



3735 GREEN ROAD
BEACHWOOD, OHIO 44122-8068

MATERIAL SAFETY DATA SHEET
TELEPHONE: (216)292-5000

EMERGENCIES: (216)765-6727 8:30-5:00 EST
AFTER HOURS: CHEMTREC (800)424-9300

SECTION 1

Order Code: 34607000 805

Product Name: TREMLITE COATING IMPROVED
Chemical Name:
Chemical Family: Coating
Product Code: 346-07000 Date Prepared: 26-SEP-00
MSDS Preparer: R. A. MIKOL Replaces Date: 09-APR-98

Other Applications:
THIS MATERIAL SAFETY DATA SHEET (MSDS) ALSO APPLIES TO:
346-4XX (IMPROVED TREMLITE COATING - WHITE & COLORS) & -0XXXX (TREMLITE
COATING IMPROVED - WHITE & COLORS).

Section 2 - Molecular Composition

Common Name and Chemical Name Exposure Limits	Weight %	CAS Number
WATER	30.0-40.0	7732-18-5
OSHA:TWA - STEL -		
ACGIH:TWA - STEL -		
CALCIUM CARBONATE	20.0-30.0	1317-65-3
OSHA:TWA 15 mg/M3 STEL -	(total dust, 5mg/M3 respirable fraction)	
ACGIH:TWA 10 mg/M3 STEL -	(total dust, no asbestos, <1% SiO2)	
ACRYLIC POLYMER	20.0-30.0	Trade Secret
OSHA:TWA - STEL -		
ACGIH:TWA - STEL -		
ZINC OXIDE	3.0-7.0	1314-13-2
OSHA:TWA 10 mg/M3 STEL -	(total dust, 5mg/M3 respirable fraction)	
ACGIH:TWA 10 mg/M3 STEL -	(total dust, no asbestos, <1% SiO2)	
TITANIUM DIOXIDE	3.0-7.0	13463-67-7
OSHA:TWA 10 mg/M3 STEL -		
ACGIH:TWA 10 mg/M3 STEL -	(total dust, no asbestos, <1% SiO2)	
ETHYLENE GLYCOL (1,2-ETHANEDIOL)	1.0-4.0	107-21-1
OSHA:TWA - Ceil 50 ppm		
ACGIH:TWA - Ceil 39 ppm		
CRYSTALLINE SILICA (QUARTZ)	0.1-0.6	14808-60-7
OSHA:TWA 0.10 mg/M3 STEL -	(respirable dust)	
ACGIH:TWA 0.10 mg/M3 STEL -	(respirable dust)	

Section 3 - Hazards Identification

Emergency Overview:
Various colored liquid. If inhaled can cause headache, dizziness, nausea, drowsiness, stupor, irritation to respiratory system. Leave area to breathe fresh air. Avoid further exposure. If symptoms persist, get medical attention immediately.

Potential Hlth Effect/Rte of Entry:

Inhalation:

Can cause headache, dizziness, nausea, drowsiness, stupor, irritation to respiratory system.

Eyes:

Can cause irritation.

Ingestion:

Can cause gastrointestinal irritation.

Skin:

Can cause irritation.

Aggravated Medical Conditions:

Pre-existing eye, skin, kidney, and respiratory disorders (eg. asthma) may be aggravated by exposure.

Acute Health Effects:

See effects described above.

Chronic Health Effects:

Animal studies indicate that prolonged and repeated overexposure to ethylene glycol may cause kidney damage and birth defects. Overexposure to sublimed zinc oxide may produce symptoms known as "zinc oxide chills" which have no recognized complications. Symptoms usually disappear within 24 hours. Inhalation of crystalline silica (quartz) can cause cancer based on animal data, and IARC concludes sufficient evidence in humans (Group 1). Prolonged and repeated overexposure to free crystalline silica dust above the TLV level may cause scarring of the lungs with cough and shortness of breath. A delayed lung injury, silicosis may result from breathing free silica. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

Section 4 - First Aid Measures

Inhalation:

Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention immediately.

Eyes:

Flush immediately with running water for 15 minutes, lifting the upper and lower lids occasionally. Get medical attention immediately.

Ingestion:

Get medical attention immediately.

Skin:

Clean area of contact thoroughly using soap and water. If irritation, rash or other disorders develop, get medical attention immediately.

Notes to Physician:

N/A

Section 5 - Fire Fighting Measures

Flash Point: NONE (WATER BASED)

Method: N/A

Lower Flammability Limit: N/A

Upper Flammability Limit: N/A

Autoignition Temperature: NOT ESTABLISHED

Extinguishing Media:

Not applicable. Water base compound, not expected to burn.

Fire and Explosion Hazards:

Not Applicable

Special Fire Fighting Procedures:

During a fire, personnel at the scene are to prevent exposure to fumes using accepted fire fighting techniques.

Fire Fighting Equipment: N/A

Other Precautions:

Not Applicable

Section 6 - Accidental Release Measures

Release Response Overview:

Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal.

Section 7 - Handling and Storage

Handling and Storage Precautions:

Store under normal warehouse conditions. Prevent inhalation of vapor, ingestion, and contact with skin and eyes. Keep container closed when not in use. Precautions also apply to emptied containers. Change soiled workclothes frequently. Clean hands thoroughly after handling. Personal protective equipment must be worn during maintenance or repair of contaminated mixer, reactor, or other equipment.

Section 8 - Exposure Controls/Personal Protection

Respiratory:

Wear appropriate, properly fitted NIOSH/MSHA approved respirator when the airborne contaminant level(s) exceed the exposure limits indicated on the MSDS. Follow respirator manufacturer's directions for respirator use.

Skin:

Protect hands with impervious rubber gloves and wear rubber apron and overshoes. Prevent contact with skin.

Eyes:

Chemical splash goggles.

Face:

Face shield is recommended.

Engineering:

Use local exhaust when the general ventilation is not sufficient to keep the airborne contaminant concentration below the exposure limit in Section 2 of the MSDS.

Section 9 - Physical and Chemical Properties

Odor/Appearance:	MILD AMMONIA/VARIOUS COLORED VISCOUS LIQUID
Color:	VARIOUS
Physical State:	VISCOUS LIQUID
pH:	9-10
Vapor Pressure:	NOT ESTABLISHED
Vapor Density:	>1 (AIR=1)
Boiling Point:	212F (WATER)
Melting Point:	N/A
Freezing Point:	32F
Solubility in Water:	SOLUBLE
Specific Gravity:	1.38
% Volatile Weight:	36.0

Section 10 - Reactivity/Stability

Stability:

Stable

Incompatible Products:

Avoid contact with oxidizing agents, strong acids and bases.

Conditions to Avoid Polymerization:

Hazardous polymerization will not occur.

Section 11 - Toxicological Information

Eyes: SEE SECTION 3
Ingestion: " " "
Inhalation: " " "
Skin: " " "
Subchronic: " " "
Chronic: " " "

Section 12 - Ecological Information

Ecotoxicological Data: N/A
Chemical Fate: N/A

Section 13 - Disposal Considerations

RCRA Class: N/A
Disposal Method:
Not regulated by RCRA. Dispose of in compliance with state and local
regulations.
EPA Reportable Quantities

N/A

Section 14 - Transportation Data

DOT Shipping Name: NOT REGULATED
DOT Hazard Class: NOT APPLICABLE
DOT Label:
UN/NA Number: N/A
Packing Group:
Special Provisions:
Packaging

Exceptions:
Non-Bulk:
Bulk:

Quantity Limitations

Passenger Aircraft or Railcar:
Cargo Aircraft:

Vessel Stowage Requirements

Vessel Stowage:
Other Stowage:

Transportation Notes: N/A

Section 15 - Regulatory Information

TSCA Status: On the TSCA Inventory
OSHA Status: Considered hazardous based on the following criteria:
Irritant

Target Organs

Lung
Skin
Eye

OSHA Hazardous Components

CAS Number

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CALCIUM CARBONATE	1317-65-3
* CRYSTALLINE SILICA (QUARTZ)	14808-60-7
ZINC OXIDE	1314-13-2
TITANIUM DIOXIDE	13463-67-7
ETHYLENE GLYCOL (1,2-ETHANEDIOL)	107-21-1
* - CHEMICAL IS LISTED AS AN IARC, NTP, OSHA, or ACGIH CARCINOGEN	

Compliance Quantities

N/A
SARA 311 Ratings

Immediate Health Hazard:	N
Delayed Health Hazard:	Y
Fire Hazard:	N
Reactivity Hazard:	N
Sudden Release of Pressure Hazard:	N

SARA 313 Ingredients

CAS Number

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ZINC OXIDE	1314-13-2
ETHYLENE GLYCOL (1,2-ETHANEDIOL)	107-21-1

Proposition 65 Ingredients

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Chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm.	CAS Number
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CRYSTALLINE SILICA (QUARTZ)	14808-60-7

Section 16 - Other Information

FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.
THE HAZARD INFORMATION HEREIN IS OFFERED SOLELY FOR THE CONSIDERATION
OF THE USER, SUBJECT TO HIS OWN INVESTIGATION OF COMPLIANCE WITH APPLICABLE
REGULATIONS, INCLUDING THE SAFE USE OF THE PRODUCT UNDER EVERY FORESEEABLE
CONDITION.



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SECTION 1

Order Code: 34607000 805

Product Name: IMPROVED TREMLITE COATING
 Chemical Family: Coating
 Product Code: 346-400 Date Prepared: 09-APR-98
 MSDS Preparer: R. A. MIKOL Replaces Date: 29-MAY-97

Other Applications:
 THIS MATERIAL SAFETY DATA SHEET (MSDS) APPLIES TO THE FOLLOWING:
 346-400(WHITE), AND - (OTHER COLORS)

Section 2 - Molecular Composition

Common Name and Chemical Name Exposure Limits	Weight %	CAS Number
WATER OSHA:TWA - STEL - ACGIH:TWA - STEL -	30.0-40.0	7732-18-5
CALCIUM CARBONATE OSHA:TWA 15 mg/M3 STEL - ACGIH:TWA 10 mg/M3 STEL -	20.0-30.0	1317-65-3 (total dust, 5mg/M3 respirable fraction) (total dust, no asbestos, <1% SiO2)
ACRYLIC POLYMER OSHA:TWA - STEL - ACGIH:TWA - STEL -	20.0-30.0	Trade Secret
ZINC OXIDE OSHA:TWA 10 mg/M3 STEL - ACGIH:TWA 10 mg/M3 STEL -	3.0-7.0	1314-13-2 (total dust, 5mg/M3 respirable fraction) (total dust, no asbestos, <1% SiO2)
TITANIUM DIOXIDE OSHA:TWA 10 mg/M3 STEL - ACGIH:TWA 10 mg/M3 STEL -	3.0-7.0	13463-67-7 (total dust, no asbestos, <1% SiO2)
ETHYLENE GLYCOL (1,2-ETHANEDIOL) OSHA:TWA - Ceil 50 ppm ACGIH:TWA - Ceil 39 ppm	1.0-4.0	107-21-1
CRYSTALLINE SILICA (QUARTZ) OSHA:TWA 0.10 mg/M3 STEL - ACGIH:TWA 0.10 mg/M3 STEL -	0.1-0.6	14808-60-7 (skin) (respirable dust) (respirable dust)

Section 3 - Hazards Identification

 Emergency Overview:
 Various colored liquid. If inhaled can cause headache, dizziness, nausea, drowsiness, stupor, irritation to respiratory system. Leave area to breathe fresh air. Avoid further exposure. If symptoms persist, get medical attention immediately.

Potential Hlth Effect/Rte of Entry:

- Inhalation:
Can cause headache, dizziness, nausea, drowsiness, stupor, irritation to respiratory system.
- Eyes:
Can cause irritation.
- Ingestion:
Can cause gastrointestinal irritation.
- Skin:
Can cause irritation.

Aggravated Medical Conditions:

Pre-existing eye, skin, kidney, and respiratory disorders (eg. asthma) may be aggravated by exposure.

Acute Health Effects:

See effects described above.

Chronic Health Effects:

Animal studies indicate that prolonged and repeated overexposure to ethylene glycol may cause kidney damage and birth defects. Overexposure to sublimed zinc oxide may produce symptoms known as "zinc oxide chills" which have no recognized complications. Symptoms usually disappear within 24 hours. Crystalline silica(quartz) may cause cancer, but only limited evidence in humans. Prolonged and repeated overexposure to free crystalline silica dust above the TLV level may cause scarring of the lungs with cough and shortness of breath. A delayed lung injury, silicosis may result from breathing free silica. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

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Inhalation:

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Eyes:

Flush immediately with running water for 15 minutes, lifting the upper and lower lids occasionally. Get medical attention immediately.

Ingestion:

Get medical attention immediately.

Skin:

Clean area of contact thoroughly using soap and water. If irritation, rash or other disorders develop, get medical attention immediately.

Notes to Physician:

N/A

Section 5 - Fire Fighting Measures

Flash Point: NONE (WATER BASED)

Method: N/A

Lower Flammability Limit: N/A

Upper Flammability Limit: N/A

Autoignition Temperature: NOT ESTABLISHED

Extinguishing Media:

Not applicable. Water base compound, not expected to burn.

Fire and Explosion Hazards:

Not Applicable

Special Fire Fighting Procedures:

During a fire, personnel at the scene are to prevent exposure to fumes using accepted fire fighting techniques.

Fire Fighting Equipment: N/A

Other Precautions:

Not Applicable

Section 6 - Accidental Release Measures

Release Response Overview:

Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal.

Section 7 - Handling and Storage

Handling and Storage Precautions:

Store under normal warehouse conditions. Prevent inhalation of vapor,

ingestion, and contact with skin and eyes. Keep container closed when not in use. Precautions also apply to emptied containers. Change soiled workclothes frequently. Clean hands thoroughly after handling. Personal protective equipment must be worn during maintenance or repair of contaminated mixer, reactor, or other equipment.

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Skin:

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Eyes:

Chemical splash goggles.

Face:

Face shield is recommended.

Engineering:

Use local exhaust when the general ventilation is not sufficient to keep the airborne contaminant concentration below the exposure limit in Section 2 of the MSDS.

Section 9 - Physical and Chemical Properties

Odor/Appearance: MILD AMMONIA/VARIOUS COLORED VISCOUS LIQUID
Color: VARIOUS
Physical State: VISCOUS LIQUID
pH: 9-10
Vapor Pressure: NOT ESTABLISHED
Vapor Density: >1 (AIR=1)
Boiling Point: 212F (WATER)
Melting Point: N/A
Freezing Point: 32F
Solubility in Water: SOLUBLE
Specific Gravity: 1.38
% Volatile Weight: 36.0

Section 10 - Reactivity/Stability

Stability:

Stable

Incompatible Products:

Avoid contact with oxidizing agents, strong acids and bases.

Conditions to Avoid Polymerization:

Hazardous polymerization will not occur.

Section 11 - Toxicological Information

Eyes:	SEE SECTION 3
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Subchronic:	" " "
Chronic:	" " "

Section 12 - Ecological Information

Ecotoxicological Data: N/A
Chemical Fate: N/A

Section 13 - Disposal Considerations

RCRA Class: N/A
Disposal Method:
Not regulated by RCRA. Dispose of in compliance with state and local regulations.
EPA Reportable Quantities

N/A

Section 14 - Transportation Data

DOT Shipping Name: NOT REGULATED
DOT Hazard Class: NOT APPLICABLE
DOT Label:
UN/NA Number: N/A
Packing Group:
Special Provisions:
Packaging

Exceptions:
Non-Bulk:
Bulk:

Quantity Limitations

Passenger Aircraft or Railcar:
Cargo Aircraft:
Vessel Stowage Requirements

Vessel Stowage:
Other Stowage:

Transportation Notes: N/A

Section 15 - Regulatory Information

TSCA Status: On the TSCA Inventory
OSHA Status: Considered hazardous based on the following criteria:
Irritant

Target Organs

Lung
Skin
Eye

OSHA Hazardous Components	CAS Number
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ZINC OXIDE	1314-13-2
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ETHYLENE GLYCOL (1,2-ETHANEDIOL)	107-21-1

* - CHEMICAL IS LISTED AS AN IARC, NTP, OSHA, or ACGIH CARCINOGEN

Compliance Quantities

N/A

SARA 311 Ratings

Immediate Health Hazard: N
Delayed Health Hazard: Y
Fire Hazard: N
Reactivity Hazard: N
Sudden Release of Pressure Hazard: N

SARA 313 Ingredients CAS Number

ZINC OXIDE 1314-13-2
ETHYLENE GLYCOL (1,2-ETHANEDIOL) 107-21-1

Proposition 65 Ingredients

Chemicals known to the State of California to cause cancer,
birth defects and/or other reproductive harm. CAS Number

CRYSTALLINE SILICA (QUARTZ) 14808-60-7

Section 16 - Other Information

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