



MSDS Name

**DEVCON® Flexane®
Brushable**

Manufacturer Name

ITW Devcon

Stock No.:

15350

Kit MSDS Revision

1/30/2012

Date

Components	
	FLEXANE BRUSHABLE CURING AGENT
	FLEXANE BRUSHABLE RESIN
ITW Devcon Product Code : 15350	

SECTION 12 : ECOLOGICAL INFORMATION

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

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: 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.
RCRA Number: D001
Important Disposal Information: 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 container.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Refer to Bill of Lading
DOT UN Number: Refer to Bill of Lading

SECTION 15 : REGULATORY INFORMATION

1-methoxy-2-propanol acetate :

TSCA Inventory Status: Listed
Canada DSL: Listed

Epoxidized soybean oil :

TSCA Inventory Status: Listed
Canada DSL: Listed

Diethyltoluenediamine :

TSCA Inventory Status: Listed
Canada DSL: Listed

Carbon black :

TSCA Inventory Status: Listed
California PROP 65: Listed: cancer.
Massachusetts: Listed
Pennsylvania: Listed
Canada DSL: Listed
Canadian Regulations. WHMIS Hazard Class(es): D2B;B3;D2A
All components of this product are on the Canadian Domestic Substances List.

SECTION 16 : ADDITIONAL INFORMATION

HMIS Fire Hazard: 2
HMIS Health Hazard: 2*
HMIS Reactivity: 0
HMIS Personal Protection: x
MSDS Revision Date: 12/30/2012
MSDS Author: Actio Corporation
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.

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SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name: FLEXANE BRUSHABLE RESIN
Manufacturer Name: ITW Polymers Adhesives, North America
Address: 30 Endicott Street
Danvers, MA 01923
General Phone Number: (978) 777-1100
Emergency Phone Number: (800) 424-9300
CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300
MSDS Revision Date: 12/30/2012

HMIS	
Health Hazard	3*
Fire Hazard	3
Reactivity	1
Personal Protection	x

* Chronic Health Effects

SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Proprietary	N/A	60 - 100 by weight
Ethyl acetate	141-78-6	10 - 30 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
Isophorone diisocyanate	4098-71-9	1 - 5 by weight

SECTION 3 : HAZARDS IDENTIFICATION

Emergency Overview:	WARNING! Flammable. Potential Sensitizer. Irritant.
Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye:	Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury..
Skin:	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.
Chronic Health Effects:	Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.
Signs/Symptoms:	Overexposure can cause headaches, dizziness, nausea, and vomiting.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system. Kidney. Liver.. Central nervous system.
Aggravation of Pre-Existing Conditions:	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.

SECTION 4 : FIRST AID MEASURES

Eye Contact:	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.
Skin Contact:	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.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Note to Physicians:	Asthmatic type symptoms may develop, which may be immediate or delayed for several hours.
Other First Aid:	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.

SECTION 5 : FIRE FIGHTING MEASURES

Flammable Properties:	Flammable. Flammable liquid Class I B.
Flash Point:	24°F (-4.4°C)
Flash Point Method:	Tag Closed Cup (TCC)
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	2%
Upper Flammable/Explosive Limit:	11%
Fire Fighting Instructions:	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.
Extinguishing Media:	Use carbon dioxide (CO ₂) or dry chemical when fighting fires involving this material.
Unsuitable Media:	Water may cause frothing.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Do not reseal containers if contaminated with water, resin will react with water to release carbon dioxide. As a result of the water contamination, pressure will build up in the sealed container causing it to rupture.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Spill Cleanup Measures:	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.
Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
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.

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.
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.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

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.
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.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
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.

EXPOSURE GUIDELINES

Ethyl acetate:

Guideline ACGIH:	400 ppm TLV-TWA: 400 ppm
Guideline OSHA:	400 ppm PEL-TWA: 400 ppm

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

Guideline ACGIH: 2 mg/m3
TLV-TWA: 2 mg/m3 Inhalable vapor fraction (IVF)

4,4'-Diphenylmethane diisocyanate:

Guideline ACGIH: 0.005 ppm
TLV-TWA: 0.005 ppm
Guideline OSHA: PEL-Ceiling/Peak: 0.02 ppm

Cyclohexanone:

Guideline ACGIH: 20 ppm
Skin: Yes.
TLV-STEL: 50 ppm
TLV-TWA: 20 ppm
Guideline OSHA: 50 ppm
PEL-TWA: 50 ppm

Dicyclohexylmethane-4,4'-diisocyanate:

Guideline ACGIH: 0.005 ppm
TLV-TWA: 0.005 ppm

Isophorone diisocyanate:

Guideline ACGIH: 0.005 ppm
TLV-TWA: 0.005 ppm

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

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 Point: Not determined.
Specific Gravity: 0.902
Solubility: Negligible reacts.
Vapor Density: 3 (air = 1)
Vapor Pressure: 86 mmHg @68°F
Percent Volatile: 21
Evaporation Rate: 4.1 (butyl acetate = 1)
pH: 7 @ 5 Percent Solution
Molecular Formula: Mixture
Molecular Weight: Mixture
Flash Point: 24°F (-4.4°C)
Flash Point Method: Tag Closed Cup (TCC)
Auto Ignition Temperature: Not determined.
VOC Content: 190 g/L
Percent Solids by Weight 79

SECTION 10 : STABILITY and REACTIVITY

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

SECTION 11 : TOXICOLOGICAL INFORMATION

Ethyl acetate:

RTECS Number: AH5425000
Eye: Eye - Human Standard Draize test.: 400 ppm
Skin: Administration onto the skin - Rabbit : >20 mL/kg [Details of toxic effects not reported other than lethal dose value]
Inhalation: Inhalation - Mouse LC50: 45 gm/m3/2H [Details of toxic effects not reported other than lethal dose value]
Inhalation - Rat LC50: 1600 ppm/8H [Details of toxic effects not reported other than lethal dose value]
Inhalation - Rat LC50: >6000 ppm/6H [Details of toxic effects not reported other than lethal dose value]
Inhalation - Rat LC50: 200 gm/m3 [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Acute pulmonary edema Gastrointestinal - Changes in structure or function of salivary glands]
Ingestion: Oral - Mouse LD50: 4100 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Changes in motor activity (specific assay) Behavioral - Coma]
Oral - Mouse LD50: 4.1 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50: 5620 mg/kg [Details of toxic effects not reported other than lethal dose value]

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

RTECS Number: G07875000
Eye: Eye - Rabbit Standard Draize test.: 100 mg/24H
Skin: Administration onto the skin - Rat : >2000 mg/kg [Details of toxic effects not reported other than lethal dose value]
Administration onto the skin - Mouse : 5 gm/kg/4W (Intermittent)

	[Lungs, Thorax, or Respiration - Changes in lung weight Related to Chronic Data - death] Administration onto the skin - Human : 500 mg/48H Administration onto the skin - Rabbit : 500 mg/48H
Ingestion:	Oral - Mouse LD50: 650 mg/kg [Behavioral - Tremor Lungs, Thorax, or Respiration - Chronic pulmonary edema] Oral - Mouse LD50: 650 mg/kg [Behavioral - Tremor Behavioral - Ataxia Lungs, Thorax, or Respiration - Other changes] Oral - Rat LD50: 890 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50: 1040 mg/kg [Details of toxic effects not reported other than lethal dose value]
<u>4,4'-Diphenylmethane diisocyanate:</u>	
RTECS Number:	NQ9350000
Eye:	Eye - Rabbit Standard Draize test.: 100 mg
Skin:	Administration onto the skin - Mouse : 0.09 pph/2D (Intermittent) [Blood - Other changes Skin and Appendages - Cutaneous sensitization, experimental (After topical exposure)] Administration onto the skin - Mouse : 220 mg/kg/12D (Intermittent) [Skin and Appendages - Cutaneous sensitization, experimental (After topical exposure) Biochemical - Metabolism (Intermediary) - Other proteins Biochemical - Metabolism (Intermediary) - Effect on inflammation or mediation of inflammation] Administration onto the skin - Mouse : 2 pph/2W (Intermittent) [Immunological Including Allergic - Increase in humoral immune response] Administration onto the skin - Mouse : 2 pph/4W (Intermittent) [Immunological Including Allergic - Increase in humoral immune response] Administration onto the skin - Mouse : 280 mg/kg/14D (Intermittent) [Immunological Including Allergic - Increase in humoral immune response] Administration onto the skin - Rabbit : 500 mg/24H
Inhalation:	Inhalation - Rat LC50: 178 mg/m3 [Details of toxic effects not reported other than lethal dose value]
Ingestion:	Oral - Rat LD50: 9200 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Nutritional and Gross Metabolic - Body temperature decrease] Oral - Mouse LD50: 2200 mg/kg [Details of toxic effects not reported other than lethal dose value]
<u>Cyclohexanone:</u>	
RTECS Number:	GW1050000
Eye:	Eye - Human Standard Draize test.: 75 ppm Eye - Rabbit Standard Draize test.: 250 ug/24H
Skin:	Administration onto the skin - Rabbit : 1 mL/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rat : 61000 mg/kg/122D (Intermittent) [Liver - Liver function tests impaired Liver - Other changes Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - Multiple enzyme effects] Administration onto the skin - Rabbit : 500 mg Administration onto the skin - Human : 50 %/48H
Inhalation:	Inhalation - Rat LC50: 8000 ppm/4H [Details of toxic effects not reported other than lethal dose value] Inhalation - Mouse LC50: 2375 mg/m3 [Details of toxic effects not reported other than lethal dose value] Inhalation - Rat LC50: 19000 mg/m3 [Details of toxic effects not reported other than lethal dose value]
Ingestion:	Oral - Rat LD50: 1620 uL/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50: 1400 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rat LD50: 1800 mg/kg [Details of toxic effects not reported other than lethal dose value]
<u>Dicyclohexylmethane-4,4'-diisocyanate:</u>	
RTECS Number:	NQ9250000
Eye:	Eye - Rabbit Standard Draize test.: 100 uL Eye - Rabbit Standard Draize test.: 100 uL/24H
Skin:	Administration onto the skin - Rabbit : >10 gm/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Food intake (animal) Behavioral - Muscle weakness] Administration onto the skin - Mouse : 220 mg/kg/12D (Intermittent) [Skin and Appendages - Cutaneous sensitization, experimental (After topical exposure) Biochemical - Metabolism (Intermediary) - Other proteins Biochemical - Metabolism (Intermediary) - Effect on inflammation or mediation of inflammation] Administration onto the skin - Mouse : 2 pph/2W (Intermittent) [Lungs, Thorax, or Respiration - Other changes Immunological Including Allergic - Increase in humoral immune response] Administration onto the skin - Mouse : 2 pph/4W (Intermittent) [Lungs, Thorax, or Respiration - Other changes Immunological Including Allergic - Increase in humoral immune response] Administration onto the skin - Mouse : 280 mg/kg/14D (Intermittent) [Immunological Including Allergic - Increase in humoral immune response] Administration onto the skin - Mouse : 480 mg/kg/28D (Intermittent) [Lungs, Thorax, or Respiration - Other changes] Administration onto the skin - Rabbit : 500 uL/24H
Ingestion:	Oral - Rat LD50: 9900 mg/kg [Behavioral - Food intake (animal) Gastrointestinal - Hypermotility, diarrhea Liver - Other changes]
<u>Isophorone diisocyanate:</u>	
RTECS Number:	NQ9370000
Skin:	Administration onto the skin - Rat : 1 mL/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Mouse : 220 mg/kg/12D (Intermittent) [Skin and Appendages - Cutaneous sensitization, experimental (After topical exposure) Biochemical - Metabolism (Intermediary) - Other proteins Biochemical - Metabolism (Intermediary) - Effect on inflammation or mediation of inflammation] Administration onto the skin - Mouse : 480 mg/kg/28D (Intermittent) [Immunological Including Allergic - Increase in humoral immune response] Administration onto the skin - Mouse : 1 %/5D (Continuous)
Inhalation:	Inhalation - Rat LC50: 123 mg/m3/4H [Details of toxic effects not reported other than lethal dose value]
Ingestion:	Oral - Rat LD50: 4825 mg/kg [Details of toxic effects not reported other

ingestion) than lethal dose value]

SECTION 12 : ECOLOGICAL INFORMATION

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

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: 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.
RCRA Number: D001
Important Disposal Information: 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 container.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Refer to Bill of Lading
DOT UN Number: Refer to Bill of Lading

SECTION 15 : REGULATORY INFORMATION

Ethyl acetate :
TSCA Inventory Status: Listed
Massachusetts: Listed: Massachusetts Oil and Hazardous List
Pennsylvania: Listed
Canada DSL: Listed
2,6-Di-tertiary-butyl-para-cresol :
TSCA Inventory Status: Listed
Massachusetts: Listed
Pennsylvania: Listed
Canada DSL: Listed
4,4'-Diphenylmethane diisocyanate :
TSCA Inventory Status: Listed
SARA: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
New Jersey: Listed: NJ Hazardous List; Substance Number: 3757
Massachusetts: Listed
Pennsylvania: Listed
Canada DSL: Listed
Cyclohexanone :
TSCA Inventory Status: Listed
Massachusetts: Listed: Massachusetts Oil and Hazardous List
Pennsylvania: Listed
Canada DSL: Listed
Dicyclohexylmethane-4,4'-diisocyanate :
TSCA Inventory Status: Listed
SARA: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
New Jersey: Listed: NJ Hazardous List; Substance Number: 3757
Massachusetts: Listed
Pennsylvania: Listed
Canada DSL: Listed
Isophorone diisocyanate :
TSCA Inventory Status: Listed
SARA: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
Section 302 EHS: EPCRA (SARA Title III) Section 302 (40 CFR Part 355) Extremely Hazardous Substances (EHS) Threshold Planning Quantity (TPQ) in pounds.: 500 Lbs.
Section 304 RQ: EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances (EHS) Reportable Quantities (RQ) in pounds.: 500 Lbs.
New Jersey: Listed: NJ Hazardous List; TPQ: 100 lbs; Substance Number: 1068
Massachusetts: Listed: Massachusetts Oil and Hazardous List
Pennsylvania: Listed
Canada DSL: Listed
Canadian Regulations: WHMIS Hazard Class(es): B2; D2B; D2A
All components of this product are on the Canadian Domestic Substances List.

SECTION 16 : ADDITIONAL INFORMATION

HMIS Fire Hazard: 3

HMIS Health Hazard: 3*
HMIS Reactivity: 1
HMIS Personal Protection: x
MSDS Revision Date: 12/30/2012
MSDS Author: Actio Corporation
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.

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MSDS Revision Notes:	GHS Update
SDS Format:	In accordance to OSHA GHS 1910.1200
MSDS Author:	Actio Corporation
Disclaimer:	The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. ITW Polymers Adhesives, NA, MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the ITW Polymers Adhesives, NA product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a ITW Polymers Adhesives, NA product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the ITW Polymers Adhesives, NA product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. ITW Polymers Adhesives, NA provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, ITW Polymers Adhesives, NA makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from ITW Polymers Adhesives, NA

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Component B - SDS

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name: FLEXANE BRUSHABLE CURING AGENT

Other means of identification:

Synonyms: None.

Recommended use of the chemical and restrictions on use:

Product Use/Restriction: Not applicable.

Chemical manufacturer address and telephone number:

Manufacturer Name: ITW
Address: 30 Endicott Street
 Danvers, MA 01923
General Phone Number: (978) 777-1100

Emergency phone number:

Emergency Phone Number: (800) 424-9300
CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:



Signal Word:	WARNING.
GHS Class:	Flammable Liquid. Category 3. Specific Target Organ Toxicity -STOT Repeated exposure RE. Category 2 (Oral, liver, kidney, and pancreas). Eye Irritation. Category 2.
Hazard Statements:	H226 - Flammable liquid and vapour. H373 - May cause damage to organs through prolonged or repeated exposure. H319 - Causes serious eye irritation.
Precautionary Statements:	P210 - Keep away from heat/sparks/open flames/hotsurfaces. — No smoking. P233 - Keep container tightly closed. P240 - Ground/Bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314 - Get medical advice/attention if you feel unwell. P337+P313 - If eye irritation persists: Get medical advice/attention. P370+P378 - In case of fire: Use dry chemical, carbon dioxide to extinguish small fires. Use water for large fires. P403+P235 - Store in a well-ventilated place. Keep cool. P501 - Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.
<u>Hazards not otherwise classified that have been identified during the classification process:</u>	
Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye:	Can cause severe eye irritation and burns. Eye contact may cause permanent damage or blindness.
Skin:	Causes severe skin irritation. May cause permanent skin damage.
Inhalation:	Vapor or mist may cause severe respiratory system irritation.
Ingestion:	Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.
Chronic Health Effects:	Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.
Signs/Symptoms:	Overexposure may cause eye watering or discomfort, redness and swelling.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS #	Ingredient Percent	EC Num.
1-methoxy-2-acetoxyp propane	108-65-6	60.4 - 66.8 by weight	
Epoxidized soybean oil	8013-07-8	4.2 - 4.7 by weight	
Diethyltoluenediamine	68479-98-1	27.2 - 30.1 by weight	
Carbon black	1333-86-4	1.8 - 2 by weight	

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	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.
Skin Contact:	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.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid:	Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning. Inhalation, skin absorption, or ingestion may cause methemoglobin formation resulting in a reduced ability of the blood to carry oxygen; a symptom of this may be cyanosis (purplish-blue coloring of skin, fingernails, and lips).
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Indication of immediate medical attention and special treatment needed:

Note to Physicians:	Immediately give oxygen if victim turns blue (lips, ears, fingernails). Since reversion of methaemoglobin to haemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures.
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SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Unsuitable extinguishing media:	Water or foam may cause frothing.

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	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. Vapors can flow along surfaces to distant ignition sources and flash back.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personnel Precautions: Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

Environmental precautions:

Environmental Precautions: Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures: 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.

Reference to other sections:

Other Precautions: Pump or shovel to storage/salvage vessels.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

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.

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.

Conditions for safe storage, including any incompatibilities:

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 store in reactive metal containers. Keep away from acids, oxidizers.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Diethyltoluenediamine :

Guideline Type: Manufacturer recommended occupational exposure limit

Guideline Info: OEL-TWA: 2 ppm

Carbon black :

Guideline ACGIH: TLV-TWA: 3 mg/m3 Inhalable fraction (I)

Appropriate engineering controls:

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.

Individual protection measures:

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.

Skin Protection Description: Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.

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.

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

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance: Liquid.

Color: Black., Viscous.

Odor: pungent

Boiling Point: >300°F (148.8°C)

Melting Point: Not determined.

Specific Gravity: 1.06

Solubility: APPRECIABLE

Vapor Density: > 1 (air = 1)

Vapor Pressure: 4.9 mbar

Percent Volatile: Not determined.

Evaporation Rate: < 1

pH: Approximately 7 @ 5 Percent Solution

Molecular Formula: Mixture

Molecular Weight:	Mixture
Flash Point:	114°F (45.5°C) (PGMEA)
Flash Point Method:	Setaflash
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Auto Ignition Temperature:	Not determined.
VOC Content:	679

9.2. Other information:

Percent Solids by Weight	36
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SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:

Chemical Stability:	Stable under normal temperatures and pressures.
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Possibility of hazardous reactions:

Hazardous Polymerization:	Not reported.
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Conditions To Avoid:

Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.
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Incompatible Materials:

Incompatible Materials:	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.
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SECTION 11 : TOXICOLOGICAL INFORMATION

1-methoxy-2-acetoxyp propane :

Skin:	Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
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Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill: 8532 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rat LD50 - Lethal dose, 50 percent kill: 9000 mg/kg [Behavioral - Coma] (RTECS)
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Epoxidized soybean oil :

Skin:	Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >20 mL/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
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Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill: 40 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rat LD50 - Lethal dose, 50 percent kill: 22500 uL/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
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Diethyltoluenediamine :

Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill: 472 mg/kg [Sense Organs and Special Senses (Eye) - Lacrimation Behavioral - Somnolence (general depressed activity) Musculoskeletal - Other changes] (RTECS)
<u>Carbon black :</u>	
Skin:	Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >3 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill: >15400 mg/kg [Behavioral - Somnolence (general depressed activity)] (RTECS)
Chronic Effects:	This product contains carbon black, which is classified as a possible carcinogen by the International Agency for Research on Cancer (IARC). Although normal application procedures for this product pose minimal hazard as to the release of carbon black dust, grinding or sanding cured product may generate respirable carbon black.
Carcinogenicity:	Carbon black and its extracts have been tested for carcinogenicity in rats and mice by inhalation and it has shown sufficient evidence in laboratory animals for the carcinogenicity of carbon black.

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity: No ecotoxicity data was found for the product.

Environmental Fate: No environmental information found for this product.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal: 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.

RCRA Number: D001

Important Disposal Information: 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 container.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Refer to Bill of Lading

DOT UN Number: Refer to Bill of Lading

IATA Shipping Name: Refer to Bill of Lading

IATA UN Number: Refer to Bill of Lading

IMDG UN Number : Refer to Bill of Lading

IMDG Shipping Name : Refer to Bill of Lading

TOXICOLOGICAL INFORMATION:

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

1-methoxy-2-acetoxypropane :

TSCA Inventory Status: Listed

Canada DSL: Listed

Epoxidized soybean oil :

TSCA Inventory Status: Listed

Canada DSL: Listed

Diethyltoluenediamine :

TSCA Inventory Status: Listed

Canada DSL: Listed

Carbon black :

TSCA Inventory Status: Listed

California PROP 65: Listed: cancer.

Canada DSL: Listed

Canadian Regulations. WHMIS Hazard Class(es): D2B;B3;D2A
All components of this product are on the Canadian Domestic Substances List.

WHMIS Pictograms:



SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 2*

HMIS Fire Hazard: 2

HMIS Reactivity: 0

HMIS Personal Protection: X

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

* Chronic Health Effects

SDS Revision Date: March 17, 2015

MSDS Revision Notes: GHS Update

SDS Format: In accordance to OSHA GHS 1910.1200

MSDS Author: Actio Corporation

Disclaimer:

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Diethyltoluenediamine

Signs/Symptoms:

Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning. Inhalation, skin absorption, or ingestion may cause methemoglobin formation resulting in a reduced ability of the blood to carry oxygen; a symptom of this may be cyanosis (purplish-blue coloring of skin, fingernails, and lips).