

**MARLENE SOLUTION**

## MATERIAL SAFETY DATA SHEET

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Date Prepared: 01-01-13  
Date Printed: 01-01-13

MANUFACTURER:

**SECTION I PRODUCT IDENTIFICATION**  
THE JOHN G. MARSHALL MFG. CO., INC.  
626 HANOVER PIKE, SUITE 102  
HAMPSTEAD, MD 21074

INFORMATION AND EMERGENCY PHONE DURING BUSINESS HOURS 800-777-6634

FOR EMERGENCY ASSISTANCE INVOLVING A SPILL, LEAK, OR FIRE WITH THIS  
PRODUCT CALL CHEMTREC 800-424-9300

PHYSICAL DATA:        BLENDED SOLUTION  
SYNONYMS:            NONE

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient(s)	CAS Number	% (by volume)
Trichloroethylene	79-01-6	75.0
Propylene Glycol Monomethyl Ether Acetate	(108-65-6)	25.0

**3. HAZARDS IDENTIFICATION****Potential Health Effects****Eye**

Exposure causes eye irritation. Symptoms may include stinging, tearing, redness, and swelling.

**Skin**

Exposure may cause mild skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking, and skin burns.

**Swallowing**

Single dose oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful. This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage.

**Inhalation**

Exposure to vapor or mist is possible. Short-term inhalation toxicity is low. Breathing small amounts during normal handling is not likely to cause harmful effects; breathing large amounts may be harmful.

**Symptoms of Exposure**

gastrointestinal irritation (nausea, vomiting, diarrhea), irritation (nose, throat, respiratory tract), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), and death.

**Target Organ Effect**

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: liver abnormalities, spleen damage, nervous system damage, kidney damage, lung damage, brain damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans, and may aggravate pre-existing disorders of these organs: liver abnormalities, anemia, lung damage.

**Developmental Information**

No data

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**Cancer Information**

Some studies with trichloroethylene in laboratory animals have produced cancer (primarily liver and/or lung), while others have not. The relevance of these findings to humans is uncertain. There is no evidence that trichloroethylene causes cancer in humans. Trichloroethylene is not listed as a carcinogen by IARC, NTP, or OSHA.

**Other Health Effects**

No Data

**Primary Route(s) of Entry**

Inhalation, Skin contact.

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**4. FIRST AID MEASURES****Eyes**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

**Skin**

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

**Swallowing**

Do not induce vomiting. This material is an aspiration hazard. If individual is drowsy or unconscious, place on left side with the head down. Seek medical attention. If possible, do not leave individual unattended.

**Inhalation**

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

**Note to Physicians**

Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmia. Sympathomimetic drugs may initiate cardiac arrhythmia in persons exposed to this material.

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**5. FIRE FIGHTING MEASURES****Flash Point**

120°F TCC

**Explosive Limit**

(for component) Lower 2.0%

**Autoignition Temperature**

670°F

**Hazardous Products of Combustion**

May form: carbon dioxide and carbon monoxide, hydrogen chloride, phosgene, various hydrocarbons.

**Fire and Explosion Hazards**

Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

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**Extinguishing Media**

Regular foam, water fog, carbon dioxide, dry chemical

**Fire Fighting Instructions**

Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

**NFPA Rating**

Not determined.

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**6. ACCIDENTAL RELEASE MEASURES****Small Spill**

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

**Large Spill**

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

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**7. HANDLING AND STORAGE****Handling**

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when material is transferred. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

**Storage**

Aluminum equipment should not be used for storage and/or transfer, e.g. pumps, mixers, fittings, storage tanks, etc. Contact with aluminum parts in a pressurizable fluid system may cause violent reactions.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Eye Protection**

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type of safety glasses. Consult your safety representative.

**Skin Protection**

Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

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**Respiratory Protections**

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

**Engineering Controls**

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

**Exposure Guidelines**

Component

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TRICHLOROETHYLENE (79-01-6)

OSHA VPEL 50.000 ppm - TWA

OSHA VPEL 200.000 ppm - STEL

ACGIH TLV 50.000 ppm - TWA

ACGIH TLV 100.000 ppm - STEL

Glycol Ether PM Acetate (108-65-6)

No Exposure Limits Established

**9. PHYSICAL AND CHEMICAL PROPERTIES****Boiling Point**

(for components) 188°F (86.7°C)

**Vapor Pressure**

(for components) 58 mmHg @ 68.00°F

**Specific Vapor Density**

4.55 @ AIR=1

**Specific Gravity**

1.337 @ 77.00°F

**Liquid Density**

11.14 lbs/gal @ 77.00°F

1.336 kg/l @ 25.00°C

**Percent Volatiles**

100.0%

**Evaporation Rate**

SLOWER THAN ETHYL ETHER

**Appearance**

Colorless Liquid

**State**

Liquid

**Physical Form**

Homogeneous Solution

**Color**

No Data

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**Odor**  
No Data

**pH**  
Not Applicable

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**10. STABILITY AND REACTIVITY****Hazardous Polymerization**

Product will not undergo hazardous polymerization.

**Hazardous Decomposition**

May form; carbon dioxide and carbon monoxide, hydrogen chloride, phosgene, various hydrocarbons.

**Chemical Stability**

Stable.

**Incompatibility**

Avoid contact with: aluminum, strong alkalies, strong oxidizing agents.

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**11. TOXICOLOGICAL INFORMATION**

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**12. ECOLOGICAL INFORMATION**

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**13. DISPOSAL CONSIDERATION****Waste Management Information**

Dispose of in accordance with all applicable local, state and federal regulations.

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**14. TRANSPORT INFORMATION****DOT Information - 49 CFR 172.101****DOT Description:**

COMPOUNDS, CLEANING, N.O.S. Combustible Liquid, Keep away from Food - NA1993, III

**Container/Mode:**

55 GAL DRUM/TRUCK PACKAGE

**NOS Component:****RQ (Reportable Quantity) - 49 CFR 172.101**

100 lbs.

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**15. REGULATORY INFORMATION****US Federal Regulations****TSCA (Toxic Substances Control Act) Status**

TSCA (UNITED STATES) The intentional ingredients of this product are listed

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**CERCLA RQ - 40 CFR 302.4**

Component	RQ (lbs)
TRICHLOROETHYLENE	100

**SARA 302 Components - 40 CFR 355 Appendix A**

None

**Section 311/312 Hazard Class - 40 CFR 370.2**

Immediate( ) Delayed (X) Fire (X) Reactive ( ) Sudden Release of Pressure ( )

**SARA 313 Components - 40 CFR 372.65**

Section 313 Component(s)	CAS Number	Max %
TRICHLOROETHYLENE	79-01-6	75.00

**International Regulations****Inventory Status**

Not determined

**State and Local Regulations****California Proposition 65**

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause cancer.

TRICHLOROETHYLENE

**New Jersey RTK Label Information**

TRICHLOROETHYLENE	79-01-6
Glycol Ether PM Acetate	108-65-6

**Pennsylvania RTK Label Information**

ETHENE, TRICHLORO-	79-01-6
Glycol Ether PM Acetate	108-65-6

**16. OTHER INFORMATION**

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

\*\*\*\*\*END\*\*\*\*\*