



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX 6C  
MSDS No. 32/20.03.2015

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### 1.1 Product Identifier

Product Name Mernox 6C  
Synonym 6PPD

### 1.2 Use of the Substance/Mixture

Identified uses Rubber antiozonant

### 1.3 Manufacturer or supplier's details

Company/Undertaking identification address Merchem Limited  
Grove Centre,  
44- Development Plot,  
Kalamassery,  
Cochin – 683 109, Kerala, India  
Telephone + 91-484-4089300  
Telefax + 91-484-4089310

### 1.4 Emergency Telephone Number

Emergency Telephone Number + 91-484-4089300

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification according to EU directives 67/548/EEC or 1999/45/EC

Xn  
N  
R22  
R43  
R50/53

EC Number: 212-344-0

Annex 1 Index Number: Nil

Classification as per Regulation (EC) n.1272/200

Acute toxic Cat.  
Skin sensitizer Cat. 1  
Acute aquatic Cat.  
Chronic aquatic Cat. 1

### 2.2 Label elements

Product Name: Mernox 6C



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#### Hazard pictograms



#### Signal Word

Warning

#### Hazard Statements

Signal word: **Atención / Warning**

Hazardous statements

- H302: Harmful if swallowed
- H317: May cause an allergic skin reaction
- H410: Very toxic to aquatic life with long lasting effects.

#### Precautionary statements:-Prevention

- P261: Avoid breathing dust/fume/gas/mist/vapours/spray
- P280: Wear protective gloves / clothing / eye / face protection.
- P273: Avoid release to the environment.

#### Precautionary statements:-Response

- P302 +P352 IF ON SKIN: Wash with plenty of soap and water
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention
- P391** Collect spillage. Hazardous to the aquatic environment

#### Precautionary statements-storage

- P403 + P235** Store in a well-ventilated place. Keep cool.

#### Precautionary statements -Disposal

- P501: Dispose of contents/container in accordance with national regulations.

#### 2.3 Other hazards

The potential of creating an explosive dust cloud exists.

The product does not meet the criteria to be considered PBT or vPvB.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

#### 3.2

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



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#### Composition/Information on ingredients

Chemical Name	CAS No.	EC No.	Annex-1 Index No	Weight %
N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine	793-24-8	212-344-0	---	> 97

#### 3.3 Mixtures

Not applicable. Substance is not a mixture

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first-aid measures

**Inhalation:** Move the affected person to fresh air. If breathing is difficult, give oxygen and seek immediate medical attention. Apply artificial respiration if breathing stops.

**Ingestion:** Seek immediate medical attention. Do not induce vomiting unless told to do so by a poison control centre or doctor. Never administer anything by mouth to an unconscious person. If vomiting occurs keep head below hips to prevent aspiration of liquid into lungs.

**Contact with the skin:** Remove contaminated clothing and thoroughly wash the affected parts of the body with soap and water. Seek medical attention if irritation persists. Wash contaminated clothing thoroughly before reuse. Destroy or properly dispose of contaminated shoes.

**Contact with the eyes:** Flush immediately with plenty of water for at least 15 min. holding the eyelids open. Seek medical attention if irritation persists after washing. Remove contact lenses immediately if worn, unless they have adhered to eyes.

**Notes to Physician:** Provide supportive care and treatment based on the patient's reactions.

#### 4.2 Most important symptoms and effects, both acute and delayed

- May be fatal if inhaled in large quantities
- Toxic if swallowed

#### 4.3 Indication of immediate medical attention and special treatment needed

No data available.

### SECTION 5: FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

Use water spray, carbon dioxide, foam or dry powder

#### 5.2 Specific hazards arising from the substance or mixture

**Specific hazards** Combustible material  
Avoid the presence of airborne dust because it is combustible.  
When the product burns, it emits toxic gases (carbon monoxide and dioxide, oxides of nitrogen).



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**Specific methods** Keep product and empty container away from heat and sources of ignition.  
Do not flush into surface water or sanitary sewer system  
Prevent product from entering drains

### **5.3 Protective Equipment and Precautions for Firefighters**

#### **Protective equipment**

Fire-fighting personnel must wear approved protective clothing for fire fighting and self-contained breathing apparatus

#### **Special recommendation**

Fight fire from a safe distance and from a protected location. Use water spray to cool surfaces exposed to the fire.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### **6.1 Personal precautions, protective equipment and emergency procedures**

- Use of safety goggles, gloves and protective clothing of a suitable material.
- Use of respiratory protective mask with filter in the presence of dust
- self-contained breathing apparatus in the presence of vapours from the hot product.
- Avoid direct contact with the product and inhalation of vapours from the hot product.
- Keep nonessential personnel away.
- Ventilate closed spaces before entering.

### **6.2 Environmental precautions:**

- Avoid discharge to sewers and public waterways.
- The product may cause long term adverse effects to the aquatic environment.

### **6.3 Methods and materials for containment and cleaning up**

Solid spillages are collected with shovels or other means and placed into sealed plastic bags or drums for later recycling or managed as waste.

### **6.4 Reference to other sections**

- See section 7,8 & 13

## SECTION 7: HANDLING AND STORAGE

### **7.1 Precautions for safe handling**

#### **Handling:**

- Do not eat, drink or smoke while handling the product.
- Use appropriate protective equipment to avoid direct contact or inhalation of the product
- Avoid generating dust.
- Eliminate all ignition sources in the material handling area: sparks, flames, static electricity and other heat sources.
- Avoid contact with the skin, eyes and clothing.



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- Reseal containers containing unused product.
- Wash hands with a neutral soap after handling work has finished.
- Handle the product in areas with efficient ventilation systems.

Stored in locations equipped with fire fighting equipment.

Avoid temperatures above 40°C for prolonged periods.

Incompatible Materials: Strong oxidizers and acids

#### **7.2 Conditions for safe storage, including any incompatibilities**

- In accordance with local and national regulations
- Keep in a dry, cool, well-ventilated area Do not store near acids
- Do not store together with oxidizing and self-igniting products
- Use spark-proof tools and explosion-proof equipment
- Keep away from heat, sources of ignition, and direct sunlight .
- Store in locations equipped with fire fighting equipment

#### **7.3 Specific end uses**

- No further relevant information available.

### SECTION 8: EXPOSURE CONTROL/PERSONNEL PROTECTION

#### **8.1 Control parameters**

**Occupational exposure limit values** Particulates not otherwise classified (PNOC):

- Inhalable particulate: 10 mg/m<sup>3</sup>
- Respirable particulate: 3 mg/m<sup>3</sup>

#### **DNELs calculated for workers**

- Acute dermal: 8 mg/kg body weight/day
- Acute Inhalation: 56.8 mg/m<sup>3</sup>
- Chronic dermal: 1 mg/kg body weight/day
- Chronic Inhalation: 7.1 mg/m<sup>3</sup>

The product is a moderate skin sensitizer for which has not been possible to establish a dose response relationship.

#### **8.2 Exposure controls**

##### **Engineering controls :**

- Ensure adequate ventilation and extraction systems in the workplace.
- Have eye wash systems and showers in the workplace.

##### **Personal protective equipment:**

##### **Eye/face Protection**

Tightly fitting safety goggles or Face-shield

##### **Skin Protection**

Wear suitable protective clothing/equipment . Wear appropriate footwear.

##### **Hand Protection**

The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

The suitability for a specific workplace should be discussed with the producers of the protective gloves.



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<b>Respiratory Protection</b>	Full-face protective mask with filter.
<b>Environmental exposure controls</b>	Prevent product from entering drains Do not contaminate surface water Avoid subsoil penetration
<b>Hygiene measures in the workplace</b>	Shower with hot water and soap at the end of the day. Do not use solvents for cleaning the body. Both clothing and equipment should be changed frequently and dry cleaned. Check the condition of the gloves to avoid internal contamination and discard if signs of cuts or holes are detected. Use skin creams after work.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	pastilles/pellets
<b>Colour</b>	grayish purple
<b>Odour</b>	Characteristic of amine
<b>Vapour pressure</b>	approx 9 mbar at 200 °C
<b>Vapour density</b>	NA
<b>pH</b>	approx. 7 ( dispersion at 10 g/l )
<b>Relative density</b>	1.095 g/cm <sup>3</sup>
<b>Melting point</b>	49-50 °C
<b>Solubility in water</b>	1.1 mg/l at 25 °C
<b>Boiling point</b>	> 300 °C
<b>Partition coefficient n-octanol/water</b>	Log Pow: 4.77 at 25°C and pH 7
<b>Flash point</b>	204°C ( Cleveland Open Cup )
<b>Autoignition temperature</b>	approx. 500 °C ( for powder)
<b>Evaporation rate</b>	NA
<b>Decomposition temp.</b>	N/A
<b>Flammability</b>	Not readily flammable
<b>Viscosity</b>	NA
<b>Combustion properties</b>	NA
<b>Explosive properties</b>	N/A
<b>Solubility</b>	Soluble in acetone, ethyl acetate and dichloromethane

### 9.2 Other information

No data available



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#### SECTION 10: STABILITY AND REACTIVITY

##### 10.1 Reactivity

- See Incompatible Materials

##### 10.2 Chemical Stability

- The product is stable when stored at room temperature in its original packaging.
- Stable under normal conditions of use, handling and transport.

##### 10.3 Possibility of hazardous reactions

- See Incompatible Materials

##### 10.4 Conditions to Avoid

- Keep away from heat sources, sparks and flames. Avoid keeping at temperatures above 40°C for prolonged periods

##### 10.5 Incompatible materials to avoid

- Strong oxidizers

##### 10.6 Hazardous Decomposition Products

- The product is not likely to decompose. In case of combustion see section 5.

#### SECTION 11: TOXICOLOGICAL INFORMATION

##### 11.1 Information on toxicological effects

**Acute oral toxicity LD50 (mg/kg)**

3,580 mg/kg (rat)

**Acute dermal toxicity LD50(mg/kg)**

> 7,940 mg/kg (rabbit)

**Organs affected/routes of exposure  
Ingestion**

Respiratory tract, skin / inhalation, contact.  
While the product is slightly toxic by ingestion, discomfort and/or adverse effects may result from the ingestion of relatively large amounts of product.

**Contact with the skin**

The product is mildly irritating to the skin. Symptoms: reddening, swelling and rashes. May cause an allergic skin reaction.

**Inhalation**

May cause mild irritation of the upper respiratory tract (mouth, nose and throat). Symptoms may include pain in the nose and throat, coughing and sneezing repeatedly.

**Contact with the eyes**

May cause slight irritation to eyes with symptoms typical of conjunctivitis: reddening, swelling, pain and tears.



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<b>Medical conditions</b>	Skin and lung diseases. Haematological problems and liver disease. The product or its emissions during use may cause sensitization effects or allergic reactions that may aggravate pre-existing systemic diseases aggravated by exposure.
<b>Carcinogenicity</b>	Negative in standard in vitro tests. Neither the product or any of the impurities/additives present in amounts exceeding 0.1% have been classified by NTP, IARC or OSHA as a carcinogen or suspected carcinogen.
<b>Genotoxicity</b>	Negative results of in vitro and in vivo genetic toxicity tests.
<b>Reproductive toxicity</b>	No evidence of teratogenicity in animal studies using rats, mice and hamsters.
<b>Other information of interest</b>	The product generates fumes during the vulcanization process which can cause eye, skin and respiratory sensitization

### SECTION 12: ECOLOGY INFORMATION

#### **12.1 Ecotoxicity**

##### **Toxicity to 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

##### **Toxicity to algae**

96h-IC50 (Selenastrum capricornutum): 0.6 mg/l

##### **Toxicity to invertebrates**

48h-EC50 (Daphnia magna): 0.82 mg/l

#### **12.2 Degradability**

Abiotic: The product is rapidly degraded by hydrolysis (93% in 24 h at pH 7 and 25°C.). Biotic: Aerobic degradation: 50% in 2.9 hours.

#### **12.3 Persistence and bioaccumulation**

The tests performed with the material indicate that the product is not bioaccumulative or persistent.

#### **12.4 Results of PBT and vPvB assessment**

The product does not meet the criteria to be considered PBT or vPvB

#### **12.5 Other adverse effects**

None known based on information supplied

#### **12.6 Other adverse effects**

None known based on information supplied

#### **12.7 Other information**

Do not discharge product unmonitored into the environment

### SECTION 13: DISPOSAL CONSIDERATIONS

#### **13.1 Waste Disposal Method**

##### **Product:**

- Recycle the product whenever possible.
- If reuse is not possible, dissolve or mix the material with a combustible solvent and burn in an incinerator equipped with an appropriate gas





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treatment system.

- In any case, avoid discharge into the environment in an uncontrolled way.

#### Contaminated containers

- Managed as HW under the laws of the country concerned.

#### Handling:

- Use properly sealed and labelled containers.
- Used containers should be handled so as not to generate dust during collection, transportation and final disposal.

#### General Provisions:

The establishments and companies engaged in the recovery, disposal, collection or transportation of waste should comply with European regulations on waste management or other local, regional or national regulations in force.

### SECTION 14: TRANSPORT INFORMATION

#### 14.1 Road transport (ADR/RID/ADN)

ADR/RID Class	9
UN-No	3077
Packing Group	III
Hazardous label	Hazardous for the environment
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S

#### 14.2 Sea transport (IMDG)

Class	9
UN-No	3077
Packing Group	III
Hazardous label	Hazardous for the environment
Marine pollutant	Yes
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S

#### 14.3 Air transport (ICAO-TI/IATA)

Class	9
UN-No	3077
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S

#### 14.4 Other information

No data available

#### 14.5 Environmental hazards

Information on environmental hazards, if relevant, pls. see 14.1 - 14.3.

#### 14.6 Special precautions for user

No data available

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

Not relevant



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#### SECTION 15: REGULATORY INFORMATION

##### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation 1907/2006 REGULATION (EC) No 1272/2008

Classification according to EU directives 67/548/EEC or 1999/45/EC

##### **Other regulations:**

The product is listed in the following inventories:

USA (TSCA), Canada (DSL), EU (EINECS), Japan (ENCS), Korea (ECL),  
Australia (AICS), New Zealand (NZ), Philippines (PICCS), China (CLECS).

Product covered by Seveso Dir. Category 9i

##### 15.2 Chemical Safety Assessment

Both the chemical safety report as well as the guide for safe use are included in the registration dossier submitted to ECHA. There is an annex available with exposure scenarios

#### SECTION 16: OTHER INFORMATION

Issue No.	2
Issue date	20.03.2015
Revision No.	0
Reason for revision	Reviewed & revamped based on the guide lines of Regulation (EC) No 1907/2006

##### List of relevant R(isk)-phrase(s)

R22	Harmful in contact with skin.
R43	May cause sensitization by inhalation.
R50/53	Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

##### List of relevant S(afety) phrase(s)

- S20 - Do not breathe dust
- S28 - After contact with skin, wash immediately with plenty of soap and water
- S36/37/39 – Wear suitable protective clothing, gloves and eye/-face protection
- S60 - This material and its container must be disposed of as hazardous waste
- S61 - Avoid release to the environment. Refer to special instructions/safety data sheets

##### Classification of dangerous substance directive (67/548/EEC)

Xn	Harmful substances or preparations
N	Substances or preparations those are dangerous for the environment

##### Further information for the material safety data sheet

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

End of Material Safety Data Sheet