



95 Goodwin Street, East Hartford, CT., 06108 (860) 528-9838

Material Safety Data Sheet

Date Prepared 3/26/2014

SECTION I - IDENTIFICATION

IDENTITY (As Used on Label) DUR-A-GARD ESD HARDENER

COMMON NAME Cycloaliphatic Diamine Epoxy Hardener

HAZARD RATING 0 = Least 1 = Slight 2 = Moderate 3 = High 4 = Extreme	Health	3
	Flammability	1
	Reactivity	0
	Personal Protection	G

SECTION II - PRODUCT COMPONENTS

	CAS.#	OSHA PEL	ACGIH TLV
Benzyl Alcohol	100-51-6	N.E. *1	N.E.
Isophorone Diamine	2855-13-2	N.E.	N.E.
1, 5 Pentanediamine, 2 Methyl	15520-10-2	N.E.	N.E.
N, Aminoethyl Piperazine	140-31-8	N.E.	N.E.
Diglycidyl Ether Bisphenol A Epoxy Resin	25085-99-8	N.E.	N.E.
Salicylic Acid	69-72-7	N.E.	N.E.

*1 None Established

T.S.C.A. Status - O.K. on all above components.

FOR SPILL, LEAK, FIRE, OR ACCIDENT, CALL CHEMTREC 24-HOUR EMERGENCY NUMBER 1-800-424-9300

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	425°F	Specific Gravity (H2O = 1)	0.991
Vapor Pressure (mm Hg)	0.1	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation rate (Butyl Acetate = 1)	N/A
Volatile Organic Compounds	63 g/L		

Solubility in Water Partially soluble.
 Appearance and Odor Clear low viscosity liquid. Mild amine odor.

SECTION IV - FIRE and EXPLOSION HAZARD DATA

Flash Point (Closed Cup Method)	220°F	Flammable Limits	LEL	UEL
			N/A	N/A

Extinguishing Media Water spray, Foam, CO₂, Dry Chemicals.

Special Firefighting Procedures

Wear full protective equipment including self-contained breathing apparatus.

Irritating and/or toxic gases may be generated by fire.

Unusual Fire and Explosion Hazards

Cool storage containers with water spray to prevent pressure build-up that may rupture the containers.

SECTION V - REACTIVITY DATA

Stability	Unstable		Conditions to Avoid
	Stable	X	Keep containers closed when not in use.

Incompatibility (Materials to Avoid) Strong oxidizers and acids.

Hazardous Decomposition or Byproducts By Fire - Carbon monoxide, Carbon dioxide, Nitrogen oxides.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Uncontrolled reaction with epoxy resins.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES
Signs and Symptoms of Exposure	Irritation of skin.		
Health Hazards (Acute and Chronic)			
ACUTE - Irritation of skin and dermatitis.			
CHRONIC - Repeated overexposure will cause severe skin irritation, dermatitis and sensitization. Sensitized persons may experience rapid irritation of skin upon exposure.			
Persons with lung disorders or who are sensitized should not use this product.			
Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO

Medical Conditions
Generally Aggravated by Exposure Allergy, skin disorders.

Emergency and First Aid Procedures
EYES - Flush with water, holding lids open for 15 minutes or more. Call physician for advice if necessary.
SKIN - PROMPTLY wash with soap and water. DO NOT wash with solvents. Seek medical advice if irritation develops or persists.
INHALATION - Move person to fresh air if effects occur. If needed, give oxygen or artificial respiration to improve breathing. Consult physician.
INGESTION - Get medical attention immediately. Never give liquids to an unconscious or convulsing person.

SECTION VII - CONTROL MEASURES

Respiratory Protection (Specify Type)

"Provide adequate exhaust ventilation; use a NIOSH approved respirator if PELS/TLVS are exceeded."

Ventilation	Local Exhaust	If needed.	Special	None known.
	Mechanical	Adequate exhaust ventilation must exhaust AWAY from applicator.		

Protective Gloves Natural rubber or Neoprene. Eye Protection Splash goggles or face shield.

Other Protective Clothing or Equipment

Use rubber apron, face shield and appropriate clothing to prevent contact with skin. Launder contaminated clothing before reuse. Discard contaminated leather shoes and canvas sneakers. Protective skin creams help cleaning with soap and water, gloves must still be worn. An eye wash station or an adequate supply of clean water must be available at work area.

Work/Hygienic Practices Enforce careful handling to prevent splashing. Wash thoroughly after use.

SECTION VIII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled

Wear protective equipment to prevent exposure. Stop spill and dike to prevent spreading. Cover spill with absorbent materials and collect into containers. Clean contaminated area with detergent and water or a steam cleaner for best results.

Waste Disposal Method

Dispose in accordance with Federal, State and Local requirements.

Precautions to be Taken in Handling and Storing

Keep containers tightly closed when not in use.

Other Precautions NONE KNOWN.

Prepared by ~~MM ~ | c' O@ aq aatZ@{ a c~~

"The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to

PLEASE change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS

NOTE OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use."



Material Safety Data Sheet

95 Goodwin Street, East Hartford, CT, 06108 (860) 528-9838

Date Prepared 8/2/2011

SECTION I - IDENTIFICATION

IDENTITY (As Used on Label) **DUR-A-GARD ESD RESIN; all colors**

COMMON NAME Pigmented Epoxy Resin

HAZARD RATING 0 = Least 1 = Slight 2 = Moderate 3 = High 4 = Extreme	Health	1
	Flammability	2
	Reactivity	0
	Personal Protection	G

SECTION II - PRODUCT COMPONENTS

	CAS.#	OSHA PEL	ACGIH TLV
Diglycidyl Ether Bisphenol A Epoxy Resin	25085-99-8	N.E. *1	N.E.
Aliphatic Glycidyl Ether Diluent	68609-97-2	N.E.	N.E.
Rutile Titanium Dioxide	13463-67-7	10mg/m ³	10mg/m ³
Benzyl Alcohol	100-51-600	N.E.	N.E.
Mixed Mineral Pigment	Proprietary *2	0.5mg/m ³	0.5mg/m ³
1-Methoxy-2-Propanol	107-98-2	100ppm	360mg/m ³
2-Methoxy-1-Propanol	1589-47-5	100ppm	360mg/m ³
Inorganic Iron Oxides	1309-37-1	10mg/m ³	10mg/m ³
Aliphatic Glycidyl Ether	41638-13-5	N.E.	N.E.

*1 None Established

*2 The manufacturer of the component states that they will provide additional information to a health professional in the event of a medical emergency.

T.S.C.A. Status - O.K. on all above components

FOR SPILL, LEAK, FIRE, OR ACCIDENT, CALL CHEMTREC 24-HOURS EMERGENCY NUMBER 1-800-424-9300

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	N/A	Specific Gravity (H2O = 1)	1.55
Vapor Pressure (mm Hg)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation rate (Butyl Acetate = 1)	N/A
Volatile Organic Compounds	63 g/L		
Solubility in Water	Slight (methoxy propanol is miscible)		
Appearance and Odor	Pigmented viscous liquid. Mild characteristic odor.		

SECTION IV - FIRE and EXPLOSION HAZARD DATA

Flash Point (Closed Cup Method)	485°F	Flammable Limits	LEL	UEL
			N/A	N/A

Extinguishing Media Water spray, Foam, CO₂, Dry Chemicals.

Special Firefighting Procedures

Wear full protective equipment including self-contained breathing apparatus.

Unusual Fire and Explosion Hazards

Cool storage containers with water spray to prevent pressure build-up that may rupture the containers.

Combustion products may be toxic.

SECTION V - REACTIVITY DATA

Stability	Unstable		Conditions to Avoid
	Stable	X	Excess heating over long periods of time degrades the resin
Incompatibility (Materials to Avoid)		Uncontrolled reaction with amines	
Hazardous Decomposition or Byproducts		By Fire - Carbon monoxide, Carbon dioxide, Nitrogen oxides, Aldehydes	
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Uncontrolled reaction with amines.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	YES	YES	YES

Signs and Symptoms of Exposure Irritation of skin.

Health Hazards (Acute and Chronic)

ACUTE - Irritation of skin and dermatitis.

CHRONIC - Repeated overexposure will cause severe skin irritation, dermatitis and sensitization. Sensitized persons may experience rapid irritation of skin upon exposure.

Persons with lung disorders or who are sensitized should not use this product.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	NO	NO	NO

Medical Conditions

Generally Aggravated by Exposure Allergy, skin disorders.

Emergency and First Aid Procedures

EYES - Flush with water, holding lids open for 15 minutes or more. Call physician for advice if necessary.

SKIN - PROMPTLY wash with soap and water. DO NOT wash with solvents. Seek medical advice if irritation develops or persists.

INHALATION - Move person to fresh air if effects occur. If needed, give oxygen or artificial respiration to improve breathing. Consult physician.

INGESTION - Get medical attention immediately. Never give liquids to an unconscious or convulsing person.

SECTION VII - CONTROL MEASURES

Respiratory Protection (Specify Type)

"Provide adequate exhaust ventilation; use a NIOSH approved respirator if PELs/TLVs are exceeded."

Ventilation	Local Exhaust	If needed.	Special	None known.
	Mechanical	Adequate exhaust ventilation must exhaust AWAY from applicator.		

Protective Gloves	Natural rubber or Neoprene.	Eye Protection	Splash goggles or face shield.
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Other Protective Clothing or Equipment

Use rubber apron, face shield and appropriate clothing to prevent contact with skin. Launder contaminated clothing before reuse. Discard contaminated leather shoes and canvas sneakers. Protective skin creams help cleaning with soap and water, gloves must still be worn. An eye wash station or an adequate supply of clean water must be available at work area.

Work/Hygienic Practices Enforce careful handling to prevent splashing. Wash thoroughly after use.

SECTION VIII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled

Wear protective equipment to prevent exposure. Stop spill and dike to prevent spreading. Cover spill with absorbent materials and collect into containers. Clean contaminated area with detergent and water or a steam cleaner for best results.

Waste Disposal Method

Dispose in accordance with Federal, State and Local requirements.

Precautions to be Taken in Handling and Storing

Keep containers tightly closed when not in use.

Other Precautions NONE KNOWN.

Prepared by T. C. O'Connell

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DUR-A-FLEX
INNOVATION FROM THE FLOOR UP

95 Goodwin Street, East Hartford, CT., 06108 (860) 528-9838

Material Safety Data Sheet

Date Prepared 8/2/2011

SECTION I - IDENTIFICATION		HAZARD RATING 0 = Least 1 = Slight 2 = Moderate 3 = Major 4 = Extreme	Health	3
IDENTITY (As Used on Label) Dur-A-Glaze ESD Primer Hardener			Flammability	1
COMMON NAME Polyamine Epoxy Hardener			Reactivity	0
			Personal Protection	G

SECTION II - PRODUCT COMPONENTS	CAS.#	OSHA PEL	ACGIH TLV
Nonyl Phenol	25154-52-3	N.E. ¹	N.E.
Piperazineethaneamine	140-31-8	N.E.	N.E.
Polyoxalkylenamine	9046-10-0	N.E.	N.E.

¹None Established

T.S.C.A. Status - O.K. on all above components.

FOR SPILL, LEAK, FIRE, OR ACCIDENT, CALL CHEMTREC 24-HOUR EMERGENCY NUMBER 1-800-424-9300

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	485°F	Specific Gravity (H2O = 1)	<1
Vapor Pressure (mm Hg)	0.02	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation rate (Butyl Acetate = 1)	N/A
Volatile Organic Compounds	0 g/L		
Solubility in Water	Partially soluble.		
Appearance and Odor	Pale yellow colored liquid. Amine odor.		

SECTION IV - FIRE and EXPLOSION HAZARD DATA

Flash Point (Closed Cup Method)	220°F	Flammable Limits	LEL	UEL
			N/A	N/A

Extinguishing Media Dry chemicals, carbon dioxide, foam, water spray.

Special Firefighting Procedures

Firefighters should wear full emergency equipment with self-contained breathing apparatus. Irritating and/or toxic gases may be generated by fire.

Unusual Fire and Explosion Hazards

Cool fire - exposed containers with cold water spray to prevent pressure build-up that may rupture the container.

SECTION V - REACTIVITY DATA

Stability	Unstable		Conditions to Avoid
	Stable	X	Keep container closed when not in use.

Incompatibility (Materials to Avoid) Strong oxidizers and acids.

Hazardous Decomposition or Byproducts By Fire- carbon monoxide, carbon dioxide, aldehydes, nitrogen.

Hazardous Polymerization	May Occur		Conditions to Avoid Uncontrolled reaction with epoxy resins. Avoid breathing fumes generated by hardener and epoxy mixture when not used within established pot life.
	Will Not Occur	X	

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES
Signs and Symptoms of Exposure	Irritation on skin.		
Health Hazards (Acute and Chronic)			
ACUTE - Irritation on skin and dermatitis.			
CHRONIC - Repeated overexposure will cause severe skin irritation, dermatitis and sensitization. Sensitized persons may experience rapid irritation of skin upon exposure.			
Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO
Medical Conditions Generally Aggravated by Exposure			
May aggravate existing respiratory or dermatitis condition.			
Emergency and First Aid Procedures			
EYES - Flush with water, holding lids open for 15 minutes or more. Call physician for advice if necessary.			
SKIN - PROMPTLY wash with soap and water. DO NOT wash with solvents. Seek medical advice if irritation develops or persists.			
INHALATION - Move person to fresh air if effects occur. If needed, give oxygen or artificial respiration to improve breathing. Consult physician.			
INGESTION - Get medical attention immediately. Never give liquids to an unconscious or convulsing person.			
NOTE* Persons with lung disorders or who are sensitized should not use this product.			

SECTION VII - CONTROL MEASURES

Respiratory Protection (Specify Type)			
Provide adequate exhaust ventilation; use a NIOSH - approved respirator if PELs/TLVs are exceeded.			
Ventilation	Local Exhaust	If needed.	Special None known.
	Mechanical	Adequate exhaust ventilation must exhaust AWAY from applicator.	
Protective Gloves	Natural or Neoprene gloves.		Eye Protection Splash goggles or face shield.
Other Protective Clothing or Equipment			
Use rubber apron, face shield and appropriate clothing to prevent contact with skin. Launder contaminated clothing before reuse. Discard contaminated leather shoes and canvas sneakers. Protective skin creams help cleaning with soap and water, gloves must be still be worn. An eye wash station or an adequate supply of clean water must be available at work area.			
Work/Hygienic Practices Enforce careful handling to prevent splashing. Wash thoroughly after use.			

SECTION VIII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled	
Wear protective equipment to prevent exposure. Stop spill and dike to prevent spreading. Cover spill with absorbent materials and collect into containers. Clean contaminated area with detergent and water or a steam cleaner for best results.	
Waste Disposal Method	
Dispose in accordance with Federal, State, and Local requirements.	
Precautions to be Taken in Handling and Storing	
Keep containers tightly closed when not in use.	
Other Precautions	
NONE KNOWN.	
Prepared by: Wm. C. O'Connell, Inc. Wm. C. O'Connell, Inc.	

PLEASE NOTE "The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use."



DUR-A-FLEX
INNOVATION FROM THE FLOOR UP

95 Goodwin Street, East Hartford, CT., 06108 (860) 528-9838

Material Safety Data Sheet

Date Prepared 8/2/2011

SECTION I - IDENTIFICATION

IDENTITY (As Used on Label) **DUR-A-GLAZE ESD Primer RESIN**
COMMON NAME Pigmented Epoxy Resin

HAZARD RATING		Health	1
0 = Least		Flammability	1
1 = Slight		Reactivity	0
2 = Moderate		Personal Protection	G
3 = High			
4 = Extreme			

SECTION II - PRODUCT COMPONENTS

	CAS.#	%	OSHA PEL	ACGIH TLV
Diglycidyl Ether Bisphenol A Epoxy Resin	25085-99-8	75-87	N.E. *1	N.E.
Aliphatic Glycidyl Ether Diluent	68609-97-2	13-25	N E	N E
Carbon black, Graphite	7782-42-5	2-12	2.0 mg/M3	2.0 mg/M3
Carbon Fiber	7440-44-0	0-5	2.0 mg/M3	2.0 mg/M3

*1 None Established.

T.S.C.A Status - O.K. on all above components.

FOR SPILL, LEAK, FIRE, OR ACCIDENT, CALL CHEMTREC 24-HOURS EMERGENCY NUMBER 1-800-424-9300

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	N/A	Specific Gravity (H2O = 1)	higher than 1
Vapor Pressure (mm Hg)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation rate (Butyl Acetate = 1)	N/A
Volatile Organic Compounds	0 g/L		
Solubility in Water	None		
Appearance and Odor	Black Viscous liquid. Mild characteristic odor.		

SECTION IV - FIRE and EXPLOSION HAZARD DATA

Flash Point (Closed Cup Method)	485°F	Flammable Limits	LEL	UEL
			N/A	N/A

Extinguishing Media Foam, CO₂, Dry Chemical, Water Spray.

Special Firefighting Procedures

Firefighters should wear full emergency equipment with self-contained breathing apparatus.

Unusual Fire and Explosion Hazards

Cool fire - exposed containers with cold water spray to prevent pressure build - up that may rupture the container. Combustion products may be toxic.

SECTION V - REACTIVITY DATA

Stability	Unstable		Conditions to Avoid
	Stable	X	Excess heating over long periods of time degrades the resin.
Incompatibility (Materials to Avoid)	Uncontrolled reaction with amines.		
Hazardous Decomposition or Byproducts	Fire- Carbon Monoxide, Carbon Dioxide, Nitrogen Oxide, Aldehydes.		
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Uncontrolled reaction with amines.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	YES	YES	YES
Signs and Symptoms of Exposure	Irritation on skin.		
Health Hazards (Acute and Chronic)			
ACUTE - Irritation on skin and dermatitis.			
CHRONIC - Repeated overexposure will cause severe skin irritation, dermatitis and sensitization. Sensitized persons may experience rapid irritation of skin upon exposure.			
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	NO	NO	NO
Medical Conditions			
Generally Aggravated by Exposure	Allergy, skin disorders.		
Emergency and First Aid Procedures			
EYES - Flush with water, holding lids open for 15 minutes or more. Call physician for advice if necessary.			
SKIN - PROMPTLY wash with soap and water. DO NOT wash with solvents. Seek medical advice if irritation develops or persists.			
INHALATION - Move person to fresh air if effects occur. If needed, give oxygen or artificial respiration to improve breathing . Consult physician.			
INGESTION - Get medical attention immediately. Never give liquids to an unconscious or convulsing person.			
Note: Persons with lung disorders or who are sensitized should not use this product.			

SECTION VII - CONTROL MEASURES

Respiratory Protection (Specify Type)			
"Provide adequate exhaust ventilation; use a NIOSH - approved respirator if PELS/TLVS are exceeded."			
Ventilation	Local Exhaust	If needed.	Special None known.
	Mechanical	Adequate exhaust ventilation must exhaust AWAY from applicator.	
Protective Gloves	Natural or Neoprene gloves.		Eye Protection Splash goggles or face shield.
Other Protective Clothing or Equipment			
Use rubber apron, face shield and appropriate clothing to prevent contact with skin. Launder contaminated clothing before reuse. Discard contaminated leather shoes and canvas sneakers. Protective skin creams help cleaning with soap and water, gloves must be still be worn. An eye wash station or an adequate supply of clean water must be available at work area.			
Work/Hygienic Practices Enforce careful handling to prevent splashing. Wash thoroughly after use.			

SECTION VIII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled	
Wear protective equipment to prevent exposure. Stop spill and dike to prevent spreading. Cover spill with absorbent materials and collect into containers. Clean contaminated area with detergent and water or a steam cleaner for best results.	
Waste Disposal Method	
Dispose in accordance with Federal, State, and Local requirements.	
Precautions to be Taken in Handling and Storing	
Keep containers tightly closed when not in use.	
Other Precautions	NONE KNOWN.
Prepared by <u>Murty Bhamidipati - Chemist</u>	

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