



MSDS Name: **DEVCON® Flexane® Brushable**  
 Manufacturer Name: ITW Devcon  
 Stock No.: 15350

<b>Components:</b>	
	FLEXANE BRUSHABLE CURING AGENT
	FLEXANE BRUSHABLE RESIN
ITW Performance Polymers (Finished Goods) Product Code : 15350	

**View Section :**   [1](#)   [2](#)   [3](#)   [4](#)   [5](#)   [6](#)   [7](#)   [8](#)   [9](#)   [10](#)   [11](#)   [12](#)   [13](#)   [14](#)   [15](#)   [16](#)

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

Product Name: **FLEXANE BRUSHABLE CURING AGENT**  
 Manufacturer Name: ITW Devcon  
 Address: 30 Endicott Street  
 Danvers, MA 01923  
 MSDS Revision Date: 10/10/2006  
 Emergency telephone number (800) 424-9300

**HMIS**

Health Hazard	2*
Fire Hazard	2
REACTIVITY	0
Personal Protection	X

\* Chronic Health Effects:

**In the US, call CHEMTREC: (800) 424-9300**

[To Top of page](#)

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	
1-methoxy-2-propanol acetate	108-65-6	60 - 100 by Weight
Epoxidized soybean oil	8013-07-8	1 - 5 by Weight
Diethyltoluenediamine	68479-98-1	10 - 30 by Weight
Carbon black	1333-86-4	1 - 5 by Weight

[To Top of page](#)

**SECTION 3: HAZARDS IDENTIFICATION**

**Emergency Overview:** WARNING! Flammable. Harmful. Potential Sensitizer. Irritant.

**Primary Routes of Exposure:** Eyes. Skin. Inhalation. Ingestion.

**Potential Health Effects:**

**Eye Contact:** Can cause severe eye irritation and burns. Eye contact may cause permanent damage or blindness.

**Skin Contact:** Causes severe skin irritation. May cause permanent skin damage. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

**Inhalation:** Vapor or mist may cause severe respiratory system irritation. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

<b>Ingestion:</b>	Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.
<b>Chronic Health Effects:</b>	Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction
<b>Signs/Symptoms:</b>	Overexposure may cause eye watering or discomfort, redness and swelling.
<b>Target Organs:</b>	Eyes. Skin. Respiratory system. Digestive system.
<b>Aggravation of Pre-Existing Conditions:</b>	Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

[To Top of page](#)

## SECTION 4: FIRST AID MEASURES

<b>Eye Contact:</b>	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
<b>Skin Contact:</b>	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
<b>Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
<b>Other First Aid:</b>	Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.

[To Top of page](#)

## SECTION 5: FIRE FIGHTING MEASURES

<b>Auto Ignition Temp :</b>	Not determined.
<b>Flash Point:</b>	114°F (45.5°C) (PGMEA)
<b>Flash Point Method:</b>	Setaflash
<b>Lower Explosive Limit (LEL)</b>	Not determined.
<b>Upper Explosive Limit (UEL)</b>	Not determined.
<b>Extinguishing Media:</b>	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
<b>Protective Equipment:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>Fire Fighting Instructions:</b>	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
<b>Unsuitable Media:</b>	Water or foam may cause frothing.

[To Top of page](#)

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
<b>Spill Cleanup Measures:</b>	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Flammable, eliminate ignition sources. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back. Ventilate area. Use proper personal protective equipment as listed in section 8.
<b>Environmental Precautions:</b>	Avoid runoff into storm sewers, ditches, and waterways.
<b>Other Precautions:</b>	Pump or shovel to storage/salvage vessels.

[To Top of page](#)

## SECTION 7: HANDLING AND STORAGE

<b>Handling:</b>	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do not reuse containers without proper cleaning or reconditioning.
<b>Storage:</b>	Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use. Do not store in reactive metal containers. Keep away from acids, oxidizers.
<b>Hygiene Practices:</b>	Wash thoroughly after handling.

**Special Handling Procedures:**

Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product. Hazardous liquid or vapor residue may remain in emptied container. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.

[To Top of page](#)

## SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

<b>Engineering Controls:</b>	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
<b>Skin Protection Description:</b>	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
<b>Eye/Face Protection:</b>	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
<b>Respiratory Protection:</b>	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
<b>Other Protective:</b>	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
<b>Carbon black:</b>	
<b>Guideline ACGIH :</b>	ACGIH TLV-TWA 3.5 mg/m <sup>3</sup>
<b>Notes :</b>	Only established PEL and TLV values for the ingredients are listed below.

[To Top of page](#)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State/Appearance:</b>	Liquid.
<b>Color:</b>	Black, Viscous
<b>Odor:</b>	pungent
<b>Boiling Point:</b>	>300°F (148.8°C)
<b>Melting / Freezing Point :</b>	Not determined.
<b>Solubility:</b>	appreciable
<b>Specific Gravity:</b>	1.06
<b>pH:</b>	Approximately 7 @ 5 Percent Solution
<b>Vapor Density:</b>	> 1 (air = 1)
<b>Vapor Pressure:</b>	4.9 mbar
<b>Molecular Formula:</b>	Mixture
<b>Molecular Weight:</b>	Mixture
<b>Percent Volatile:</b>	Not determined.
<b>VOC Data :</b>	679
<b>Percent Solids by Weight</b>	36

[To Top of page](#)

## SECTION 10: STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal temperatures and pressures.
<b>Conditions to Avoid:</b>	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.
<b>Incompatibilities with Other Materials:</b>	Oxidizers, acids, and chlorinated organic compounds. Reactive metals (e.g. sodium, calcium, zinc). Sodium/calcium hypochlorite. Nitrous acid/ oxide, nitrites. Peroxides. Materials reactive with hydroxyl compounds.
<b>Hazardous Polymerization:</b>	Not reported.

[To Top of page](#)

## SECTION 11: TOXICOLOGICAL INFORMATION

### **1-methoxy-2-propanol acetate:**

<b>Skin Effects:</b>	Skin - Rat LD50: >5 gm/kg - [Details of toxic effects not reported other than lethal dose value ](RTECS)
----------------------	----------------------------------------------------------------------------------------------------------

<b>Ingestion Effects:</b>	Oral - Rat LD50: 8532 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS)
<b><u>Epoxidized soybean oil:</u></b>	
<b>Skin Effects:</b>	Skin - Rat Open irritation test -: 500 mg - [mild](RTECS) Skin - Rat LD50: >20 mL/kg - [Details of toxic effects not reported other than lethal dose value](RTECS)
<b>Ingestion Effects:</b>	Oral - Rat LD50: 22500 uL/kg - [Details of toxic effects not reported other than lethal dose value] (RTECS)
<b><u>Diethyltoluenediamine:</u></b>	
<b>Ingestion Effects:</b>	Oral - Rat LD50: 472 mg/kg - [Sense Organs and Special Senses (Eye) - lacrimation oral - somnolence (general depressed activity) Musculoskeletal - other changes] (RTECS)
<b><u>Carbon black:</u></b>	
<b>Skin Effects:</b>	Skin - Rat LD50: >3 gm/kg - [Details of toxic effects not reported other than lethal dose value ](RTECS)
<b>Inhalation Effects:</b>	Inhalation - Rat TCLo - Lowest published toxic concentration: 7 mg/m3 - [Lungs, Thorax, or Respiration - other changes Biochemical - Metabolism (Intermediary) - effect on inflammation or mediation of inflammation ] (RTECS)
<b>Ingestion Effects:</b>	Oral - Rat LD50: >15400 mg/kg - [oral - somnolence (general depressed activity) ] (RTECS)
<b>Carcinogenicity:</b>	IARC: Group 2B: Possibly carcinogenic to humans

[To Top of page](#)

## SECTION 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	No ecotoxicity data was found for the product.
<b>Environmental Fate:</b>	No environmental information found for this product.

[To Top of page](#)

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>Waste Disposal:</b>	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
<b>RCRA Number :</b>	D001
<b>Important Disposal Information:</b>	DANGER! Rags, steel wool and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. To avoid a spontaneous combustion fire, immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal con

[To Top of page](#)

## SECTION 14: TRANSPORT INFORMATION

<b>DOT Shipping Name:</b>	Coating solution
<b>DOT UN Number:</b>	1139
<b>DOT Hazard Class:</b>	3
<b>DOT Packing Group:</b>	III
<b>DOT Exemption</b>	ORM-D Small quantity exemption

[To Top of page](#)

## SECTION 15: REGULATORY INFORMATION

### **1-methoxy-2-propanol acetate:**

<b>TSCA Inventory Status</b>	Listed
<b>EC Num :</b>	607-195-00-7

### **Carbon black:**

<b>TSCA Inventory Status</b>	Listed
<b>State:</b>	Listed in the State of Massachusetts Hazardous Substance List. Listed in the Pennsylvania State Hazardous Substances List.
<b>Canadian Regulations.</b>	WHMIS Hazard Class(es): D2B;B3;D2A All components of this product are on the Canadian Domestic Substances List.

[To Top of page](#)

## SECTION 16: ADDITIONAL INFORMATION

<b>HMIS Health Hazard:</b>	2*
<b>HMIS Fire Hazard:</b>	2
<b>HMIS Reactivity:</b>	0

HMIS Personal Protection: x

MSDS Revision Date: 10/10/2006

Disclaimer:

"This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment."

Copyright© 1996-2007 [Actio Software Corporation](#). All Rights Reserved.

**View Section :**    [1](#)   [2](#)   [3](#)   [4](#)   [5](#)   [6](#)   [7](#)   [8](#)   [9](#)   [10](#)   [11](#)   [12](#)   [13](#)   [14](#)   [15](#)   [16](#)

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

Product Name:                                   **FLEXANE BRUSHABLE RESIN**  
Manufacturer Name:                           ITW Devcon  
Address:                                           30 Endicott Street  
                                                          Danvers, MA 01923  
MSDS Revision Date:                         10/10/2006  
  
Emergency telephone number               (800) 424-9300

**HMIS**

Health Hazard	3*
Fire Hazard	3
REACTIVITY	1
Personal Protection	X

\* Chronic Health Effects:

**In the US, call CHEMTREC: (800) 424-9300**

[To Top of page](#)

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	
Proprietary	N/A	60 - 100 by Weight
Ethyl acetate	141-78-6	10 - 30 by Weight
Isophorone diisocyanate	4098-71-9	1 - 5 by Weight
2,6-Di-tertiary-butyl-para-cresol	128-37-0	1 - 5 by Weight
4,4'-Diphenylmethane diisocyanate	101-68-8	1 - 5 by Weight
Cyclohexanone	108-94-1	1 - 5 by Weight
Dicyclohexylmethane-4,4'-diisocyanate	5124-30-1	1 - 5 by Weight

[To Top of page](#)

**SECTION 3: HAZARDS IDENTIFICATION**

Emergency Overview:                         WARNING! Flammable. Potential Sensitizer. Irritant.

Primary Routes of Exposure:               Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

**Eye Contact:**                             Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury..

**Skin Contact:**                            Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

**Inhalation:**                                Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

**Ingestion:**                                 Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

<b>Chronic Health Effects:</b>	Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction
<b>Signs/Symptoms:</b>	Overexposure can cause headaches, dizziness, nausea, and vomiting.
<b>Target Organs:</b>	Eyes. Skin. Respiratory system. Digestive system. Kidney. Liver. Central nervous system.
<b>Aggravation of Pre-Existing Conditions:</b>	Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product. Isocyanate exposure levels must be monitored. Medical supervision of all employees who handle or come in contact with isocyanates is recommended (i.e. FEV, FVC). This should include pre-employment and periodic medical examinations. Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases, recurrent skin eczema or sensitization should be excluded from working with this product. Once sensitized no further exposure can be permitted.

[To Top of page](#)

## SECTION 4: FIRST AID MEASURES

<b>Eye Contact:</b>	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
<b>Skin Contact:</b>	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
<b>Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
<b>Other First Aid:</b>	Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.
<b>Note to Physicians:</b>	Asthmatic type symptoms may develop, which may be immediate or delayed for several hours.

[To Top of page](#)

## SECTION 5: FIRE FIGHTING MEASURES

<b>Flammable Properties :</b>	Flammable. Flammable liquid Class I B.
<b>Auto Ignition Temp :</b>	Not determined.
<b>Flash Point:</b>	24°F (-4.4°C)
<b>Flash Point Method:</b>	Tag Closed Cup (TCC)
<b>Lower Explosive Limit (LEL)</b>	2%
<b>Upper Explosive Limit (UEL)</b>	11%
<b>Extinguishing Media:</b>	Use carbon dioxide (CO <sub>2</sub> ) or dry chemical when fighting fires involving this material.
<b>Protective Equipment:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>Fire Fighting Instructions:</b>	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
<b>Unsuitable Media:</b>	Water may cause frothing.

[To Top of page](#)

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
<b>Spill Cleanup Measures:</b>	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal. Clean up spills immediately observing precautions in the protective equipment section. Neutralize residue with appropriate neutralizer. Do not attempt to neutralize large quantities of material unless measures to control reactivity and heat generation have been taken. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue. Flammable, eliminate ignition sources. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back. Ventilate area. Use proper personal protective equipment as listed in section 8. A blanket of protein foam may be placed over spill for temporary control of isocyanate vapor.

Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Other Precautions:	Pump large quantities into closed but not sealed metal containers. Isocyanates will react with water and generate carbon dioxide, this could result in the rupture of any closed containers. Neutralize using 10 parts neutralizer to 1 part isocyanate solution. Mix and allow to stand for 48 hrs in containers, letting evolved carbon dioxide to vent. Neutralizer consist of 90% water, 3-8% concentrated ammonia (or sodium carbonate), 2% detergent.

[To Top of page](#)

## SECTION 7: HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do not reuse containers without proper cleaning or reconditioning.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use. Do not reseal container if moisture or water contamination is suspected. Water contaminated material in a sealed container may rupture due to pressure buildup.
Hygiene Practices:	Wash thoroughly after handling.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product. Hazardous liquid or vapor residue may remain in emptied container. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.

[To Top of page](#)

## SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

### Ethyl acetate:

Guideline ACGIH : ACGIH TLV-TWA 400 ppm

Guideline OSHA : OSHA PEL-TWA 400 ppm

### Isophorone diisocyanate:

Guideline ACGIH : ACGIH TLV-TWA 0.005 ppm

### 2,6-Di-tertiary-butyl-para-cresol:

Guideline ACGIH : ACGIH TLV-TWA 2 mg/m<sup>3</sup>

### 4,4'-Diphenylmethane diisocyanate:

Guideline ACGIH : ACGIH TLV-TWA 0.005 ppm

Guideline OSHA : OSHA PEL-STEL 0.02 ppm Ceiling/Peak

### Cyclohexanone:

Guideline ACGIH : ACGIH TLV-STEL 50 ppm

Guideline OSHA : OSHA PEL-TWA 50 ppm

### Dicyclohexylmethane-4,4'-diisocyanate:

Guideline ACGIH : ACGIH TLV-TWA 0.005 ppm

Notes : Only established PEL and TLV values for the ingredients are listed below.

[To Top of page](#)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:	Liquid.
Color:	Clear.
Odor:	Strong solvent.
Boiling Point:	172°F (77.7°C) solvent boils
Melting / Freezing Point :	Not determined.
Solubility:	Negligible reacts.
Specific Gravity:	0.902
pH:	7 @ 5 Percent Solution
Vapor Density:	3 (air = 1)
Vapor Pressure:	86 mmHg @68°F
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Percent Volatile:	21
VOC Data :	190 g/L
Percent Solids by Weight	79

[To Top of page](#)

## SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Moisture and extended exposure over 85 F.
Incompatibilities with Other Materials:	Alcohols, amines, strong bases (alkali, ammonia), acids, metal compounds, moisture or water. Resin reacts with water to give off carbon dioxide.
Hazardous Polymerization:	Polymerization may occur under certain conditions.

[To Top of page](#)

## SECTION 11: TOXICOLOGICAL INFORMATION

### **Ethyl acetate:**

Eye Effect:	Eye - Human Standard Draize Test : 400 ppm(RTECS)
Skin Effects:	Skin - Rat LD50: >20 mL/kg - [Details of toxic effects not reported other than lethal dose value ](RTECS)
Inhalation Effects:	Inhalation - Rat LC50: 200 gm/m <sup>3</sup> - [Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - acute pulmonary edema Gastrointestinal - changes in structure or function of salivary glands ] (RTECS) Inhalation - Mouse LC50: 45 gm/m <sup>3</sup> /2H - [Details of toxic effects not reported other than lethal dose value ] (RTECS)
Ingestion Effects:	Oral - Rat LD50: 5620 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS) Oral - Mouse LD50: 4100 mg/kg - [oral - somnolence (general depressed activity) oral - changes in motor activity (specific assay) oral - coma ] (RTECS)

### **Isophorone diisocyanate:**

Skin Effects:	Skin - Rat LDLo: 1 mL/kg - [Details of toxic effects not reported other than lethal dose value ](RTECS)
Inhalation Effects:	Inhalation - Rat LC50: 123 mg/m <sup>3</sup> /4H - [Details of toxic effects not reported other than lethal dose value ] (RTECS)
Ingestion Effects:	Oral - Rat LD50: 4825 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS)

### **2,6-Di-tertiary-butyl-para-cresol:**

Eye Effect:	Eye - Rabbit Standard Draize Test : 100 mg/24H - [Moderate](RTECS)
Skin Effects:	Skin - Rat Standard Draize Test : 500 mg/48H - [Moderate](RTECS)
Ingestion Effects:	Oral - Rat LD50: 890 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS) Oral - Mouse LD50: 650 mg/kg - [oral - tremor Lungs, Thorax, or rat - chronic pulmonary edema ] (RTECS) Oral - Mouse LD50: 1040 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS) Oral - Mouse LD50: 650 mg/kg - [oral - tremor oral - ataxia Lungs, Thorax, or rat - other changes ] (RTECS)

### **4,4'-Diphenylmethane diisocyanate:**

Eye Effect:	Eye - Rabbit Standard Draize Test : 100 mg - [Moderate ](RTECS)
Skin Effects:	Skin - Rat Standard Draize Test : 500 mg/24H(RTECS)
Inhalation Effects:	Inhalation - Rat LC50: 178 mg/m <sup>3</sup> - [Details of toxic effects not reported other than lethal dose value ] (RTECS)
Ingestion Effects:	Oral - Rat LD50: 9200 mg/kg - [oral - somnolence (general depressed activity) oral - ataxia Nutritional and Gross Metabolic - body rat decrease ] (RTECS) Oral - Mouse LD50: 2200 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS)

### **Cyclohexanone:**

Eye Effect:	Eye - Human Standard Draize Test : 75 ppm(RTECS)
-------------	--------------------------------------------------

<b>Skin Effects:</b>	Skin - Rat Open irritation test: 500 mg - [mild ](RTECS) Skin - Rat LD50: 1 mL/kg - [Details of toxic effects not reported other than lethal dose value ](RTECS)
<b>Inhalation Effects:</b>	Inhalation - Rat LC50: 19000 mg/m3 - [Details of toxic effects not reported other than lethal dose value] (RTECS) Inhalation - Mouse LC50: 2375 mg/m3 - [Details of toxic effects not reported other than lethal dose value] (RTECS)
<b>Ingestion Effects:</b>	Oral - Rat LD50: 1800 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS) Oral - Mouse LD50: 1400 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS)

#### **Dicyclohexylmethane-4,4'-diisocyanate:**

<b>Eye Effect:</b>	Eye - Rabbit Standard Draize Test : 100 uL/24H - [severe ](RTECS)
<b>Skin Effects:</b>	Skin - Rat Standard Draize Test : 500 uL/24H - [Moderate](RTECS) Skin - Rat LD - Lethal dose: >10 gm/kg - [Behavioral - somnolence (general depressed activity) Behavioral - food intake (animal) Behavioral - muscle weakness ](RTECS)
<b>Inhalation Effects:</b>	Inhalation - Guinea pig LC50: 51 mg/m3/1H - [Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - cyanosis Lungs, Thorax, or Respiration - other changes ] (RTECS)
<b>Ingestion Effects:</b>	Oral - Rat LD50: 9900 mg/kg - [oral - food intake (animal) Gastrointestinal - hypermotility, diarrhea Liver - other changes ] (RTECS)

[To Top of page](#)

## SECTION 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	No ecotoxicity data was found for the product.
<b>Environmental Fate:</b>	No environmental information found for this product.

[To Top of page](#)

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>Waste Disposal:</b>	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
<b>RCRA Number :</b>	D001
<b>Important Disposal Information:</b>	DANGER! Rags, steel wool and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. To avoid a spontaneous combustion fire, immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal con

[To Top of page](#)

## SECTION 14: TRANSPORT INFORMATION

<b>DOT Shipping Name:</b>	Coating solution
<b>DOT UN Number:</b>	1139
<b>DOT Hazard Class:</b>	3
<b>DOT Packing Group:</b>	II
<b>DOT Exemption</b>	ORM-D Small quantity exemption

[To Top of page](#)

## SECTION 15: REGULATORY INFORMATION

#### **Ethyl acetate:**

<b>State:</b>	Listed in the State of Massachusetts Hazardous Substance List. Listed in the Pennsylvania State Hazardous Substances List.
<b>EC Num :</b>	607-022-00-5

#### **Isophorone diisocyanate:**

<b>State:</b>	Listed in the State of Massachusetts Hazardous Substance List. Listed in the New Jersey State Right to Know List. Listed in the Pennsylvania State Hazardous Substances List.
<b>EC Num :</b>	615-008-00-5

#### **2,6-Di-tertiary-butyl-para-cresol:**

<b>State:</b>	Listed in the State of Massachusetts Hazardous Substance List. Listed in the Pennsylvania State Hazardous Substances List.
---------------	-------------------------------------------------------------------------------------------------------------------------------

#### **4,4'-Diphenylmethane diisocyanate:**

<b>State:</b>	Listed in the State of Massachusetts Hazardous Substance List. Listed in the New Jersey State Right to Know List. Listed in the Pennsylvania State Hazardous Substances List.
<b>EC Num :</b>	615-005-00-9

**Cyclohexanone:**

State: Listed in the State of Massachusetts Hazardous Substance List.  
Listed in the Pennsylvania State Hazardous Substances List.

EC Num : 606-010-00-7

**Dicyclohexylmethane-4,4'-diisocyanate:**

State: Listed in the State of Massachusetts Hazardous Substance List.  
Listed in the New Jersey State Right to Know List.  
Listed in the Pennsylvania State Hazardous Substances List.

EC Num : 615-009-00-0

Canadian Regulations. WHMIS Hazard Class(es): B2; D2B; D2A  
All components of this product are on the Canadian Domestic Substances List.

[To Top of page](#)

---

**SECTION 16: ADDITIONAL INFORMATION**

---

HMIS Health Hazard: 3\*

HMIS Fire Hazard: 3

HMIS Reactivity: 1

HMIS Personal Protection: x

MSDS Revision Date: 10/10/2006

Disclaimer: "This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment."