

SAFETY DATA SHEET

Randolph Products Company

MIL-PRF-85285E 36320 TYPE 1 AND 2 CLASS H - POLYURETHANE TOPCOAT TWO COMPONENT TOUCH-UP PEN

Date Printed: 3/18/2020

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1. Product and Company Identification

Product Name: MIL-PRF-85285E 36320 TYPE 1 AND 2 CLASS H-POLYURETHANE TOPCOAT TWO COMPONENT TOUCH-UP PEN
Product Code: 8010-01-441-6024 p/n 801085285 (Part A, color 36320)
Recommended Use: Please refer to Product Information/Technical Data Sheet.

Company Identification:

Randolph Products Company
33 Haynes Circle
Chicopee, MA 01020

Product filled by :
Delaware Paint Company
8455 Rausch Drive
Plain City, Ohio 43064
740-368-9981

Information Phone: 413-592-4191

Emergency Phone: ChemTel 800-255-3924

2. Hazards Identification

EMERGENCY OVERVIEW

HAZARD CLASSIFICATION:

HIGHLY FLAMMABLE LIQUID & VAPOR, CATEGORY 2

ACUTE TOXICITY (ORAL), CATEGORY 4

SKIN IRRITATION, CATEGORY 2

EYE IRRITATION, CATEGORY 2B

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE, CATEGORY 3 (CENTRAL NERVOUS SYSTEM)

ASPIRATION HAZARD, CATEGORY 1

CARCINOGENICITY, CATEGORY 1

SIGNAL WORD:

DANGER



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HAZARD STATEMENTS:

HIGHLY FLAMMABLE LIQUID AND VAPOR
HARMFUL IF SWALLOWED
CAUSES SKIN IRRITATION
CAUSES EYE IRRITATION
MAY CAUSE DROWSINESS OR DIZZINESS
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS
MAY CAUSE CANCER

PRECAUTIONARY STATEMENTS:

Keep away from heat, sparks, open flame/hot surfaces.
No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting and other equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Store/Use outdoors or in a well ventilated place.
Keep cool.
Store locked up.
Wash hands thoroughly after handling.
Do not eat or drink while using this product.
Do not breathe vapors.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If swallowed, immediately call a poison control center.
Rinse mouth.
Wear protective gloves, protective clothing, eye/face protection.
If on skin or hair: Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation occurs, seek medical advice.
Take off contaminated clothing and wash it before reuse.
If exposed or concerned, get medical advice or attention.
Call a poison center or doctor if you feel unwell.
If in eyes, rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: get medical attention.
In case of fire: Use dry chemical, CO₂, Halon or foam to extinguish.
Dispose of contents/container in accordance with all local, regional, national regulations.
Do NOT induce vomiting.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Potential Health Effects

Eye:

Can cause eye irritation.

Skin:

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Causes skin irritation.

Ingestion:

If swallowed, call a poison control center or physician if you feel unwell.

Rinse mouth.

Inhalation:

May cause drowsiness or dizziness.

Chronic (Cancer) Information:

Contains CRYSTALLINE SILICA, which can be a health hazard. Respirable crystalline silica can cause the occupational lung disease silicosis (a scarring of the lungs), and IARC concluded in October 1996 that crystalline silica is carcinogenic to humans. Silicosis increases the risk of tuberculosis, autoimmune and chronic kidney diseases, as well as non-malignant respiratory disease (such as chronic bronchitis and emphysema). IARC: A component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.

ACGIH: A component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP: A component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Teratology (Birth Defects) Information:

INFORMATION NOT AVAILABLE.

Reproduction Information:

INFORMATION NOT AVAILABLE.

Aggravation of Pre-Existing Conditions:

Dermatitis or other skin conditions.

3. Composition/Information on Ingredients

Component	CAS#	% by Wt.
BARIUM SULFATE	7727-43-7	12
ACGIH: 10 MG/M3 TWA		
OSHA: 15 MG/M3 TWA		
TALC	14807-96-6	12
ACGIH TLV: 2 MG/M3 TWA, RESPIRABLE DUST		
OSHA PEL: 20 MPPCF TWA		
# MICROCRYSTALLINE SILICA (QUARTZ)	14808-60-7	11.3
ACGIH: 10 MG/M3 TWA, TOTAL DUST		
OSHA: 20 MPPCF3 TWA		

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TITANIUM DIOXIDE	13463-67-7	10.177
ACGIH: 10 MG/M3 TWA		
OSHA: 10 MG/M3 TWA		
METHYL ETHYL KETONE	78-93-3	9
ACGIH: 200 PPM TWA		
OSHA: 200 PPM TWA		
METHYL NORMAL AMYL KETONE	110-43-0	6
OSHA PEL 100 PPM - TWA		
OSHA VPEL 100 PPM -TWA		
ACGIH TLV 50 PPM - TWA		
ACGIH TLV 233 MG/M3 - TWA		
N-BUTYL ACETATE	123-86-4	5
ACGIH: 150 PPM TWA		
OSHA: 150 PPM TWA		
ACGIH: 200 PPM STEL		
OSHA: 200 PPM CEILING		
MODIFIED OXAZOLIDINE	145899-78-1	5
NOT ESTABLISHED		
HYDRATED AMORPHOUS SILICA	112926-00-8	3
ACGIH: 10 MG/M3 TWA, TOTAL DUST		
OSHA: 6 MG/M3 TWA		
*+# METHYL ISOBUTYL KETONE	108-10-1	1.8
ACGIH TLV: 50 PPM TWA		
ACGIH TLV: 75 PPM STEL		
OSHA PEL: 100 PPM TWA		
TERTIARY BUTYL ACETATE	540-88-5	2
ACGIH: 200 PPM TWA		
OSHA: 200 PPM TWA		
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	1
SUPPLIER RECOMMENDED: 30 PPM TWA		
2,4-PENTANEDIONE	123-54-6	1
EXPOSURE LIMITS: NOT ESTABLISHED		

4. First Aid Measures

Eyes:

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Skin:

If on skin: wash with plenty of soap & water. If skin irritation occurs: Get Medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Ingestion:

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If swallowed: Immediately call a poison center/physician.
Do NOT induce vomiting.

Inhalation:

If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison control center/get medical attention if you feel unwell.

Note to Physicians:

INFORMATION NOT AVAILABLE.

5. Fire Fighting Measures

Flammable Properties:

Flash Point: 20 F

Method:

Explosive Limits:

Lower explosive limit: 1.1

Upper explosive limit: 11.4

Autoignition Temperature:

INFORMATION NOT AVAILABLE.

Hazardous Combustion Products:

Smoke, soot and carbon dioxide, carbon monoxide.

Extinguishing Media:

Dry chemical, CO2, Halon, Foam

Firefighting Procedures:

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards: High temperatures can cause sealed containers to rupture due to a build up of internal pressure. Cool with water spray. Vapors are heavier than air and can travel some distance away and flash back.

Sensitivity to Static Discharge: Material may accumulate a static charge which could act as an ignition source.

Precautions should be taken when pouring to minimize splash/free fall.

6. Accidental Release Measures

Small Spill:

See Information for Large Spill, below:

Large Spill:

Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental Precautions:

INFORMATION NOT AVAILABLE.

Methods/Materials for Containment and Cleaning Up:

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Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/state/federal regulations.

7. Handling and Storage

Handling:

Keep away from heat, sparks, open flames, hot surfaces. NO SMOKING. Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/processing equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/eye protection/face protection.

Storage:

Prevent unauthorized access.

Store in a well ventilated place.

Keep container tightly closed.

Keep cool.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

SEE SECTION 3 FOR THIS INFORMATION

Engineering Controls:

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used.

Ventilation rates should be matched to conditions.

Ventilation should be explosion proof.

Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, spray painting, mechanical generation of dusts, heating, drying, etc.

Personal Protective Equipment

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be

worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance

with OSHA Standard 63 CFR 1152, January 8, 1998. Respirator type: Organic Vapor.

Skin Protection:

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Wear impervious gloves to prevent skin contact.

Recommended Decontamination Facilities: eye bath, washing facilities, safety shower.

Eye Protection:

Chemical safety goggles or glasses with side shields.

9. Physical and Chemical Properties

Boiling Point: 175 F

Melting Point:

INFORMATION NOT AVAILABLE.

Freezing Point: n/a

Vapor Pressure:

Information not available for mixture

Vapor Density:

HEAVIER THAN AIR

Solubility in Water:

NEGLIGIBLE

Evaporation Rate: SLOWER THAN ETHER

Specific Gravity: 1.464

Weight per Gallon: 12.193 lb/gal

Coating VOC: 3.02 lb/gal

Material VOC: 2.94 lb/gal

Odor:

Mild solvent odor.

Appearance:

Liquid.

Partition Coefficient:

INFORMATION NOT AVAILABLE.

10. Stability and Reactivity

Chemical Stability (Conditions to Avoid):

Stable under normal storage/use conditions.

Incompatibility:

Avoid strong oxidizing agents, acids and alkalies.

Hazardous Decomposition Products:

INFORMATION NOT AVAILABLE.

Hazardous Polymerization:

Will not occur under normal conditions.

11. Toxicological Information

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Eye Irritation/Damage:

Component 78-93-3:

Mild eye irritation, Category 2B

Component 540-88-5:

Based on available data, the classification criteria are not met.

Skin Irritation/Damage:

Component 78-93-3:

Moderate skin irritation, Category 2

LD50: >5000 mg/kg, rabbit

Component 540-88-5:

LD50: >2000 mg/kg, rabbit. Category 5.

Acute Oral Toxicity:

Component 14808-60-7:

LD50: >5000 mg/kg, rat. Category 5

Component 13463-67-7:

LD50: 10,000 mg/kg, rat. Category 5

Component 108-10-1:

LD50: 2080 mg/kg, rat. Category 4

Component 78-93-3:

LD50: 2300-3500 mg/kg, rat. Category 5

Component 123-86-4:

LD50: 10,700 mg/kg, rat. Category 5

Component 540-88-5:

LD50: 4,500 mg/kg, rat. Category 5

Component 108-65-6:

LD50: no data

Acute Inhalation Toxicity:

Component 78-93-3:

LD50: 11,700 mg/kg, rat. Category 5

Component 540-88-5:

LC50: >2.23 mg/l, rat. Category 3

Respiratory/Skin Sensitization:

Component 78-93-3:

No evidence of respiratory or skin sensitization.

Component 540-88-5:

No evidence of respiratory or skin sensitization.

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Carcinogenicity:

Component 13463-67-7:

Listed by IARC as a group 2B carcinogen (possibly carcinogenic to humans). GHS Category 2.

Component 14808-60-7:

Listed by IARC as a group 1 carcinogen (carcinogenic to humans), and as a known carcinogen by NTP. GHS Category 1A.

Component 78-93-3:

Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH.

Component 540-88-5:

Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH.

Reproductive Toxicity:

Component 78-93-3:

No evidence of human reproductive toxicity.

Component 540-88-5:

No evidence of human reproductive toxicity.

Germ Cell Mutagenicity:

Component 78-93-3:

No data

Component 540-88-5:

No data

Aspiration Toxicity:

Component 108-10-1:

Aspiration Hazard; Category 1

Component 78-93-3:

Not classified as an Aspiration Hazard.

Component 123-86-4:

Not classified as an Aspiration Hazard.

Component 540-88-5:

Not classified as an Aspiration Hazard.

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Component 108-65-6:

Not classified as an Aspiration Hazard.

STOT-single exposure

Component 108-10-1:

No data Component 78-93-3:

No data

Component 123-86-4:

No data Component 540-88-5:

Transient target organ effects (Category 3);

Respiratory tract irritation.

Component 108-65-6:

No data

STOT-repeated exposure

Component 108-10-1:

No data Component 78-93-3:

No data

Component 123-86-4:

No data

Component 540-88-5:

No data

Component 108-65-6:

No data

Routes of Exposure:

Inhalation of vapors, skin/eye/mucous membrane absorption, ingestion.

12. Ecological Information

Environmental Toxicity:

Component 108-10-1:

LC50: 505 mg/l (fish); EC50: 1000 mg/l (daphnia); EC50: 980 mg/l (algae)

Component 78-93-3:

LC50: 2993 mg/l (fish); EC50: 308 mg/l (daphnia); EC50: 2029 mg/l (algae)

Component 123-86-4:

LC50: 100 mg/l (fish); EC50: 72.8-205 mg/l (daphnia)

Component 540-88-5:

Low toxicity: fish, daphnia; EC50: 16 mg/l (algae); EC50: 1.5 mg/l (bacteria)

Component 108-65-6:

LC50: 161 mg/l (fish); EC50: 373 mg/l (daphnia); EC50: >1000 mg/l (algae)

Persistence & degradability:

Component 108-10-1:

Readily biodegradable

Component 78-93-3:

Readily biodegradable

Component 123-86-4:

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No Data

Component 540-88-5:

Inherently biodegradable

Component 108-65-6:

Readily biodegradable

Bioaccumulative potential:

Component 108-10-1:

No Data

Component 78-93-3:

No Data

Component 123-86-4:

No Data

Component 540-88-5:

Not expected to bioaccumulate

Component 108-65-6:

No Data

Mobility in soil:

Component 108-10-1:

No data

Component 78-93-3:

No data

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Component 123-86-4:

No data

Component 540-88-5:

No data

Component 108-65-6:

No data

Other Adverse Ecological Effects:

Component 540-88-5:

Harmful to aquatic life.

13. Disposal Considerations

Waste Disposal Method:

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Discharge, treatment or disposal is subject to national, state, or local laws. When a decision is made to discard this material as supplied, it meets RCRA's characteristic definition of ignitability. The toxicity characteristic (TC) has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP). Federal Regulations may apply to empty container. State and/or local regulations may be different.

Of the methods of disposal currently available, it is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) recycle or rework, if feasible; (2) incinerate at an authorized facility; or (3) treat at an acceptable waste treatment facility.

Be sure to contact the appropriate government environmental agencies if further guidance is required.

14. Transport Information

Domestic (Land, DOT), International (Water, IMO/IMDG), International (Air, ICAO)
Road and Rail (ADR/RID), Air (ICAO/IATA), Vessel (IMO/IMDG):
DOT (USA) Shipping Name: Paint
UN/NA ID No: UN1263
Hazard Class: Class 3 (IATA/49CFR)
Packing Group: II

Environmental Hazards:

INFORMATION NOT AVAILABLE.

Marine Pollutant:

Components of this product do not appear on the list of Marine Pollutants (49CFR 172.101)

Special Precautions for User:

INFORMATION NOT AVAILABLE.

15. Regulatory Information

U.S. Federal Regulations:

TSCA: All components of this material are on the US TSCA 8(b) Inventory or are exempt from listing.

OSHA:

This product is hazardous under OSHA's Hazard Communication Std. Not regarded as a health hazard under current legislation.

CERCLA: SARA Hazard Category:

INFORMATION NOT AVAILABLE.

Section 313:

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"*" Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

International Regulations:

Canadian WHMIS:

INFORMATION NOT AVAILABLE.

Canadian Environmental Protection Act (CEPA):

INFORMATION NOT AVAILABLE.

EINECS:

INFORMATION NOT AVAILABLE.

State Regulations:

"#" Indicates a chemical known to the state of California to cause cancer, birth defects or other reproductive harm.

"+" Indicates a Clean Air Act Hazardous Air Pollutant (HAP).

Volatile Organic Compounds:

COATING VOC content is being expressed as mass of VOC per unit volume of coating less water and exempt solvents, where applicable.

MATERIAL VOC content is the actual weight of VOC per unit volume.

16. Other Information

Date Revised: 08/20/19

Prepared By: Regulatory Compliance

Information Contact: Regulatory Compliance 413-592-4191 ext 106

Manufacturer Disclaimer:

USERS RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the

user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to

determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and

safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER OF LIABILITY: The information contained herein is, to the best of our knowledge and belief, accurate.

However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no

liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be

used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards

which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No

representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any

other nature are made hereunder with respect to the information contained herein or the chemical to which the

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information refers. These data relate only to the specific material designated herein and do not relate to use in combination with any other material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

End of Material Safety Data Sheet

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MIL-PRF-85285E TYPE 1 AND 2 CLASS H POLYURETHANE TOPCOAT TWO COMPONENT TOUCH-UP PENS

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1. Product and Company Identification

Product Name : MIL-PRF-85285E TYPE 1 AND 2 CLASS H POLYURETHANE TOPCOAT TWO COMPONENT TOUCH-UP PENS
Product Code : 852851-3CBFL (801085285 PART B)
Recommended Use: Please refer to Product Information/Technical Data Sheet.

Company Identification:

Randolph Products Company
33 Haynes Circle
Chicopee, MA 01020

Product filled by:
Delaware Paint Company
8455 Rausch Drive
Plain City, Ohio 43064
740-368-9981

Information Phone: 413-592-4191
Emergency Phone: ChemTel 800-255-3924

2. Hazards Identification

EMERGENCY OVERVIEW

HAZARD CLASSIFICATION:

HIGHLY FLAMMABLE LIQUID, AND VAPOR ,CATEGORY 2
ACUTE TOXICITY (ORAL), CATEGORY 4
SKIN IRRITATION, CATEGORY 2
EYE IRRITATION, CATEGORY 2B
SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE, CATEGORY 3 (CENTRAL NERVOUS SYSTEM)
SENSITIZATION, RESPIRATORY, CATEGORY 1 SENSITIZATION, SKIN, CATEGORY 1B
SIGNAL WORD:
DANGER



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HAZARD STATEMENTS:

HIGHLY FLAMMABLE LIQUID AND VAPOR

HARMFUL IF SWALLOWED

CAUSES SKIN IRRITATION

MAY CAUSE DROWSINESS OR DIZZINESS

CAUSES EYE IRRITATION

MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTY IF INHALED

MAY CAUSE AN ALLERGIC SKIN REACTION

PRECAUTIONARY STATEMENTS:

Keep away from heat, sparks, open flame/hot surfaces.

No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting and other equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Store/Use outdoors or in a well ventilated place. Keep cool.

Store locked up.

Wash hands thoroughly after handling.

Do not eat or drink while using this product.

Do not breathe vapors.

If swallowed, immediately call a poison control center. Rinse mouth.

Wear protective gloves, protective clothing, eye/face protection.

If on skin, wash with plenty of water.

If skin irritation occurs, seek medical advice.

Take off contaminated clothing and wash it before reuse.

If exposed or concerned, get medical advice or attention.

If in eyes, rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: get medical attention.

Avoid breathing vapors or spray mist.

In case of fire: Use dry chemical, CO₂, Halon, or foam to extinguish.

In case of inadequate ventilation (not adequate to keep chemical concentrations below exposure limit(s)), wear respiratory protection.

If inhaled: if breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms, obtain medical attention.

Dispose of contents/container in accordance with all local, state, national laws.

If skin rash occurs, seek medical advice.

Contaminated clothing must not be allowed out of the workplace.

Potential Health Effects

Eye:

Can cause eye irritation.

Skin:

Causes skin irritation.

Ingestion:

If swallowed, call a poison control center or physician if you feel unwell.

Rinse mouth.

Inhalation:

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May cause drowsiness or dizziness.

Chronic (Cancer) Information:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probably, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Teratology (Birth Defects) Information:

INFORMATION NOT AVAILABLE.

Reproduction Information:

INFORMATION NOT AVAILABLE.

Aggravation of Pre-Existing Conditions:

Dermititis or other skin conditions.

3. Composition/Information on Ingredients

Component	CAS#	% by Wt.
HEXAMETHYLENE DIISOCYANATE HOMOPOLYMER (SUPPLIER) 0.5 mg/m3 - TWA (SUPPLIER) 1.00 mg/m3 - STEL	28182-81-2	50.583
TERTIARY BUTYL ACETATE ACGIH: 200 PPM TWA OSHA: 200 PPM TWA	540-88-5	27
METHYL ETHYL KETONE ACGIH: 200 PPM TWA OSHA: 200 PPM TWA	78-93-3	10
METHYL NORMAL AMYL KETONE OSHA PEL 100 PPM - TWA OSHA VPEL 100 PPM -TWA ACGIH TLV 50 PPM - TWA ACGIH TLV 233 MG/M3 - TWA	110-43-0	9
ACETONE ACGIH TLV: 500 PPM TWA ACGIH TLV: 750 PPM STEL OSHA PEL: 1000 PPM TWA OSHA VPEL: 750 PPM TWA OSHA VPEL: 1000 PPM STEL	67-64-1	3
HEXAMETHYLENE-1,6-DIISOCYANATE	822-06-0	.36

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ACGIH TLV: 0.005 PPM - TWA
(SUPPLIER): 0.02 PPM - CEILING

4. First Aid Measures

Eyes:

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Skin:

If on skin: wash with plenty of soap & water. If skin irritation occurs: Get Medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Ingestion:

If swallowed: Immediately call a poison center/physician.
Do NOT induce vomiting.

Inhalation:

If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison control center/get medical attention if you feel unwell.

Note to Physicians:

INFORMATION NOT AVAILABLE.

5. Fire Fighting Measures

Flammable Properties:

Flash Point: -4 F Method: TCC

Explosive Limits:

Lower explosive limit: 1.1
Upper explosive limit: 12.8

Autoignition Temperature:

INFORMATION NOT AVAILABLE.

Hazardous Combustion Products:

Smoke, soot and carbon dioxide, carbon monoxide.

Extinguishing Media:

Dry chemical, CO₂, Halon, Foam

Firefighting Procedures:

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards: High temperatures can cause sealed containers to rupture due to a build up of

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internal pressure. Cool with water spray. Vapors are heavier than air and can travel some distance away and flash back.

Sensitivity to Static Discharge: Material may accumulate a static charge which could act as an ignition source.

Precautions should be taken when pouring to minimize splash/free fall.

6. Accidental Release Measures

Small Spill:

See Information for Large Spill, below:

Large Spill:

Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental Precautions:

INFORMATION NOT AVAILABLE.

Methods/Materials for Containment and Cleaning Up:

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/state/federal regulations.

7. Handling and Storage

Handling:

Keep away from heat, sparks, open flames, hot surfaces. NO SMOKING. Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/processing equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/eye protection/face protection.

Storage:

Prevent unauthorized access.

Store in a well ventilated place.

Keep container tightly closed.

Keep cool.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

SEE SECTION 3 FOR THIS INFORMATION

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Engineering Controls:

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used.

Ventilation rates should be matched to conditions.

Ventilation should be explosion proof.

Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, spray painting, mechanical generation of dusts, heating, drying, etc.

Personal Protective Equipment

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be

worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance

with OSHA Standard 63 CFR 1152, January 8, 1998. Respirator type: Organic Vapor.

Skin Protection:

Wear impervious gloves to prevent skin contact.

Recommended Decontamination Facilities: eye bath, washing facilities, safety shower.

Eye Protection:

Chemical safety goggles or glasses with side shields.

9. Physical and Chemical Properties

Boiling Point: 133 F

Melting Point:

INFORMATION NOT AVAILABLE.

Freezing Point: n/a

Vapor Pressure:

Information not available for mixture

Vapor Density:

HEAVIER THAN AIR

Solubility in Water:

NEGLIGIBLE

Evaporation Rate: SLOWER THAN ETHER

Specific Gravity: .975

Weight per Gallon: 8.12 lb/gal

Coating VOC: 2.35 lb/gal

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Material VOC: 1.54 lb/gl

Odor:

Mild solvent odor.

Appearance:

Liquid.

Partition Coefficient:

INFORMATION NOT AVAILABLE.

10. Stability and Reactivity

Chemical Stability (Conditions to Avoid):

Stable under normal storage/use conditions.

Incompatibility:

Avoid strong oxidizing agents, acids and alkalies.

Hazardous Decomposition Products:

INFORMATION NOT AVAILABLE.

Hazardous Polymerization:

Will not occur under normal conditions.

11. Toxicological Information

Eye Irritation/Damage:

Component 28182-81-2:

Mild eye irritation, Category 2b

Component 78-93-3:

Mild eye irritation, Category 2B

Component 67-64-1:

Mild eye irritation, Category 2b

Component 540-88-5:

Based on available data, the classification criteria are not met.

Component 822-06-0:

Mild eye irritation, Category 2b

Skin Irritation/Damage:

Component 28182-81-2:

LD50: >2000 mg/kg, rat. Category 5

Mild skin irritation, possible skin sensitizer.

Component 78-93-3:

Moderate skin irritation, Category 2

LD50: >5000 mg/kg, rabbit

Component 67-64-1:

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LD50: 7426 mg/kg, rat. Category 5

Mildly irritating to skin.

Component 540-88-5:

LD50: >2000 mg/kg, rabbit. Category 5.

Component 822-06-0:

LD50: >2000 mg/kg, rat. Category 5

Mild skin irritation, possible skin sensitizer.

Acute Oral Toxicity:

Component 28182-81-2:

LD50: >5000 mg/kg, rat. Category 5

Component 78-93-3:

LD50: 2300-3500 mg/kg, rat. Category 5

Component 67-64-1:

LD50: 5800 mg/kg, rat. Category 5

Component 540-88-5:

LD50: 4,500 mg/kg, rat. Category 5

Component 822-06-0:

LD50: >5000 mg/kg, rat. Category 5

Acute Inhalation Toxicity:

Component 28182-81-2:

LC50: 1.18, rat. Category 4

Component 78-93-3:

LD50: 11,700 mg/kg, rat. Category 5

Component 67-64-1:

LC50: 16000 mg/l, rat. Category 4

Component 540-88-5:

LC50: >2.23 mg/l, rat. Category 3

Component 822-06-0:

LC50: 1.18, rat. Category 4

Respiratory/Skin Sensitization:

Component 28182-81-2:

Caused skin sensitization in animal studies. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

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Component 78-93-3:

No evidence of respiratory or skin sensitization.

Component 67-64-1:

No evidence of respiratory or skin sensitization.

Component 540-88-5:

No evidence of respiratory or skin sensitization.

Component 822-06-0:

Caused skin sensitization in animal studies. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

Carcinogenicity:

Component 28182-81-2:

Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH.

Component 78-93-3:

Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH.

Component 67-64-1:

Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH

Component 540-88-5:

Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH.

Component 822-06-0:

Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH.

Reproductive Toxicity:

Component 28182-81-2:

No evidence of human reproductive toxicity.

Component 78-93-3:

No evidence of human reproductive toxicity.

Component 67-64-1:

No evidence of human reproductive toxicity.

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Component 540-88-5:

No evidence of human reproductive toxicity.

Component 822-06-0:

No evidence of human reproductive toxicity.

Germ Cell Mutagenicity:

Component 28182-81-2:

No data

Component 78-93-3:

No data

Component 67-64-1:

No data

Component 540-88-5:

No data

Component 822-06-0:

No data

Aspiration Toxicity:

Component 28182-81-2:

Not classified as an Aspiration Hazard.

Component 78-93-3:

Not classified as an Aspiration Hazard.

Component 67-64-1:

Not classified as an Aspiration Hazard.

Component 540-88-5:

Not classified as an Aspiration Hazard.

Component 822-06-0:

Not classified as an Aspiration Hazard.

STOT-single exposure

Component 28182-81-2:

No data

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Component 78-93-3:

No data

Component 67-64-1:

No Data

Component 540-88-5:

Transient target organ effects (Category 3);

Respiratory tract irritation.

Component 822-06-0:

No data

STOT-repeated exposure

Component 28182-81-2:

Repeated exposure affected lungs, nasal cavities

Component 78-93-3:

No data

Component 67-64-1:

No data

Component 540-88-5:

No data

Component 822-06-0:

Repeated exposure affected lungs, nasal cavities

Routes of Exposure:

Inhalation of vapors, skin/eye/mucous membrane absorption, ingestion.

12. Ecological Information

Environmental Toxicity:

Component 28182-81-2:

LC50: >100 mg/l (fish); EC50: >100 mg/l (daphnia); EC50: 100 mg/l (algae); EC50: <10 mg/l (bacteria)

Component 78-93-3:

LC50: 2993 mg/l (fish); EC50: 308 mg/l (daphnia); EC50: 2029 mg/l (algae)

Component 67-64-1:

LC50: 6100 mg/l (fish); EC50: 7630 mg/l (daphnia)

Component 540-88-5:

Low toxicity: fish, daphnia; EC50: 16 mg/l (algae); EC50: 1.5 mg/l (bacteria)

Component 822-06-0:

LC50: >100 mg/l (fish); EC50: >100 mg/l (daphnia); EC50: 100 mg/l (algae); EC50: <10 mg/l (bacteria)

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Persistence & degradability:

Component 28182-81-2:
Not readily biodegradable

Component 78-93-3:
Readily biodegradable
Component 67-64-1:
Readily biodegradable

Component 540-88-5:
Inherently biodegradable
Component 822-06-0:
Not readily biodegradable

Bioaccumulative potential:

Component 28182-81-2:
No Data
Component 78-93-3:
No Data

Component 67-64-1:
Does not bioaccumulate

Component 540-88-5:
Not expected to bioaccumulate

Component 822-06-0:
No Data

Mobility in soil:
Component 28182-81-2:
No data
Component 78-93-3:
No data

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Component 67-64-1:
no data

Component 540-88-5:
No data

Component 822-06-0:
No data

Other Adverse Ecological Effects:
Component 540-88-5:
Harmful to aquatic life.

13. Disposal Considerations

Waste Disposal Method:

Discharge, treatment or disposal is subject to national, state, or local laws. When a decision is made to discard this material as supplied, it meets RCRA's characteristic definition of ignitability. The toxicity characteristic (TC) has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP). Federal Regulations may apply to empty container. State and/or local regulations may be different. Of the methods of disposal currently available, it is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) recycle or rework, if feasible; (2)

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incinerate at an authorized facility; or (3) treat at an acceptable waste treatment facility.

Be sure to contact the appropriate government environmental agencies if further guidance is required.

14. Transport Information

Domestic (Land, DOT), International (Water, IMO/IMDG), International (Air, ICAO) Road and Rail (ADR/RID), Air (ICAO/IATA), Vessel (IMO/IMDG):

DOT (USA) Shipping Name: Paint

UN/NA ID No: UN1263

Hazard Class: Class 3 (IATA/49CFR)

Packing Group: II

Environmental Hazards:

INFORMATION NOT AVAILABLE.

Marine Pollutant:

Components of this product do not appear on the list of Marine Pollutants (49CFR 172.101)

Special Precautions for User:

INFORMATION NOT AVAILABLE.

15. Regulatory Information

U.S. Federal Regulations:

TSCA: All components of this material are on the US TSCA 8(b) Inventory or are exempt from listing.

OSHA:

This product is hazardous under OSHA's Hazard Communication Std. Not regarded as a health hazard under current legislation.

CERCLA: SARA Hazard Category:

INFORMATION NOT AVAILABLE.

Section 313:

"*" Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

International Regulations:

Canadian WHMIS:

INFORMATION NOT AVAILABLE.

Canadian Environmental Protection Act (CEPA):

INFORMATION NOT AVAILABLE.

EINECS:

INFORMATION NOT AVAILABLE.

State Regulations:

"+" Indicates a Clean Air Act Hazardous Air Pollutant (HAP).

Volatile Organic Compounds:

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COATING VOC content is being expressed as mass of VOC per unit volume of coating less water and exempt solvents, where applicable.

MATERIAL VOC content is the actual weight of VOC per unit volume.

16. Other Information

Date Revised: 12/28/18

Prepared By: Regulatory Compliance

Information Contact: Regulatory Compliance 413-592-4191 ext 106

Manufacturer Disclaimer:

USERS RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER OF LIABILITY: The information contained herein is, to the best of our knowledge and belief, accurate.

However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No

representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the

information refers. These data relate only to the specific material designated herein and do not relate to use in combination with any other material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

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End of Material Safety Data Sheet