

SAFETY DATA SHEET

Superior 100 Part "A" Epoxy Resin

Revision Number: 1.01

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Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: SUPERIOR 100 PART A Product Type: Epoxy Resin Restriction of Use: None identified Company Address: Dura Polymers Roof Coatings 2160 Long Lake Rd., Sudbury, Ontario, Canada P3E 5H4	Item Number: SFLEX100-A Region: Canada Contact Information: Telephone: +1 (877) 707-0202 Emergency Phone: 1 (877) 707-0202 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free)
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Section 2: HAZARDS IDENTIFICATION

HAZARD CLASS	HAZARD CATEGORY
SKIN CORROSION	2
EYE IRRITATION	2B
SKIN SENSITIZATION	1B

PICTOGRAMS



Signal word: **WARNING!**

Hazards: Causes skin and eye irritation. May cause an allergic skin reaction..

Precautionary statements

Prevention Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Avoid release to the environment. Wear eye protection/ face protection. Wear protective gloves.

Response If skin irritation or rash occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. Collect spillage.

Disposal Dispose of contents/ container to an approved waste disposal plant.

Other hazards no data available

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

This product is a substance.

Component	CAS Number	Percentage
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Propane, 2,2-bis[p-(2,3epoxypropoxy)phenyl]-, polymers	25085-99-8	100.0%
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Section 4: FIRST AID MEASURES

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog, applied gently may be used as a blanket for fire extinguishment.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen.

Advice for firefighters Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has

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passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (includes fire-fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire-fighting operations. If contact is likely, change to full chemical resistant fire-fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to section 7, Handling, for additional precautionary measures.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Sand. Polypropylene fiber products. Polyethylene fiber products. Remove residual with soap and hot water. Collect in suitable and properly labeled containers. Residual can be removed with solvent. Solvents are not recommended for clean-up unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent Safety Data Sheet for handling information and exposure guidelines. See Section 13, Disposal Considerations, for additional information.

Section 7: HANDLING & STORAGE

Precautions for safe handling: Avoid prolonged or repeated contact with skin. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of liquid epoxy resin to explode and catch fire. Application of a direct flame to a container of liquid epoxy resin can also cause explosion and/or fire. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Recommended pumping and storage temperature for bulk shipments is 60°C (140°F) Additional storage and handling information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure.

Shelf life: Use within 24 Months

Storage Temperature: Between 2°C (36°F) and 30°C (86°F)

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Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters Exposure limits are listed below, if they exist.

None established

Exposure controls Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. **Skin protection Hand protection:** Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier. **Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. **Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state: Viscous Liquid. Color Colorless to yellow

Odor: Odorless to mild

Odor Threshold: No test data available

pH: No test data available

Melting point/range: Not applicable

Freezing point: No test data available

Boiling point: (760 mmHg) 320 °C Differential Scanning Calorimetry (DSC) Decomposition

Flash point: closed cup 264 - 268 °C at 102.89 hPa EC Method A9

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Evaporation Rate: (Butyl Acetate = 1) No test data available
Flammability: (solid, gas) No Lower explosion limit Not applicable
Upper explosion limit: Not applicable
Vapor Pressure: < 0.0000001 Pa EC Method A4
Relative Vapor Density: (air = 1) no data available
Relative Density: (water = 1) 1.16 at 20 °C / 20 °C
Water solubility: 5.4 - 8.4 mg/l at 20 °C EU Method A.6 (Water Solubility)
Partition coefficient n-octanol/water: log Pow: 3.242 Estimated.
Auto-ignition temperature: Not applicable
Decomposition temperature: No test data available
Dynamic Viscosity: 11,000 - 14,000 mPa.s at 25 °C ASTM D 445
Kinematic Viscosity: No test data available
Explosive properties: No EEC A14
Oxidizing properties: No
Liquid Density: 1.16 g/cm³ at 25 °C ASTM D4052
Molecular weight: Not determined
Particle size: Not determined

NOTE: The physical data presented above are typical values and should not be construed as a specification.

Section 10: STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup. Conditions to avoid: Avoid short term exposures to temperatures above 300 °C Potentially violent decomposition can occur above 350 °C Avoid prolonged exposure to temperatures above 250 °C Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases. Avoid unintended contact with amines.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

Section 11: TOXICOLOGY INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

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LD50, Rat, > 15,000 mg/kg

Acute dermal toxicity: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rabbit, 23,000 mg/kg

Acute inhalation toxicity: At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material, mist or aerosols may cause respiratory irritation. The LC50 has not been determined.

Skin corrosion/irritation: Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness.

Serious eye damage/eye irritation: May cause eye irritation. Corneal injury is unlikely.

Sensitization For similar material(s): Has caused allergic skin reactions in humans. Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure): Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure): Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

Carcinogenicity

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic.

Teratogenicity: Resins based on the diglycidyl ether of bisphenol A (DGEBA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

Reproductive toxicity: In animal studies, did not interfere with reproduction.

Mutagenicity: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Aspiration Hazard: Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers Acute inhalation toxicity The LC50 has not been determined.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Ecotoxicity

Acute toxicity to fish: Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 Hour, 2 mg/l

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Acute toxicity to aquatic invertebrates: EC50, Daphnia magna (Water flea), static test, 48 Hour, 1.8 mg/l

Acute toxicity to algae/aquatic plants: ErC50, Scenedesmus capricornutum (fresh water algae), static test, 72 Hour, Growth rate inhibition, 11 mg/l

Toxicity to bacteria: IC50, Bacteria, 18 Hour, Respiration rates., > 42.6 mg/l

Chronic aquatic toxicity: Chronic toxicity to aquatic invertebrates

MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 0.55 mg/l

Persistence and degradability Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. 10-day Window: Not applicable Biodegradation: 12 % Exposure time: 28 d Method: OECD Test Guideline 302B or Equivalent

Bioaccumulative potential Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Partition coefficient: n-octanol/water(log Pow): 3.242 at 25 °C Estimated.

Mobility in Soil: Potential for mobility in soil is low (Koc between 500 and 2000). Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient(Koc): 1800 - 4400 Estimated.

Results of PBT and vPvB assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Other adverse effects: This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Section 13: DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

This product when disposed of in its unused and uncontaminated state should be treated as a hazardous waste.

Section 14: TRANSPORTATION INFORMATION

Classification for ROAD and Rail transport:

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Epoxy resin)

UN number: UN 3082

Class: 9

Packing group: III

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Marine pollutant: Epoxy Resin

Classification for SEA transport (IMO-IMDG):

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Epoxy resin)

UN number: UN 3082

Class: 9

Packing group: III

Marine pollutant: Epoxy resin

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.(Epoxy resin)

UN number: UN 3082

Class 9:

Packing group: III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15: REGULATORY INFORMATION

Canadian Domestic Substances List (DSL)

All substances contained in the product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations:

This product is subject to the SDS, labeling, PEL and other requirements in the Act/Regulations.

Workplace Classification:

This product is classified as hazardous according to Singapore Standards, Act and Regulations.

The following statutes, regulations and standards have the related prescribes on chemicals in terms of safe use, storage, transportation, loading and unloading, classification and symbol etc.

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations
Environmental Protection and Management Act and Environmental Protection and Management (Hazardous Substances) Regulations
Chemical Weapons Prohibition Act
Fire Safety Act and Fire Safety (Petroleum and Flammable Materials) Regulations.

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Section 16: OTHER INFORMATION

Disclaimer: Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Dura Polymers Roof Coatings

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