

Dur-A-Gard ESD Hardener SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier: Dur-A-Gard ESD Hardener

Recommended use: Floor Surfacing

Manufacturer Name: Dur-A-Flex, Inc.
95 Goodwin Street
East Hartford, CT 06108

Telephone number: 860-528-9838

Emergency phone number: 1-800- 424-9300 (CHEMTREC)

Date of Preparation: May 19, 2014

2. HAZARD(S) IDENTIFICATION

This product is one part of a 2 part product. Read and understand the hazard information on the SDS for Dur-A-Gard ESD Resin before using this product.

Classification:

Physical	Health
Not Hazardous	Acute Toxicity Category 4 (Oral) Skin Corrosion Category 1A Eye Damage Category 1 Skin Sensitization Category 1

Labeling:

Danger!



Hazard statement(s)

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

Precautionary statement(s)

Do not breathe mist, vapors or spray.
Wash thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, protective clothing and eye and face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with soap and water.
 Wash contaminated clothing before reuse.
 Immediately call a POISON CENTER or doctor.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Immediately call a POISON CENTER or doctor.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER or doctor.
 Store locked up.
 Dispose of contents and container in accordance with local and national regulations

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Benzyl Alcohol	100-51-6	10-30
3, Aminomethyl -3,5,5-Trimethylcyclohexylamine	2855-13-2	10-30
1,3-cyclohexanedimethanamine	2579-20-6	10-30
Polyoxypropylenediamine	9046-10-0	10-30
Salicylic Acid	69-72-7	1-10
Diglycidyl Ether Bisphenol A Epoxy Resin	25068-38-6	1-10

The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation: Remove victim to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get medical attention.

Skin contact: Immediately remove contaminated clothing. Wash skin thoroughly with soap and water. Get immediate medical attention. If rash occurs, get medical attention. Launder clothing before re-use.

Eye contact: Immediately flush with large quantities of water for 15 minutes, holding the eyelids apart. Get immediate medical attention.

Ingestion: If conscious, rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. DO NOT INDUCE VOMITING. Get immediate medical attention.

Most important symptoms/effects, acute and delayed: May cause severe eye and skin irritation with possible burns. May cause allergic skin reaction. Inhalation of vapors or mists may cause irritation of mucous membranes and upper respiratory tract. Harmful if swallowed.

Indication of immediate medical attention and special treatment, if necessary: For eye and skin contact, get immediate attention. If swallowed, get immediate medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use water spray, foam, carbon dioxide or dry chemical. Cool fire exposed containers with water.

Specific hazards arising from the chemical: Combustion may produce carbon and nitrogen oxides and aldehydes.

Special protective equipment and precautions for fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing as described in Section 8.

Environmental precautions: Prevent release to the environment. Report releases as required by local, state and federal authorities.

Methods and materials for containment and cleaning up: Contain and collect with an inert absorbent. Place into an appropriate container for disposal. Caution slip hazard. Wash spill site with soap and water.

7. HANDLING AND STORAGE

Precautions for safe handling: Prevent contact with eyes and skin. Do not breathe vapors or mists. Wash thoroughly after handling and before eating, drinking, smoking or using the toilet. Do not taste or swallow. Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities: Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from physical damage. Store away from oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Benzyl Alcohol	10 ppm TWA AIHA WEEL
3, Aminomethyl -3,5,5-Trimethyl	None Established
1,3-cyclohexanedimethanamine	None Established
Polyoxypropylenediamine	None Established
Salicylic Acid	None Established
Diglycidyl Ether Bisphenol A Epoxy Resin	None Established

Appropriate engineering controls: Use with adequate general or local exhaust ventilation to maintain exposures below occupational exposure limits.

Personal Protective Equipment:

Respiratory protection: If the exposures are exceeded, a NIOSH approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin protection: Wear impervious gloves such as 4H™.

Eye protection: Chemical safety goggles and faceshield recommended.

Other: Impervious clothing as needed to prevent contact. An eye wash and safety shower should be available in the immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Clear liquid

Odor: Mild amine odor

Odor threshold: Not available	pH: Not available
Melting Point/Freezing Point: - Not available	Boiling Point: 485°F / 251.6°C
Flash point: 220 °F / 104.4°C	Evaporation rate: Not available
Flammability (solid, gas): Not applicable	
Flammable limits: LEL: Not available	UEL: Not available
Vapor pressure: 0.1 mmHg	Vapor density: Not available
Relative density: 0.991	Solubility(is): Partially soluble in water
Partition coefficient: n-Octanol/water: Not applicable	Auto-ignition temperature: Not available
Decomposition temperature: Not available	Viscosity: Not available

10. STABILITY AND REACTIVITY

Reactivity: None known.

Chemical stability: Stable

Possibility of hazardous reactions: None

Conditions to avoid: Avoid uncontrolled reaction with epoxy resins.

Incompatible materials: Avoid contact with oxidizing agents, acids, bases, ammonia, ketones, aldehydes, acetaldehyde and aluminum alkyl compounds.

Hazardous decomposition products: Thermal decomposition may produce carbon and nitrogen oxides, and aldehydes.

11. TOXICOLOGICAL INFORMATION

Inhalation: Inhalation of vapors and mists may cause mucous membrane and upper respiratory tract irritation. Excessive vapors may cause burns to the mucous membranes and cause lung damage.

Ingestion: Swallowing may cause burns to the mouth, throat and stomach with nausea, vomiting and diarrhea.

Skin contact: May cause severe irritation or burns. May cause allergic skin reaction.

Eye contact: May cause severe irritation or burns with redness, tearing, stinging and swelling. May cause permanent damage.

Chronic effects from short- and long-term exposure: Not expected to cause adverse effects from prolonged exposure.

Reproductive Toxicity: This product is not expected to cause adverse reproductive or developmental effects.

Sensitization: 3, Aminomethyl -3,5,5-trimethyl and diglycidyl ether bisphenol A epoxy resin have been shown to cause sensitization in studies with laboratory animals.

Mutagenicity: None of the components have been shown to cause mutagenic activity.

Carcinogenicity: None of the components are listed as a carcinogen by IARC, NTP, ACGIH or OSHA.

Acute Toxicity Values: No toxicity data for the product. The acute toxicity estimate for the product: Oral 1320 mg/kg.

Benzyl Alcohol: Oral rat LD50 1620 mg/kg; Inhalation rat LC50 > 4.178 mg/L

3, Aminomethyl -3,5,5-Trimethyl: Oral rat LD50 1030 mg/kg; Inhalation rat LC50 >5.01 mg/L/4 hr; Dermal rabbit LD50 >2000 mg/kg

1,3-cyclohexanedimethanamine: Oral rat LD50 >300 – 2000 mg/kg; Dermal rabbit LD50 1700 mg/kg

Polyoxypropylenediamine: Oral rat LD50 2885 mg/kg; Inhalation rat LC50 >0.74 mg/L/8 hr (highest dose tested); Dermal rabbit LD50 2980 mg/kg.

Salicylic Acid: Oral rat LD50 891 mg/kg; Dermal rabbit LD50 > 2000 mg/kg

Diglycidyl Ether Bisphenol A Epoxy Resin: Oral rat LD50 > 2000 mg/kg; Dermal rabbit LD50 >2000 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Benzyl Alcohol: 96 hr LC50 Pimephales promelas 770 mg/L; 48 hr EC50 daphnia magna 230 mg/L; 72 hr EC50 Pseudokirchnerella subcapitata 770 mg/L

3, Aminomethyl -3,5,5-Trimethyl: 96 hr LC50 Leuciscus idus 110 mg/L; 48 hr EC50 daphnia magna 23 mg/L; 72 hr EC50 Desmodemus subspicatus 37 mg/L

1,3-cyclohexanedimethanamine: 96 hr LC50 Leuciscus idus 130 mg/L; 48 hr EC50 daphnia magna 33.1 mg/L; 72 hr EC50 Pseudokirchnerella subcapitata 56.7 mg/L

Polyoxypropylenediamine: 96 hr LC50 Oncorhynchus mykiss > 1000 mg/L (structurally similar chemical); 48 hr EC50 daphnia magna 80 mg/L; 72 hr EC50 Pseudokirchnerella subcapitata 15 mg/L

Salicylic Acid: 48 hr EC50 daphnia magna 870 mg/L; 72 hr EC50 Desmodemus subspicatus > 100 mg/L

Diglycidyl Ether Bisphenol A Epoxy Resin: 96 hr LC50 Oryzias latipes > 15 mg/L; 48 hr EC50 daphnia magna > 100 mg/L; 72 hr EC50 Desmodemus subspicatus > 100 mg/L

Persistence and degradability: Benzyl alcohol is readily biodegradable.

Bioaccumulative potential: Benzyl alcohol and salicylic acid has a BCF of <5.

Mobility in soil: Benzyl alcohol is highly mobility in soil. Salicylic Acid is moderately mobile is soil.

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, state and federal regulations.

14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	UN 2735	Amines, liquid, corrosive n.o.s. (1,3-cyclohexanedimethanamine, 3, Aminomethyl -3,5,5-	8	PG II	None

		Trimethyl)			
TDG	UN 2735	Amines, liquid, corrosive n.o.s. (1,3- cyclohexanedimethanamine, 3, Aminomethyl -3,5,5- Trimethyl)	8	PG II	None
IMDG	UN 2735	Amines, liquid, corrosive n.o.s. (1,3- cyclohexanedimethanamine, 3, Aminomethyl -3,5,5- Trimethyl)	8	PG II	None
IATA	UN 2735	Amines, liquid, corrosive n.o.s. (1,3- cyclohexanedimethanamine, 3, Aminomethyl -3,5,5- Trimethyl)	8	PG II	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known.

15. REGULATORY INFORMATION

CERCLA: This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA Hazard Category (311/312): Acute Health

SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

California Proposition 65

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity (birth defects): Epichlorohydrin 106-89-8 (cancer, male reproductive toxicity) <50 ppm

EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory.

CANADA:

Canadian CEPA: All of the ingredients in this product are listed on the Canadian DSL.

Canadian WHMIS Classification: Class E (Corrosive), Class D Division 2 Subdivision B (Toxic Material Causing other Toxic Effects)

This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

16. OTHER INFORMATION

NFPA Rating: Health = 3 Flammability = 1 Instability = 0
HMIS Rating: Health = 3 Flammability = 1 Physical Hazard = 0

SDS Revision History: Converted to GHS format. All sections revised.

Date of preparation: May 19, 2014

Date of last revision: New SDS

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 USE.**

Dur-A-Gard ESD SAFETY DATA SHEET

1. IDENTIFICATION

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Recommended use: Floor Surfacing

Manufacturer Name: Dur-A-Flex, Inc.
95 Goodwin Street
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Telephone number: 860-528-9838

Emergency phone number: 1-800- 424-9300 (CHEMTREC)

Date of Preparation: May 19, 2014

2. HAZARD(S) IDENTIFICATION

This product is one part of a 2 part product. Read and understand the hazard information on the MSDS for Hardener before using this product.

Classification:

Physical	Health
Not Hazardous	Skin Irritation Category 2 Eye Irritation Category 2A Skin Sensitization Category 1 Toxic to Reproduction Category 1B

Labeling:

Warning!



Hazard statement(s)

Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May damage the unborn child.

Precautionary statement(s)

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist, vapors or spray.
Wash thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, protective clothing, eye protection or face protection.

IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.
IF exposed or concerned: Get medical attention.
Store locked up.
Dispose of contents and container in accordance with local and national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Diglycidyl Ether Bisphenol A Epoxy Resin	25068-38-6	30-50
Aliphatic Glycidyl Ether Diluent (Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.)	68609-97-2+	1-10
Polymer of Epichlorohydrin Polyglycol	41638-13-5	1-5
1-Methoxy-1 propanol (PGME)	107-98-2	1-5
2-Methoxy-1-propanol	1589-47-5	<1

The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation: Remove victim to fresh air. If irritation occurs or breathing is difficult, get medical attention.

Skin contact: Remove contaminated clothing. Wash with soap and water. If irritation or rash develops, get medical attention.

Eye contact: Immediately flush with large quantities of water for 15 minutes, holding the eyelids apart. Get medical attention if irritation persists.

Ingestion: If conscious, rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

Most important symptoms/effects, acute and delayed: May cause eye and skin irritation. May cause allergic skin reaction.

Indication of immediate medical attention and special treatment, if necessary: None expected under normal conditions of use. If allergic skin reaction occurs, discontinue use and get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use media appropriate for the surrounding fire.

Specific hazards arising from the chemical: Combustion may produce carbon oxides.

Special protective equipment and precautions for fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing as described in Section 8.

Environmental precautions: Avoid release to the environment. Report releases as required by local, state and federal authorities.

Methods and materials for containment and cleaning up: Contain and collect with an inert absorbent. Place into an appropriate container for disposal. Caution slip hazard. Wash spill site with soap and water.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Wash thoroughly after handling and before eating, drinking, smoking or using the toilet. Use with adequate ventilation.

Conditions for safe storage, including any incompatibilities: Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from physical damage. Store away from oxidizing agents, acids and bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Diglycidyl Ether Bisphenol A Epoxy Resin	None Established
Aliphatic Glycidyl Ether Diluent (Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.)	None Established

Appropriate engineering controls: Use with adequate general or local exhaust ventilation to minimize exposures.

Personal Protective Equipment:

Respiratory protection: If the exposures are excessive, a NIOSH approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin protection: Wear impervious gloves such as butyl rubber.

Eye protection: Chemical safety goggles recommended.

Other: Impervious clothing as needed to prevent contact. An eye wash and safety shower should be available in the immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Viscous liquid

Odor: Mild characteristic odor

Odor threshold: Not available	pH: Not available
Melting Point/Freezing Point: - Not available	Boiling Point: Not available
Flash point: 485 °F / 251.6°C	Evaporation rate: Not available

Flammability (solid, gas): Not applicable	
Flammable limits: LEL: Not available	UEL: Not available
Vapor pressure: Not available	Vapor density: Not available
Relative density: >1	Solubility(is): Insoluble
Partition coefficient: n-Octanol/water: Not applicable	Auto-ignition temperature: Not available
Decomposition temperature: Not available	Viscosity: Not available

10. STABILITY AND REACTIVITY

Reactivity: None known.

Chemical stability: Stable.

Possibility of hazardous reactions: May polymerize with amines, mercaptans and Lewis acids.

Conditions to avoid: Avoid excessive heat.

Incompatible materials: Avoid contact with oxidizing agents, acids and bases.

Hazardous decomposition products: Thermal decomposition may produce carbon oxides.

11. TOXICOLOGICAL INFORMATION

Inhalation: Excessive inhalation of mists may cause mucous membrane and upper respiratory tract irritation.

Ingestion: Swallowing may cause gastrointestinal irritation, nausea and diarrhea.

Skin contact: May cause skin irritation with redness, itching and pain. May cause allergic skin reaction (sensitization).

Eye contact: May cause irritation with redness, tearing, stinging and swelling.

Chronic effects from short- and long-term exposure: None known.

Reproductive Toxicity: This product is not expected to cause adverse reproductive or developmental effects.

Sensitization: Diglycidyl ether bisphenol A epoxy resin and aliphatic glycidyl ether diluent causes sensitization in laboratory animals.

Mutagenicity: This product is not expected to cause mutagenic activity.

Carcinogenicity: None of the components are listed as a carcinogen by IARC, NTP, ACGIH or OSHA.

Acute Toxicity Values:

Diglycidyl Ether Bisphenol A Epoxy Resin: Oral rat LD50 > 2000 mg/kg; Inhalation rat LC0 – no deaths at saturation; Dermal rabbit LD50 > 2000 mg/kg

Aliphatic Glycidyl Ether Diluent: Oral rat LD50 26.8 g/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Diglycidyl Ether Bisphenol A Epoxy Resin: 96 hr LC50 *Oncorhynchus mykiss* 1.2 mg/L; 48 hr EC50 daphnia magna 1.1 mg/L; 72 hr EC50 *Scenedesmus capricornutum* 9.4 mg/L

Aliphatic Glycidyl Ether Diluent: 96 hr LC50 *Oncorhynchus mykiss* > 5000 mg/L; 72 hr IC50

Pseudokirchnerella subcapitata 843.75 mg/L

Persistence and degradability: Diglycidyl ether bisphenol A epoxy resin is not readily biodegradable. Aliphatic glycidyl ether diluent is readily biodegradable.

Bioaccumulative potential: Diglycidyl ether bisphenol A epoxy resin has a BCF of 31. Aliphatic glycidyl ether diluent has a BCF 160-263.

Mobility in soil: No data available.

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, state and federal regulations.

14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	None	Not Regulated	None	None	None
TDG	None	Not Regulated	None	None	None
IMDG	UN 3082	Environmentally hazardous substances, liquid, n.o.s. (Diglycidyl Ether Bisphenol A Epoxy Resin)	9	PG III	Marine Pollutant
IATA	UN 3082	Environmentally hazardous substances, liquid, n.o.s. (Diglycidyl Ether Bisphenol A Epoxy Resin)	9	PG III	Yes

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known

15. REGULATORY INFORMATION

CERCLA: This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA Hazard Category (311/312): Acute Health

SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

California Proposition 65

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity (birth defects): epichlorhydrin 106-89-8 <0.1% (cancer, male reproductive toxicity)

EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory.

CANADA:

Canadian CEPA: All of the ingredients in this product are listed on the Canadian DSL.

Canadian WHMIS Classification: Class D Division 2 Subdivision B (Toxic Material Causing other Toxic Effects)

This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

16. OTHER INFORMATION

NFPA Rating: Health = 2 Flammability = 1 Instability = 0

HMIS Rating: Health = 2 Flammability = 1 Physical Hazard = 0

SDS Revision History: Converted to GHS format. All sections revised.

Date of preparation: May 19, 2014

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