

MATERIAL SAFETY DATA SHEET
KLENKS EPOXY 8100

1. PRODUCT AND COMPANY IDENTIFICATION

Product ID: 8100 Resin	Product Name: Klenks Epoxy	Application: Two Component Epoxy
Manufacturer/Supplier: Swing Paints Ltd. 2100 St. Patrick St. Montreal Quebec H3K 1B2 TEL (514) 932-2157 FAX (514) 932-2779		
Emergency Telephone Number: (800) 424-9300		
Prepared by: Safety and Health Department, Swing Paints Ltd.		Preparation Date: January 1, 2017

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS	w/w	Oral LD50 (rat)	Skin LD50 (rabbit)	LC50 (rat-4 hours)
Epoxy resin	25036-25-3	30-60	>2,000 mg/kg	>5,000 mg/kg	No Data
Xylene	1330-20-7	15-40	4,300 mg/kg	1,700 mg/kg	23,700 mg/m3
1-Propoxy-2-propanol	1569-01-3	1-5	2,500 mg/kg	3,550 mg/kg	No Data
Diglycidyl ether	68609-97-2	1-5	2,000 mg/kg	4,500 mg/kg	>1,500 mg/m3

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:	
Eye Contact:	Severe irritation. May cause tears, pain and corneal damage.
Skin Contact:	Irritation. Prolonged or repeated exposure may result in dermatitis and in the material being absorbed through skin in harmful amounts.
Inhalation:	Prolonged or repeated exposure may cause nasal and respiratory irritation. Intoxication may result in central nervous system depression with anesthetic or narcotic effects.
Ingestion:	Nausea, vomiting and diarrhea. Irritation of the mouth and throat. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

4. FIRST AID MEASURES

Eye Contact:	Flush eyes with water for at least 15 minutes while holding eyelids open. Obtain medical attention.
Skin Contact:	Wash contaminated skin with mild soap and water for 15 minutes. If irritation persists or signs of toxicity occur, seek medical attention.
Inhalation:	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
Ingestion:	Do not induce vomiting. Guard against aspiration into lungs by having the individual turn on to their left side. Do not give anything by mouth to an unconscious person. Get immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.
Notes to Physicians:	If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

Flash Point: 25 C	Flash Point Method: Tag Closed Cup	Autoignition Temperature: NO DATA
Flammable Limits in Air (%):	Lower Limit: 1	Upper Limit: 17
Extinguishing Media	Use DRY chemicals, carbon dioxide, alcohol foam or water spray.	
Special Exposure Hazards.	Flammable liquid. Keep containers cool to prevent rupture and release of material. Closed containers may explode in fire. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations. Isolate and restrict area access.	
Special Protective Equipment:	Fire fighters should wear full protective clothing, including self-contained breathing equipment.	

6. ACCIDENTAL RELEASE MEASURES

Procedure for Clean Up: Land Spill:	Flammable liquid. Avoid direct contact with material. Saturated clothing should be immediately removed to avoid flammability hazard. Eliminate all ignition sources. Isolate hazard area and restrict access. Small spills: soak up with absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container.
Procedure for Clean Up: Water Spill:	Isolate hazard area and restrict access.
Personal Precautionary Measures:	Wear appropriate protective equipment. Avoid contact with spilled or released material. Immediately remove all contaminated clothing.
Environmental Precautionary Measures:	Prevent entry in sewers or streams, dike if needed.

7. HANDLING AND STORAGE	
Handling:	Flammable. Containers, even those that have been emptied, will retain product residue and vapour and should be handled as if they were full until they have been cleaned. Do not pressurize, cut, drill, grind, weld or perform similar operations on or near containers. Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point and may flash back explosively. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Wear all protective equipment. Handle and open containers with care. Avoid breathing vapours and prolonged or repeated contact with eyes, skin and clothing. Air-dry contaminated clothing in a well ventilated area before laundering. Do not ingest.
Storage:	Keep containers tightly closed. Keep in a cool, well-ventilated area, away from heat and ignition source. Use explosion-proof ventilation to prevent vapour accumulation. Can attack aluminum at elevated temperature. Keep away from aerosols, flammables, oxidizing agents, corrosives.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION	
Engineering Controls:	Electrical and mechanical equipment should be explosion proof. Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Firewater monitors and deluge systems are recommended.
Respiratory Protection:	If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airborne concentrations, use a NIOSH -approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.
Gloves:	Impervious gloves.
Skin Protection:	Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance. Impervious clothing.
Eyes:	Chemical goggles; also wear a face shield if splashing hazard exists.
Other Personal Protection Data:	Ensure that eyewash stations and safety showers are proximal to the work-station location.

9. PHYSICAL AND CHEMICAL PROPERTIES					
Physical State:	Liquid	Colour:	Various colours	Odour:	characteristic
pH:	No Data	Freezing Point:	No Data	Vapour Pressure:	No Data
Specific Gravity:	1.2	Boiling Point:	138 C	Evaporation Rate:	No Data
Vapour Density:	No Data	% Volatile by Volume:	No Data	Molecular Weight:	No Data
VOCs:	No Data	Viscosity:	No Data	Solubility:	No Data

10. STABILITY AND REACTIVITY	
Chemical Stability:	Stable
Hazardous Polymerization:	Will not occur, but mass of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.
Conditions to Avoid:	Avoid excessive heat, open flames and all ignition sources.
Materials to Avoid:	Acids, bases, amines and oxidizing agents.
Hazardous Decomposition Products:	Carbon monoxide. Carbon dioxide.
Additional Information:	Xylene will attack some forms of plastics, rubber and coatings.

11. TOXICOLOGICAL INFORMATION	
Principal Routes of Exposure:	
Eye Contact:	Severe irritation. May cause tears, pain and corneal damage.
Skin Contact:	Irritation. Prolonged or repeated exposure may result in dermatitis and in the material being absorbed through skin in harmful amounts.
Inhalation:	The main effect of inhaling xylene vapour is depression of the central nervous system (CNS), with symptoms such as headache, dizziness, nausea and vomiting. Irritation of the nose and throat may also occur. High concentration may cause incoordination, loss of consciousness, respiratory failure and death. Reversible liver and kidney damage has been reported in cases of severe xylene exposure. Aspiration hazard! Small amounts aspirated into the lungs during ingestion or vomiting may cause lung injury, possibly leading to death. Symptoms of aspiration into the lungs include coughing, gasping, choking, shortness of breath, bluish discolored skin, rapid breathing and heart rate. Chemical pneumonitis from aspiration may result in fever. Pulmonary edema or bleeding, drowsiness, confusion, coma and seizures may occur in more serious cases. Symptoms may develop immediately or as late as 24 hours after the exposure, depending on how much chemical entered the lungs.
Ingestion:	May be slightly toxic. Ingestion of large amounts of xylene is likely to cause CNS effects such as dizziness, nausea and vomiting. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury. May cause pain, nausea, vomiting and diarrhea, abdominal discomfort, dizziness, drowsiness, faintness, lack of coordination and unconsciousness. Kidney damage secondary to red blood breakdown and liver damage may occur.
Carcinogenicity:	Listed IARC – Group 3.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity	<p>Reproductive Toxicity: Epoxy resin did not interfere with reproduction in animal studies.</p> <p>Teratogenicity: Epoxy resin 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.</p> <p>Mutagenicity: Animal mutagenicity studies were negative. In vitro mutagenicity studies were inconclusive.</p> <p>Xylene did not produce reproductive effects, although abnormal sperm were observed after an interperitoneal injection in rats. An increase in menstrual disorders has been reported in women exposed to organic solvents but it is not possible to attribute this to xylene alone. Xylene has produced fetotoxic effects (delayed ossification and behavioural effects) in animals, in the absence of maternal toxicity. In other studies where rats and mice were exposed by inhalation or ingestion, harmful effects in the offspring (teratogenicity, embryotoxicity and/or fetotoxicity) were either not observed or were observed in the presence of significant harmful effects in the mothers. Animal information suggests that xylenes are not teratogenic or embryotoxic at exposure levels that are not harmful to the mother. There have been a few studies investigating the mutagenic potential of xylenes. These studies (induction of sister chromatid exchanges and chromosomal aberrations in human lymphocytes (white blood cells)) were negative.</p>
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12. ECOLOGICAL INFORMATION				
Ecotoxicological Information:				
Hazardous Components:				
Ingredients	Percent	Ecotoxicity – Fish Species Data	Acute Crustaceans Toxicity:	Freshwater Algae Data
Epoxy Resin	30-60	No Data	No Data	No Data
Xylene	15-40	LC50 (fathead minnow) 13.4 mg/L LC50 (bluegill) 16.1 mg/L LC50 (rainbow trout) 8.05 mg/L	No Data	No Data
1-Propoxy-2-propanol	1-5	No Data	No Data	No Data
Diglycidyl ether	1-5	No Data	No Data	No Data

13. DISPOSAL CONSIDERATIONS	
Disposal of Waste Method:	Disposal of all waste must be done in accordance with municipal, provincial and federal regulations.
Contaminated Packaging:	Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORTATION INFORMATION	
Shipping Name:	COATING SOLUTION (Epoxy surface treatment)
Hazard Class:	3
UN Number:	1139
Packing Group:	III
Note:	Consumer Commodity, ORM-D (Limited quantities of flammable liquids) for containers not over 1.0 L. Package may not exceed 30 kg.
Marine Pollutant:	No

15. REGULATORY INFORMATION	
WHMIS Hazardous Class:	B2 Flammable Liquids D2A Very Toxic Materials D2B Toxic Materials

16. OTHER INFORMATION	
Disclaimer:	<p>NOTICE TO READER:</p> <p>Swing Paints Limited, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.</p> <p>Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification.</p> <p>All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Swing Paints Limited makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Swing Paints Limited's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.</p>

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Ingredients	CAS	w/w	Oral LD50 (rat)	Skin LD50 (rabbit)	LC50 (rat-4 hours)
Xylene	1330-20-7	30-60	4,300 mg/kg	1,700 mg/kg	23,700 mg/m3
Polyamine	68410-23-1	10-30	>5,000 mg/kg	No Data	No Data
Naphtha, light aromatic	64742-95-6	7-13	8,400 mg/kg	No Data	No Data
1-Propoxy-2-propanol	1569-01-3	3-7	2,500 mg/kg	3,550 mg/kg	No Data
1-Butoxy-2-propanol	5131-66-8	3-7	1,900 mg/kg	3,100 mg/kg	No Data
Butanol	71-36-3	1-5	790 mg/kg	3,400 mg/kg	8,000 mg/m3

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:	
Eye Contact:	Severe irritation. May cause permanent damage and burns
Skin Contact:	Severe Irritation. May cause burns. Prolonged or repeated exposure may result in the material being absorbed through skin in harmful amounts.
Inhalation:	Prolonged or repeated exposure may cause nasal and respiratory irritation. Intoxication may result in central nervous system depression with anesthetic or narcotic effects.
Ingestion:	Nausea, vomiting and diarrhea. Irritation of the mouth and throat. Gastro-intestinal irritation and possibility of burns and ulceration. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

4. FIRST AID MEASURES

Eye Contact:	Flush eyes with water while holding eyelids open for at least 15 minutes. Do not attempt to neutralize with chemical agents. Obtain medical attention immediately.
Skin Contact:	Immediately remove contaminated clothing and shoes. Wash contaminated skin with water for 15 minutes. Do not attempt to neutralize with chemical agents. Obtain medical attention immediately.
Inhalation:	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
Ingestion:	Do not induce vomiting. Guard against aspiration into lungs by having the individual turn on to their left side. Do not give anything by mouth to an unconscious person. Get immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.
Notes to Physicians:	If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

Flash Point: 25 C	Flash Point Method: Tag Closed Cup	Autoignition Temperature: NO DATA
Flammable Limits in Air (%):	Lower Limit: 1	Upper Limit: 17
Extinguishing Media	Use DRY chemicals, carbon dioxide, alcohol foam or water spray.	
Special Exposure Hazards.	Flammable liquid. Keep containers cool to prevent rupture and release of material. Closed containers may explode in fire. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations. Isolate and restrict area access.	
Special Protective Equipment:	Fire fighters should wear full protective clothing, including self-contained breathing equipment.	

6. ACCIDENTAL RELEASE MEASURES

Procedure for Clean Up: Land Spill:	Flammable liquid. Avoid direct contact with material. Saturated clothing should be immediately removed to avoid flammability hazard. Eliminate all ignition sources. Isolate hazard area and restrict access. Small spills: soak up with absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container.
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7. HANDLING AND STORAGE	
Handling:	Flammable. Containers, even those that have been emptied, will retain product residue and vapour and should be handled as if they were full until they have been cleaned. Do not pressurize, cut, drill, grind, weld or perform similar operations on or near containers. Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point and may flash back explosively. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Wear all protective equipment. Handle and open containers with care. Avoid breathing vapours and prolonged or repeated contact with eyes, skin and clothing. Air-dry contaminated clothing in a well ventilated area before laundering. Do not ingest.
Storage:	Keep containers tightly closed. Keep in a cool, well-ventilated area, away from heat and ignition source. Use explosion-proof ventilation to prevent vapour accumulation. Can attack aluminum at elevated temperature. Keep away from aerosols, flammables, oxidizing agents, corrosives.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION	
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Gloves:	Impervious gloves.
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Eyes:	Chemical goggles; also wear a face shield if splashing hazard exists.
Other Personal Protection Data:	Ensure that eyewash stations and safety showers are proximal to the work-station location.

9. PHYSICAL AND CHEMICAL PROPERTIES					
Physical State:	Liquid	Colour:	Clear or amber	Odour:	Amine
pH:	No Data	Freezing Point:	No Data	Vapour Pressure:	No Data
Specific Gravity:	0.9	Boiling Point:	118 C	Evaporation Rate:	No Data
Vapour Density:	No Data	% Volatile by Volume:	No Data	Molecular Weight:	No Data
VOCs:	No Data	Viscosity:	No Data	Solubility:	No Data

10. STABILITY AND REACTIVITY	
Chemical Stability:	Stable
Hazardous Polymerization:	Will not occur, but mass of more than one pound of product plus epoxy resin will cause irreversible polymerization with considerable heat build-up.
Conditions to Avoid:	Avoid excessive heat, open flames and all ignition sources. Freezing may cause a temporary haze to develop.
Materials to Avoid:	Acids, bases, amines and oxidizing agents.
Hazardous Decomposition Products:	Carbon monoxide. Carbon dioxide.
Additional Information:	None.

11. TOXICOLOGICAL INFORMATION	
Principal Routes of Exposure:	
Eye Contact:	Severe irritation. May cause permanent damage and burns
Skin Contact:	Severe Irritation. May cause burns. Prolonged or repeated exposure may result in the material being absorbed through skin in harmful amounts.
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Ingestion:	Nausea, vomiting and diarrhea. Irritation of the mouth and throat. Gastro-intestinal irritation and possibility of burns and ulceration. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.
Carcinogenicity:	Listed IARC – Group 3.
Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity	<p>Reproductive Toxicity: Epoxy resin did not interfere with reproduction in animal studies.</p> <p>Teratogenicity: Epoxy resin 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.</p> <p>Mutagenicity: Animal mutagenicity studies were negative. In vitro mutagenicity studies were inconclusive.</p> <p>Xylene did not produce reproductive effects, although abnormal sperm were observed after an interperitoneal injection in rats. An increase in menstrual disorders has been reported in women exposed to organic solvents but it is not possible to attribute this to xylene alone. Xylene has produced fetotoxic effects (delayed ossification and behavioural effects) in animals, in the absence of maternal toxicity. In other studies where rats and mice were exposed by inhalation or ingestion, harmful effects in the offspring (teratogenicity, embryotoxicity and/or fetotoxicity) were either not observed or were observed in the presence of significant harmful effects in the mothers. Animal information suggests that xylenes are not teratogenic or embryotoxic at exposure levels that are not harmful to the mother. There have been a few studies investigating the mutagenic potential of xylenes. These studies (induction of sister chromatid exchanges and chromosomal aberrations in human lymphocytes (white blood cells)) were negative.</p>

12. ECOLOGICAL INFORMATION				
Ecotoxicological Information:				
Hazardous Components:				
Ingredients	Percent	Ecotoxicity – Fish Species Data	Acute Crustaceans Toxicity:	Freshwater Algae Data
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Polyamine	10-30	No Data	No Data	No Data
Naphtha, light aromatic	7-13	No Data	No Data	No Data
1-Propoxy-2-propanol	3-7	No Data	No Data	No Data
1-Butoxy-2-propanol	3-7	No Data	No Data	No Data
Butanol	1-5	No Data	No Data	No Data

13. DISPOSAL CONSIDERATIONS	
Disposal of Waste Method:	Disposal of all waste must be done in accordance with municipal, provincial and federal regulations.
Contaminated Packaging:	Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORTATION INFORMATION	
Shipping Name:	COATING SOLUTION (Epoxy surface treatment)
Hazard Class:	3
UN Number:	1139
Packing Group:	III
Note:	Consumer Commodity, ORM-D (Limited quantities of flammable liquids) for containers not over 1.0 L. Package may not exceed 30 kg.
Marine Pollutant:	No

15. REGULATORY INFORMATION	
WHMIS Hazardous Class:	B2 Flammable Liquids D2A Very Toxic Materials D2B Toxic Materials

16. OTHER INFORMATION	
Disclaimer:	<p>NOTICE TO READER:</p> <p>Swing Paints Limited, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.</p> <p>Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification.</p> <p>All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Swing Paints Limited makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Swing Paints Limited's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.</p>