



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

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

### 1.1 Product Identifier

Product Name	Mernox TQ
Synonym	2, 2, 4-trimethyl-1, 2-dihydroquinoline (Polymerized)

### 1.2 Use of the Substance/Mixture

Identified uses	Rubber antioxidant
-----------------	--------------------

### 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
Email	mail@merchem.com

### 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

Not available

REGULATION (EC) No. 1272/2008

Not available

EC Number: 500-051-3

Annex 1 Index Number: Not available

### 2.2 Label elements

Product Name	MERNOX TQ
Hazard pictograms	Not available

Signal Word

Warning



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

#### Hazard Statements

H412 – Harmful to aquatic life with long lasting effects.

#### Precautionary Statements Prevention

P273 - Avoid release to the environment.

#### Precautionary Statements Response

P313 Get medical advice/attention

#### Precautionary Statements Storage

P403 Store in a well-ventilated place.

#### Precautionary statements Disposal

P501 - Dispose of contents/container to an approved incineration plant.

### 2.3 Other hazards

#### PBT and vPvB assessment

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

#### Other hazards which do not result in classification

No information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

#### Chemical description:

2,2,4-trimethyl-1,2-dihydroquinoline (polymerized)

#### Composition/Information on ingredients

Chemical Name	CAS No.	EC No.	Annex-1 Index No.	Weight %
2,2,4-trimethyl-1,2-dihydroquinoline (polymerized)	26780-96-1	500-051-3	--	>97

This product is considered as UVCB substance (Substances of Unknown or variable composition, complex reaction products, or Biological materials) in accordance with European directives and appears on the NLP (No Longer Polymer) List.

### 3.2 Mixtures

Not applicable.



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

#### SECTION 4: FIRST AID MEASURES

##### 4.1 Description of first-aid measures

<b>General Advice</b>	Treatment should be directed at preventing absorption, administering to symptoms as they occur, and providing supportive therapy. Give special attention to breathing difficulties .
<b>Eye Contact</b>	In case of contact or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse. Remove contaminated shoes and discard. If irritation persists or signs of toxicity occur, seek medical attention.
<b>Inhalation</b>	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
<b>Ingestion</b>	Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration. Never give fluids or induce vomiting if the victim is unconscious or having convulsions

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

- No information available

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

- No information available

#### SECTION 5: FIRE FIGHTING MEASURES

##### 5.1 Extinguishing media

**Suitable extinguishing media:** Use water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

**Extinguishing media, which must not be used for safety reasons** Water- jet

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

**Specific hazards:** Combustible material. Development of hazardous combustion gases or vapours possible in the event of fire. Fire may cause evolution of: nitrogen oxides, carbon monoxide, or carbon dioxide.



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

#### Specific methods:

Fight fire from a safe distance and protected location.  
Use water spray to cool surfaces exposed to fire.  
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  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains

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

Fire fighters should wear full impervious protective clothing, including self-contained breathing equipment.

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

- Avoid substance contact.
- Avoid generation of dusts; do not inhale dusts.
- Ensure adequate ventilation.
- Evacuate the danger area, observe emergency procedures, consult an expert.
- Wear respiratory protection
- Wear suitable protective clothing, gloves and eye/face protection

#### **6.2 Environmental precautions**

- Remove immediately adhering matter
- Prevent product from entering drains
- Do not flush into surface water or sanitary sewer system

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

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

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

See section 7,8 &13



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling:

- Avoid contact with skin and eyes.
- Avoid breathing dust; if exposed to high dust concentration, leave area immediately.
- Keep away from food and smoking materials. Good hygienic practices should be observed.
- Work clothes should be washed separately at the end of each work day.
- Wash hands before eating, drinking, or using the toilet.

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

- Do not store near acids
- Keep away from heat and sources of ignition
- Store closed containers in a cool, dry, well-ventilated area.
- No significant incompatibilities. When the product is stored for prolonged periods at temperatures above 30°C, it agglomerates forming large blocks

### 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  
Inhalable particulate = 10mg/m<sup>3</sup>  
Respirable particulate = 3 mg/m<sup>3</sup>

#### Derived no-effect level (DNEL) calculated for workers

Chronic dermal: 12 mg per kg bodyweight per day  
Chronic inhalation: 36 mg per kg bodyweight per day  
Chronic oral: 12 mg per kg bodyweight per day

### 8.2 Exposure controls

#### Engineering Controls:

Ensure adequate ventilation and exposure control measures in the work place. Must have eye-wash systems and showers in the workplace.



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

#### Personal Protective Equipment:

##### Eye/face Protection

Approved safety goggles or face-shield

##### Skin Protection

Long sleeve overall and appropriate footwear to avoid contact with skin. Neoprene or Nitrile rubber coated apron or other body covering may be required if there is a possibility of regular work clothing becoming contaminated with product. All soiled or dirty clothing and PPEs should be washed thoroughly cleaned before reuse

##### Hand Protection

Gloves (Neoprene or Nitrile rubber)

##### Respiratory Protection

Appropriate respiratory protection must be worn when applied engineering controls are not adequate to protect against inhalational exposure

##### Environmental exposure controls

Prevent product from entering drains  
Do not contaminate surface water  
Avoid subsoil penetration

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical State	Pastilles /Powder
Color	Amber
Odor	Faint Aromatic
Boiling point/Range	>280°C (Decompose before boiling)
Melting point/Range	80-85°C
Flash Point	180°C (Cleveland open cup)
Flammability	Not readily flammable
Auto-ignition temperature	450 -500°C (For powder)
Explosive properties	No data available
Explosion Limit	Lower explosion Limit (LEL): <10g /m <sup>3</sup> Minimum ignition energy: 4-12 mJ
Oxidizing properties	No data available
Vapor pressure	<4.6x10 <sup>-4</sup> Pa at 25°C
Solubility in water	2.5 mg /L at 23°C and pH = 5 3.2 mg/L at 23° and pH = 9
Solubility in other solvents	Acetone, Alcohol, Organic solvents
Partition coefficient (n-Octanol-water)	Log Pow: 1.2 – 7.7 at pH =6.3 and 25°C with an average value of 5.8
Relative vapor density	No data available
Viscosity	No data available



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

#### 9.2 Other information

No data available

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity

- See Incompatible Materials

#### 10.2 Chemical Stability

- Stable under recommended storage and handling conditions (See section 7)

#### 10.3 Possibility of hazardous reactions

- See Incompatible Materials

#### 10.4 Conditions to Avoid

- Avoid dust formation
- Keep away from heat and sources of ignition (sparks and flame)

#### 10.5 Incompatible materials to avoid

- Strong Oxidizing agents

#### 10.6 Hazardous Decomposition Products

- Heating or fire can release toxic gas
  - Carbon monoxide
  - Carbon dioxide
  - Oxides of Nitrogen

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

**Acute oral toxicity** (LD50/oral/rat):

3190 mg/Kg

**Acute dermal toxicity** (LD50/dermal/rabbit):

>5100 mg/Kg

**Acute inhalational toxicity** :

No data available. May cause mild irritation of the upper respiratory tract.

**Eye irritation:**

Slightly irritating to eyes but not sufficient for classification



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

<b>Skin irritation/Sensitization:</b>	Slightly irritating to eyes but not sufficient for classification. The product is not a skin sensitizer as per GPMT tests (Guinea pig maximization test) conducted according to OECD TG 406 method
<b>Mutagenic Effects</b>	No information available
<b>Reproductive toxicity:</b>	No evidence of teratogenicity in animal studies using rats, mice and/or hamsters.
<b>Carcinogenic effects:</b>	Negative in standard in vitro tests. No conclusive data for in vivo test.
<b>Genotoxicity:</b>	Negative for genetic activity in in vitro and in vivo tests
<b>Target Organ Effects:</b>	No data available
<b>Human experience:</b>	No data available

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity

Component information:	Active ingredient
Toxicity to fish: LC50/96h/ <i>Lepomis macrochirus</i>	54 mg/L
LC50/96h/ <i>Oncorhynchus mykiss</i>	50 mg/L
LC50/96h/ <i>Pimephales promelas</i>	64 mg/L
Toxicity to algae: 96h/IC <sub>50</sub> / <i>Selenastrum capricornutum</i>	>1000 mg/L
Toxicity to invertebrates: 48h-EC <sub>50</sub> ( <i>Daphnia magna</i> ):	96 mg/L

### 12.2 Mobility in soil

No information available

### 12.3 Persistence and degradability

Abiotic:	The product is rapidly degraded by hydrolysis (50% at 17 h at pH 7 and 23°C.) and photolysis (breakdown by photolysis in water: 50% in 3 minutes)
Biotic:	Product not biodegradable





## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

#### **12.4 Bioaccumulative Potential**

The tests performed with the material indicate that the product is neither bioaccumulative nor persistent.

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

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

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

No information available

#### **12.7 Other information**

PNEC (Predicted No Effect Concentration) Values:

Freshwater:	0.056 mg/L
Aquatic marine water:	0.0056 mg/L
Freshwater sediment:	4.57 mg/kg w.w.
Marine sediment:	0.457 mg/kg w.w.
Soil:	3.68 mg/kg w.w.
STP:	100 mg/L

### 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 treatment system. In any case, avoid discharge into the environment in an uncontrolled way.

##### **Packing**

Manage as Dangerous Waste under the laws of the country concerned. 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):** Not Regulated

**14.2 Sea transport (IMDG/IMO):** Not Regulated

**14.3 Air transport (IATA):** Not Regulated

#### **Other information**

No data available



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERNOX TQ  
MSDS No. 28/20.03.2015

#### **14.4 Environmental hazards**

No data available

#### **14.5 Special precautions for user**

No data available

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

Not relevant

### SECTION 15: REGULATORY INFORMATION

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

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).

#### **15.2 Chemical Safety Assessment**

No data available

### 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)
---------------------	--

#### **Training advice**

Provide adequate information, instruction and training to operators.

#### **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**