

Safety Data Sheet: Polymerized 2,2,4-Trimethyl-1,2-dihydroquinoline (TMQ)

1. Identification

Product	Polymerized 2,2,4-Trimethyl-1,2-dihydroquinoline (TMQ); CAS 26780-96-1; EC 500-051-3
Use	Professional rubber-compound and antioxidant-system development.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Polymerized 2,2,4-Trimethyl-1,2-dihydroquinoline (TMQ). The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Chronic aquatic toxicity Category 3. Combustible dust hazard in the selected industrial reference.
Signal word / symbols	Warning; No GHS pictogram in the selected reference
Hazard statements	H412: harmful to aquatic life with long-lasting effects. Airborne combustible dust can form an explosive mixture under suitable conditions.
Prevention	Control airborne dust with effective local extraction. Avoid dust accumulation, sparks and static discharge; use suitable non-sparking collection tools. Wear protective gloves, goggles and work clothing, and use suitable respiratory protection when the exposure assessment requires it.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.

3. Composition / Information on Ingredients

Reference ingredient	Polymerized 2,2,4-trimethyl-1,2-dihydroquinoline, CAS 26780-96-1; selected solid reference ≥90–100%. The reference fraction is not a supplied-batch analysis. Commercial supply controls dimer + trimer + tetramer at ≥40%.
Supply grade	Dimer + trimer + tetramer ≥40%
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to dust.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Seek medical advice for persistent irritation.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Seek medical advice if irritation persists.
Ingestion	Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain medical advice.
Effects / treatment	Avoid dust inhalation and unnecessary skin or eye exposure. Dust may cause mechanical irritation; control combustible dust and environmental release. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use water spray, foam, dry chemical or carbon dioxide appropriate to the incident. Firefighters require self-contained respiratory protection. Avoid dispersing accumulated dust and retain contaminated firewater.
Hazards	Combustion can release carbon oxides, nitrogen oxides and hazardous smoke.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personnel	Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and dust exposure.
Environment	Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.
Cleanup	Collect spilled solid without raising dust into closed labelled containers.

7. Handling and Storage

Handling	Control airborne dust with effective local extraction. Avoid dust accumulation, sparks and static discharge; use suitable non-sparking collection tools. Wear protective gloves, goggles and work clothing, and use suitable respiratory protection when the exposure assessment requires it.
Storage	Store tightly closed in a cool, dry and well-ventilated place. Protect from moisture, excessive heat and ignition sources. Segregate from strong oxidizers, strong acids and strong bases.
Incompatibilities	Strong oxidizing agents, strong acids and strong bases.

8. Exposure Controls / Personal Protection

Exposure limits	No substance-specific occupational exposure limit is identified in the selected reference. Apply local workplace dust controls.
Engineering controls	Use local extraction where dust can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	Amber to brown granules
Formula / molecular weight	(C ₁₂ H ₁₅ N) _n / 173.26 g/mol (repeat unit)
Physical state	Amber to brown granules
Softening range, supply TDS	80–100°C
Density, typical supply value	Approximately 1.05 g/cm ³
Other properties	Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred.

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Strong oxidizing agents, strong acids and strong bases.
Decomposition	Combustion can release carbon oxides, nitrogen oxides and hazardous smoke.

11. Toxicological Information

Exposure effects	Avoid dust inhalation and unnecessary skin or eye exposure. Dust may cause mechanical irritation; control combustible dust and environmental release.
Reference classification	Chronic aquatic toxicity Category 3. Combustible dust hazard in the selected industrial reference.
Data limits	Selected reference oral rat LD ₅₀ 3,190 mg/kg and dermal rabbit LD ₅₀ >5,010 mg/kg. Reported mutagenicity studies were negative in the stated test systems. These endpoints do not establish the safety of every commercial oligomer distribution or finished compound.

12. Ecological Information

Environmental effects	Selected reference water-flea EC ₅₀ 11–20 mg/L over 48 hours and fish LC ₅₀ 50–64 mg/L over 96 hours. Not readily biodegradable in the reference assessment. Prevent uncontrolled release to drains, soil and water.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Non-dangerous goods
UN number	Not assigned
Shipping name	Not regulated as dangerous goods
Class / packing group	DOT / IMDG / IATA: non-dangerous goods in the selected solid reference; no UN number or packing group assigned.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Polymerized 2,2,4-Trimethyl-1,2-dihydroquinoline (TMQ); CAS 26780-96-1; EC 500-051-3
HS reference	381231; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished formulation.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H412: harmful to aquatic life with long-lasting effects. Airborne combustible dust can form an explosive mixture under suitable conditions.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.1; prepared 2026-10-07. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

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