

SAFETY DATA SHEET

RUBBER ANTIOXIDANT TMQ

DATE OF ISSUE 2021-8-7 VERSION 1.2

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	TMQ
Manufacturer	TIANJIN EASTRICHON RUBBER ADDITIVES CO., LTD.
Chemical name	2,2,4-Trimethyl-1,2-dihydroquinoline
Synonym	Flectol; Flectol Pastilles; Flectol H; Permanax TQ; TMQ; Polymerized 1,2-Dihydro-2,2,4-trimethylquinoline.
Material uses	Antioxidant
Product type	Granule

## SECTION 2. HAZARDS IDENTIFICATION

### Hazard Information

Emergency Overview	WARNING! Combustible dust - explosion potential. May irritate the eyes. May irritate the skin. May cause allergic skin reaction.
Eye Contact	May cause mild eye irritation.
Skin Contact	May cause mild skin irritation. May cause a rash and itching of the skin. May cause an allergic skin reaction. Causes drying of the skin.
Inhalation	May cause mild respiratory irritation.
Ingestion	Illness may occur after a single swallowing of relatively large quantities of this material.

## SECTION 3. Composition/information on ingredients

Substance/mixture	Substance		
Ingredient name	CAS number	% by weight	
2,2,4-Trimethyl-1,2-dihydroquinoline	26780-96-1	99-100	

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4. First aid measures

### Description of necessary first aid measures

In Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
On Skin	Remove contaminated clothing. wash skin with water, using soap if available. Remove contaminated clothing and launder before reuse. Get medical attention if irritation persists.
Inhaled	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
Swallowed	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Notes To Physician                      No specific antidote. Treatment should be directed at preventing absorption, administering to symptoms as they occur, and providing supportive therapy.

**SECTION 5. Fire-fighting measures**

Flash Point (°F/C)	239°F / 115°C (Powder) 302°F / 150°C (Pastilles)
Unsuitable extinguishing	Cleveland Open Cup
Autoignition Temp. (°F/C)	Not Determined
Lower Explosion Limit in Air (LEL)	20-200 mg/l (dust cloud)
Upper Explosion Limit in Air (UEL)	Not Determined
Extinguishing Media	Water fog, carbon dioxide, foam, dry chemical
Special Exposure Hazards	Fight fire from a safe distance and from a protected location. Flammable dust when in finely divided and highly suspended state. Use water spray to cool fire exposed surfaces. Decomposition in fire may produce toxic gases. Do not allow runoff to enter waterways
Special Protective Equipment	Fire fighters should wear full protective clothing, including self-contained breathing equipment
Unusual Fire/Explosion Hazards	Toxic emissions may result if product is involved in a fire. Fire produces highly toxic sulfur dioxide gas

**SECTION 6. Accidental release measures**

Spill Procedures	Wear protective equipment specified. Avoid the generation of dust. Sweep, vacuum, or shovel and place into closable container for disposal.
Procedure for Cleaning/Absorption	Isolate area and remove sources of friction, impact, heat, low level electrical current, and RF energy. Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Scoop up and remove. Do NOT spread spilled product with water.
CERCLA Reportable Quantity (RQ)	Not Applicable

**SECTION 7. Handling and storage**

Handling	Good hygienic practices should be observed. Work clothes should be washed separately at the end of each work day. Disposable clothing should be discarded with material. Avoid generating or breathing dust. Avoid contact with eyes, skin and clothing. Reclose containers of unused product. Wash hands before eating, drinking, chewing gum, using tobacco or using
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	the toilet. Do not reuse this container.
Storage	Store closed containers in a cool, dry, well-ventilated area. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Do not double stack.

### **SECTION 8. Exposure controls/personal protection**

Eye Protection	Wear safety glasses or goggles to protect against exposure. Wear eye protection appropriate to handling activities.
Skin Protection	Normal work coveralls. Launder contaminated clothing before reuse.
Gloves	Use gloves as a standard industrial handling procedure. All cleanable impervious glove types are acceptable.
Respiratory Protection	Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure. Firefighting; use a Positive Pressure Demand Full Face Self Contained Breathing Apparatus
Ventilation	General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. If air is to be recirculated, it must be filtered properly.
Airborne Exposure Limits	Nuisance Dust. OSHA PEL/8Hr-TWA = 15 mg/m <sup>3</sup> (Total Dust). OSHA PEL/8-Hr TWA = 05mg/m <sup>3</sup> (Respirable Dust). ACGIH TLV/8-Hr TWA = 10 mg/m <sup>3</sup> .

### **SECTION 9. Physical and chemical properties**

Appearance	Light brown powder Granules
Color	Amber-browns
Odor	AROMATIC
pH	Not available
Melting point	80-83°C
Boiling point	Not Determined
Specific Gravity	1.1 @ 25°C
Density	Unknown
Bulk Density	190-230 kg/m <sup>3</sup> (Powder) 600-630 kg/m <sup>3</sup> (Pastilles)
Vapor pressure	Negligible.
Vapor density (Air=1)	Not Determined.
% Volatile by Volume	<0.5%
Solubility	Soluble in Acetone Ethanol Chloroform Organic liquids,

	including fats and oils Toluene
Solubility in water	INSOLUBLE.
Viscosity	Not determined.
Other Data	Ash content = 0.3% max.
Molecular	[173.26]n
Molecular Formula	[C12-H15-N]n

### SECTION 10. Stability and reactivity

Chemical Stability	Stable when stored at room temperature in closed, original container. Stable under normal conditions of handling, use and transportation.
Hazardous Polymerization	Will not occur
Conditions to Avoid	Avoid contact with heat, sparks, open flame, and static discharge. Avoid contact with strong oxidants such as liquid chlorine and concentrated oxygen. Heat.
Materials to Avoid	Contact with oxidizing agents. Nitric acid.
Hazardous Decomposition Products	Carbon monoxide. Oxides of nitrogen.
Additional Guidelines	Thermal decomposition begins @ 90°C.

### SECTION 11. Toxicological information

#### Target Organs

Acute Oral LD50 (mg/kg)	2250 mg/kg
Acute Dermal LD50 (mg/kg)	>5010 mg/kg
Acute Inhalation LC50 (mg/l)	Not Determined
Principle Routes of Exposure	Eyes. Inhalation. Dermal - skin.

Ingestion	Illness may occur after a single swallowing of relatively large quantities of this material.
Skin Contact	May cause mild skin irritation. May cause a rash and itching of the skin. May cause an allergic skin reaction. Causes drying of the skin.
Inhalation	May cause mild respiratory irritation.
Eye Contact:	May cause mild eye irritation
Aggravated Conditions:	Pulmonary disorders. Dermal ailments.
Carcinogenicity Comment:	This product or one of its ingredients present 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA. Carcinogenic: Category 3
Other:	Decomposition products and fumes from vulcanization and cross-linking may cause eye, skin and respiratory

	sensitization. May be a skin sensitizer.
Primary Irritation Effect:	Practically non-irritating Possible sensitizer.
Carcinogenicity:	Negative in standard tests using bacteria and yeast cells
Genotoxicity:	None
Reproductive/Developmental Toxicity:	Not determined

## SECTION 12. Ecological information

Acute Fish Toxicity	96Hr LC50 Rainbow Trout = 50.0 mg/l. 96Hr LC50 Bluegill Sunfish = 54.0 mg/l. 96Hr LC50 Fathead Minnow = 64.0 mg/l.
Acute Crustaceans Toxicity	48Hr EC50 Daphnia Magna: 5.8 mg/l.
Acute Algae Toxicity	96Hr EC50 Algae = >1000 mg/kg.
Octanol/Water Coefficient	3.2 log P
Chemical Fate Information	Biodegradability: <10% in river water. 8% based on CO2 evolution.
Other Information	Not Available

## SECTION 13. Disposal considerations

Disposal of Waste Method	This material is not a RCRA hazardous waste. Bury in a licensed landfill or burn in an approved incinerator according to federal, state, and local regulations. Empty containers should be handled in a manner not to cause dusting during collection, transportation and disposal.
Contaminated Packaging	If empty container retains product residues, all label precautions must be observed. Store away from ignition sources. Transport with all closures in place. Return for reuse or dispose according to national or local regulations. Dispose of container according to national or local regulations.

## SECTION 14. Transport information

DOT:DOT Status	NONE
DOT Shipping Name	UN/NA Number
DOT Reportable Quantity (lbs)	IMDG: Status
ICAO/IATA:Status	Proper Shipping Name
Proper Shipping Name	TDG (Canada): Status
Not Regulated	Proper Shipping Name
NONE	None
NONE	Not Regulated
NOT REGULATED FOR TRANSPORTATION	None

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Not Regulated	None
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### SECTION 15. Regulatory information

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#### Worldwide Inventory Status

TSCA (USA)	Listed
Canadian DSL	Listed
Canadian NDSL	N/A
EINECS/ELINCS (Europe)	Listed
Japanese Inventory (ENCS)	Listed
Korean Chemical Inventory (ECL)	Listed
Australian Chemical Inventories	Listed

#### (AICS)

New Zealand (NZ)	Listed
Phillipines (PICCS) Inventory	Listed
China (CLECS)	Listed

#### US Regulatory Rules

SARA Section 302	None Found
SARA 311/312 Hazard Categories	Delayed Fire
SARA 313 Chemical	N/A
RCRA Status	Not a RCRA waste.

#### Other Regulations

California Proposition 65	NONE
New Jersey Right-to-Know List	N/A
Pennsylvania Right to Know List	N/A
Florida Right to Know	N/A
Minnesota Right to Know	N/A
MA Right to Know Law	N/A

FDA Status 21 CFR	PROHIBITED FROM USE in 21 CFR.
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Canadian Regulations	
WHMIS Hazard Class	D2B TOXIC MATERIALS / Materials Causing Other Toxic Effects

NPRI	N/A
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### SECTION 16. Other information

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The following has been revised since the last issue of this MSDS:

Nothing has been revised.

Additional Information

NONE

Important Note

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