

# Safety Data Sheet

## According to Regulation (EC) No 1907/2006

TMQ(1,2-Dihydro-2,2,4-trimethylquinoline, oligomers)

Version 1.0

Issue date: 16/05/2013

Revision date: 16/05/2013

SDS Record Number: CSSS-TCO-010-112986

### Section 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier:

Identification on the label/Trade name: TMQ(1,2-Dihydro-2,2,4-trimethylquinoline, oligomers)  
Additional identification: Poly(1,2-dihydro-2,2,4-trimethylquinoline);  
2,2,4-trimethyl-1,2-dihydroquinoline polymer  
Identification of the product: CAS# 26780-96-1; EC# 500-051-3  
Index Number: Not available.  
REACH registration No.: 01-2119486783-23-0002

#### 1.2 Relevant identified uses of the substance and uses advised against:

##### 1.2.1 Identified uses:

Used as rubber antioxidant.

##### 1.2.2 Uses advised against:

Not available.

#### 1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): -  
Supplier(Manufacturer): SINOPEC Nanjing Chemical Industries Co., Ltd  
Address: NO.355 Xinhua Road, Yanjiang Development Zone, Nanjing, China  
Contact person(E-mail): Jix.nhgs@sinopec.com  
Telephone: +86-25-57794085  
Fax: +86-25-57794085

#### 1.4 Emergency telephone Number:

+86-25-57794085 Only available during office hours (8:30a.m.-17:30p.m. Beijing Time Zone)

Available outside office hours? YES  NO

### Section 2 Hazards Identification

#### 2.1 Classification of the substance/mixture

##### 2.1.1 Classification:

The substance is classified as following according to 67/548/EEC and REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Aquatic Chronic 3	H412

For full text of H- phrases: see section 2.2.

67/548/EEC	
Hazards characteristics	R-Phrases
-	R52-53

For full text of R- phrases: see section 16.

#### 2.2 label elements

Product name: TMQ(1,2-Dihydro-2,2,4-trimethylquinoline, oligomers)  
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<b>Hazard Pictograms:</b>	No hazard pictogram is used.
<b>Signal Word(S):</b>	No signal word is used.
<b>Hazard Statement:</b>	H412: Harmful to aquatic life with long lasting effects.
<b>Precautionary statement</b>	P273: Avoid release to the environment. P501: Dispose of contents/container in according with local regulation.

### 2.3 Other hazards

The substance is not considered a PBT/vPvB.

## Section 3 Composition/information on ingredients

**Substance/Mixture:** Substance

**Ingredient(s):**

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
1,2-Dihydro-2,2,4-trimethylquino line, oligomers	01-2119486783-23-0002	26780-96-1	500-051-3	100%

## Section 4 First aid measures

### 4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

#### 4.1.1 In case of inhalation:

Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

#### 4.1.2 In case of skin contact:

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

#### 4.1.3 In case of eyes contact:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

#### 4.1.4 In case of ingestion:

Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

The product is not classified as harmful to human health effect.

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

If skin irritation or rash occurs, get medical advice/attention.

## Section 5 Fire-Fighting measures

## 5.1 Extinguishing media:

**Suitable extinguishing media:**

Use water spray (fog), foam, dry chemical or CO<sub>2</sub>.

**Unsuitable extinguishing media:**

Not available.

## 5.2 Special hazards arising from the substance or mixture

No specific fire or explosion hazard. During a fire the product can form carbon monoxide, carbon dioxide, nitrogen oxides.

## 5.3 Special fire fighting methods and special protective actions for fire-fighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## Section 6 Accidental release measures

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

**6.1.1 For non-emergency personnel:**

Provide adequate ventilation. Avoid inhalation of vapour or dust. Avoid skin and eye contact. Refer to section 8 of SDS for personal protection details.

**6.1.2 For emergency responders:**

Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

### 6.2 Environmental Precautions:

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Do not allow material to be released to the environment without proper governmental permits. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 6.3 Methods for Containment and Cleaning up:

Large spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections:

See Section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

### 6.5 Additional information:

Not applicable.

## Section 7 Handling and storage

### 7.1 Precautions for safe handling:

**7.1.1 Protective measures:**

Good hygienic practices should be observed. Avoid contact with skin and eyes. Avoid breathing dust; if exposed to high dust concentration, leave area immediately. Work clothes should be washed separately at the end of each work day. Since empty containers contain product residue, follow all hazard warnings and precautions even after container is emptied. Keep away from sources of ignition. Ensure good ventilation/exhaustion at the workplace. Normal measures for preventive fire protection.

**7.1.2 Advice on general occupational hygiene:**

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

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

Store in accordance with local regulations. Store in a dry place. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Packaging materials, Recommended: Use original container.

### 7.3 Specific end use(s):

Not applicable.

## Section 8 Exposure Controls/Personal Protection

### 8.1 Control parameters:

**8.1.1 Occupational exposure limits:** OSHA PEL/8Hr-TWA = 15 mg/m<sup>3</sup> (Total Dust).  
OSHA PEL/8-Hr TWA = 0.5 mg/m<sup>3</sup> (Respirable Dust).  
ACGIH TLV/8-Hr TWA = 10 mg/m<sup>3</sup>.

**8.1.2 Additional exposure limits under the conditions of use:** Not available

**8.1.3 DNEL/DMEL and PNEC-Values:** Not available

### 8.2 Exposure controls

**8.2.1 Appropriate engineering controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin. Provide safety shower and cleaning eyes equipments.

#### 8.2.2 Individual protection measures, such as personal protective equipment:

**Eye/face protection:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: safety glasses with side-shields.

**Hand protection:** For prolonged or repeated contact use protective gloves.

**Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: protective clothing.

**Respiratory protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: dust-protection mask.

**Thermal hazards:** Wear suitable protective clothing to prevent heat.

**8.2.3 Environmental exposure controls:** Avoid discharge into the environment.  
According to local regulations, Federal and official regulations.

## Section 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance** Pastilles  
**Colour:** Light brown  
**Odour:** Faint, aromatic  
**Odour threshold:** Not available  
**pH:** 7  
**Melting point/range (°C):** 48°C  
**Boiling point/range (°C):** Decomposition: ca. 280 °C  
**Flash point (°C):** 180°C(ca. 1013 hPa)  
**Evaporation rate:** Not available  
**Flammability limit - lower (%):** Not available  
**Flammability (solid, gas):** Not available  
**Ignition temperature (°C):** Not available  
**Upper/lower flammability/explosive limits:** Lower: <10mg/l(dust)

Vapour pressure:	< 0.00048 Pa(25°C)
Vapour density:	Not available
Relative Density:	1.04(20°C)
Bulk density (kg/m <sup>3</sup> ):	600-630 kg/m <sup>3</sup>
Water solubility (g/l):	< 2.5 mg/L (23°C,PH=5)
n-Octanol/Water (log Po/w):	1.2 -7.7(25°C,PH=6.3)
Auto-ignition temperature:	Not available
Decomposition temperature:	ca. 280 °C
Viscosity, dynamic (mPa.s):	Not relevant, substance is solid
Explosive properties:	Non explosive
Oxidising properties:	Not oxidizing
Molecular Formula:	(C <sub>12</sub> H <sub>15</sub> N) <sub>n</sub> . n=34
Molecular Weight:	(173.26) <sub>n</sub>

## 9.2. Other information:

Fat solubility(solvent– oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water( pKa):	Not available
Oxidation-reduction Potential:	Not available
Specific gravity:	1.04

## Section 10 Stability and reactivity

<b>10.1 Reactivity:</b>	The substance is stable under normal storage and handling conditions.
<b>10.2 Chemical stability:</b>	Stable at room temperature in closed containers under normal storage and handling conditions.
<b>10.3 Possibility of hazardous reactions:</b>	No dangerous reactions known.
<b>10.4 Conditions to avoid:</b>	Incompatible materials. Avoid dust formation.
<b>10.5 Incompatible materials:</b>	Strong oxidizing agents.
<b>10.6 Hazardous decomposition products:</b>	Carbon monoxide, carbon dioxide, nitrogen oxides.

## Section 11 Toxicological information

### 11.1 Toxicokinetics, metabolism and distribution

Non-human toxicological data:	Not available
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### 11.2 Information on toxicological effects

Acute toxicity:	
LD50(Oral, Rat):	3190 mg/kg bw
LD50(Dermal, Rabbit):	> 5100 mg/kg bw
LC50(Inhalation, Rat):	Not available

Skin corrosion/Irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	Not classified
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified

<b>Carcinogenicity:</b>	Not classified
<b>Reproductive toxicity:</b>	Not classified
<b>STOT- single exposure:</b>	Not classified
<b>STOT-repeated exposure:</b>	Not classified
<b>Aspiration hazard:</b>	Not classified

## Section 12 Ecological information

### Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	>100mg/l	96h	Fish	OECD 203	N/A	N/A
EC50	56 mg/l	48h	Daphnia	OECD 202	N/A	N/A
EC50	>1000mg/l	72h	Algae	OECD 201	N/A	N/A

<b>Persistence and degradability:</b>	Not readily biodegradable.
<b>Bioaccumulative potential:</b>	Not available.
<b>Mobility in soil:</b>	Not available.
<b>Results of PBT&amp;vPvB assessment:</b>	The substance is not considered a PBT/vPvB.
<b>Other adverse effects:</b>	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## Section 13 Disposal considerations

<b>13.1 Waste treatment methods</b>	The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.
<b>13.2 Product / Packaging disposal:</b>	If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations.

## Section 14 Transport information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
<b>UN-Number:</b>	Not Regulated	Not Regulated	Not Regulated
<b>UN Proper shipping name:</b>	Not Regulated	Not Regulated	Not Regulated
<b>Transport hazard Class:</b>	Not Regulated	Not Regulated	Not Regulated
<b>Packaging group:</b>	Not Regulated	Not Regulated	Not Regulated
<b>Environmental hazards:</b>	No	No	No
<b>Special precautions for user:</b>	See section 2.2	See section 2.2	See section 2.2
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not Regulated	Not Regulated	Not Regulated

## Section 15 Regulation information

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

**Relevant information regarding authorization:** Not applicable.

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**Relevant information regarding restriction:** Not applicable.  
**Other EU regulations:** Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.  
**Other National regulations:** Not applicable  
**Chemical Safety Assessment has been carried out?** YES  NO

## Section 16 Other information

### 16.1 Indication of changes

Version 1.1 Amended by EU No 453/2010

### 16.2 Relevant R- phrases (number and full text):

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 16.3 Training instructions:

Not applicable.

### 16.4 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

### 16.5 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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