



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
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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
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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



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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.



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SECTION 4: FIRST AID MEASURES

4.1 Description of first-aid measures

General Advice	Treatment should be directed at preventing absorption, administering to symptoms as they occur, and providing supportive therapy. Give special attention to breathing difficulties .
Eye Contact	In case of contact or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately
Skin Contact	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 launder before reuse. Remove contaminated shoes and discard. If irritation persists or signs of toxicity occur, seek medical attention.
Inhalation	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
Ingestion	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 (CO₂), 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.



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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



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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/m³
Respirable particulate = 3 mg/m³

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.



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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 ³ Minimum ignition energy: 4-12 mJ
Oxidizing properties	No data available
Vapor pressure	<4.6x10 ⁻⁴ 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



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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



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Skin irritation/Sensitization:	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
Mutagenic Effects	No information available
Reproductive toxicity:	No evidence of teratogenicity in animal studies using rats, mice and/or hamsters.
Carcinogenic effects:	Negative in standard in vitro tests. No conclusive data for in vivo test.
Genotoxicity:	Negative for genetic activity in in vitro and in vivo tests
Target Organ Effects:	No data available
Human experience:	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 ₅₀ / <i>Selenastrum capricornutum</i>	>1000 mg/L
Toxicity to invertebrates: 48h-EC ₅₀ (<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



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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



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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