



## Material Safety Data Sheet

Last Revision: 04/27/2007

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** FLECTOL® TMQ

**MSDS NO.** FLXP0008

**Chemical Name:** 2,2,4-Trimethyl-1,2-dihydroquinoline, polymerized.

**Synonyms:** Flectol; Flectol Pastilles; Flectol H; Permanax TQ; TMQ; Polymerized 1,2-Dihydro-2,2,4-trimethylquinoline.

**Use:** Antidegradant

**Manufactured By:** Flexsys America L.P. 260 Springside Drive Akron OH 44333-2433 USA

**Emergency Telephone:** **CHEMTREC:** 1-800-424-9300 [TOLL FREE - USA and Territories]  
703-527-3887 [ELSEWHERE - Collect Calls Accepted]  
**CANUTEC:** 613-996-6666 [Canada]  
**SETIQ:** 91-800-00-214 [Mexico]

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### 2. HAZARDS IDENTIFICATION

**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.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
2,2,4-Trimethyl-1,2-dihydroquinoline, polymerized	26780-96-1	99 - 100

### 4. 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 and launder before reuse. Wash with soap and water. 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.

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**HARWICK STANDARD  
DISTRIBUTION CORPORATION**  
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#### 4. FIRST AID MEASURES

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

#### 5. FIRE FIGHTING MEASURES

**Flash Point (°F/C):** 239°F / 115°C (Powder) 302°F / 150°C (Pastilles)  
**Flash Point Method:** Cleveland Open Cup  
**Autoignition Temp. (°F/C):** Not Determined  
**Lower Explosion Limit (LEL):** 20-200 mg/l (dust cloud)  
**Upper Explosion Limit (UEL):** Not Determined

**Extinguishing Media:** Use water fog, carbon dioxide, foam or dry chemical.  
**Special Exposure Hazards:** Fight fire from a safe distance and from a protected location. 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 impervious protective clothing, including self-contained breathing equipment.  
**Unusual Fire/Explosion Hazards:** Toxic emissions may result if product is involved in a fire.

#### 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. Scoop up and remove solids. Do NOT spread spilled product with water.  
**CERCLA Reportable Quantity (RQ):** Not Applicable

#### 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 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.

#### 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. Use in a well ventilated area. 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.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Airborne Exposure Limits:** Nuisance Dust. OSHA PEL/8Hr-TWA = 15 mg/m<sup>3</sup> (Total Dust). OSHA PEL/8-Hr TWA = 05 mg/m<sup>3</sup> (Respirable Dust). ACGIH TLV/8-Hr TWA = 10 mg/m<sup>3</sup>.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Light brown powder; Granules  
**Odor:** AROMATIC  
**pH:** Not Applicable  
**Specific Gravity:** 1.1 @ 20°C  
**Density:** 1.1  
**Bulk Density:** 190-230 kg/m<sup>3</sup> (Powder), 600-630 kg/m<sup>3</sup> (Pastilles)

**Melting Point (°F/C):** 80-83°C (Softening Point)  
**Boiling Point (°F/C):** >315°C  
**Vapor Pressure:** Negligible  
**Vapor Density (Air=1):** Not Applicable  
**% Volatile by Volume:** <0.5%  
**Solubility in Water:** Insoluble  
**Other Solubility:** Soluble in: Acetone Ethanol Chloroform Organic liquids, including fats and oils  
Toluene

**Viscosity:** Not Applicable  
**Other Data:** Ash content = 0.3% max.  
**Molecular Weight:** [173.3]<sub>n</sub>  
**Molecular Formula:** [C<sub>12</sub>-H<sub>15</sub>-N]<sub>n</sub> n = 2.5 (typical)

## 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 at about 160°C

## 11. TOXICOLOGICAL INFORMATION

**Acute Oral LD50 (mg/kg):** 2250 mg/kg (Rat)

**Acute Dermal LD50 (mg/kg):** >5010 mg/kg (Rabbit)

**Acute Inhalation LC50 (mg/l):** Not Determined

**Target Organs / 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 at 0.1% or more, is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC or OSHA.

**Other Information:** 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.

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## 11. TOXICOLOGICAL INFORMATION

<b>Carcinogenicity:</b>	Negative in standard tests using bacteria and/or yeast cells. Some evidence of tumor formation reported in a long-term feeding study on rats. No evidence of increased tumor formation reported in a long-term feeding study on mice.
<b>Genotoxicity:</b>	No adverse effects in standard tests using yeast cells. Negative for genetic activity - in vitro tests. Negative for genetic activity - in vivo tests.
<b>Reproductive/Developmental Toxicity:</b>	Animal studies have shown some adverse effects - low birth weight of pups, maternal toxicity - on female animals. Fetal toxicity noted only at levels that produced maternal toxicity.

## 12. ECOLOGICAL INFORMATION

<b>Acute Fish Toxicity:</b>	96Hr LC50 Rainbow Trout = 50.0 mg/l. 96Hr LC50 Bluegill Sunfish = 54.0 mg/l. 96Hr LC50 Fathead Minnow = 64.0 mg/l.
<b>Acute Crustaceans Toxicity:</b>	48Hr EC50 Daphnia Magna = 5.8 mg/l.
<b>Acute Algae Toxicity:</b>	96Hr EC50 Algae = >1000 mg/l.
<b>Octanol/Water Coefficient:</b>	3.2 log P
<b>Chemical Fate Information:</b>	Biodegradability: <10% in river water. 8% based on CO2 evolution. Phototransformation: Extremely rapid. 75% in 3 minutes.
<b>Other Information:</b>	Tests indicate this material will not bioaccumulate or persist in the environment.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal of Waste Method:</b>	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.
<b>Contaminated Packaging:</b>	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.

## 14. TRANSPORT INFORMATION

<b>DOT:</b>	Not Regulated
<b>DOT Reportable Quantity (lbs):</b>	None
<b>ICAO/IATA:</b>	See DOT
<b>IMDG:</b>	See DOT
<b>Marine Pollutant:</b>	No
<b>TDG (Canada):</b>	See DOT
<b>Remarks:</b>	None

## 15. REGULATORY INFORMATION

### Worldwide Inventory Status

<b>USA (TSCA):</b>	Listed
<b>Canada (DSL):</b>	Listed
<b>Canada (NDSL):</b>	Not Applicable. Listed on the DSL.
<b>European Union (EINECS/ELINCS):</b>	Listed
<b>Japan (ENCS):</b>	Listed
<b>Korea (ECL):</b>	Listed
<b>Australia (AICS):</b>	Listed
<b>New Zealand (NZ):</b>	Listed
<b>Phillipines (PICCS):</b>	Listed
<b>China (CLECS):</b>	Listed.

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## 15. REGULATORY INFORMATION

### US Regulatory Rules

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

### Other Regulations:

California Proposition 65: NONE  
New Jersey Right-to-Know List: Not Applicable.  
Pennsylvania Right to Know List: Not Applicable.  
Florida Right to Know: Not Applicable.  
Minnesota Right to Know: Not Applicable  
Massachusetts Right to Know Law: Not Applicable.

FDA Status 21 CFR: PROHIBITED FROM USE in ALL food contact applications in the USA [21 CFR 189.220 - Flectol H].

### Canadian Regulations

WHMIS Hazard Class: D2B TOXIC MATERIALS / Materials Causing Other Toxic Effects  
NPRI: Not Listed. [Canada]

## 16. OTHER INFORMATION

### Hazard Rating Systems:

HMIS Classification: HEALTH 1, FLAMMABILITY 1, REACTIVITY 0  
NFPA Rating: HEALTH 1, FLAMMABILITY 1, REACTIVITY 0

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

Additional Information: NONE

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\*\*\*END OF MSDS\*\*\*