phenyl-p-phenylene diamine)

**Sea transport (IMDG-code/ IMO)**

<b>Correct technical name</b>	----	<b>IMDG Class</b>	
<b>UN Number</b>	----	<b>Packaging group</b>	
<b>EMS Number</b>	----		
<b>Air transport (ICAO-TI/ IATA-DGR)</b>			
<b>ICAO-TI/IATA-DGR Class</b>	----	<b>UN number</b>	----

**Packing group**

Environmentally hazardous substance, solid, n.o.s.  
(N- (1,3-dimethylbutyl)-N'-phenyl-p-phenylene diamine)

**Correct technical name****15. REGULATORY INFORMATION**

<b>Chemical description</b>	N- (1,3-dimethylbutyl)-N'-phenyl-p-phenylene diamine
<b>Labelling according to EC directives</b>	
<b>EC-number</b>	See section 2
<b>Classification based on</b>	Annex-1 to directive 67/548/EEC
	R 43 May cause sensitization by skin contact
<b>R(isk) phrase(s)</b>	May cause long-term adverse effects in the aquatic environment.
	S 24 Avoid contact with skin
	S 37 Wear suitable gloves
<b>S(afety) phrase(s)</b>	S 60 This material and its container must be disposed of as hazardous waste
	S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets
<b>Other information</b>	To be displayed on the label: "EC label".
<b>Wassergefährdungsklasse (WGK)</b>	



**YLSCH-RBB**

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## **16.OTHER INFORMATION**

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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.

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