SAFETY DATA SHEET

1. Identification

Product identifier	**Thinset Resin**
Other means of identification	None.
Recommended use	Not available.
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name	
Address	Armor Limited, Inc. 2410 US-15 South, Sumter, SC 29150
After hours telephone number	1-877-982-7667
Normal work hours telephone number	1-877-982-7667
Website	www.armor-inc.com
E-mail	customerservice@armor-inc.com
Emergency 24-hour telephone number	CHEMTREC North America: 800-424-9300, International: +1-703-527-3887
Information on operation hours	8:00 a.m. to 5:00 p.m.

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
	Sensitization, skin	Category 1B
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word	Warning
Hazard statement	Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary statement

Prevention	Wear protective gloves. Wear eye/face protection. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment.
Response	Specific treatment see Section 4 of this SDS. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.
Storage	Store in accordance with local/regional/national regulations.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
BISPHENOL A-(EPICHLORHYDRIN) EPOXY RESIN		25068-38-6	40 - < 50
MINERAL FILLER		Mixture	30 - 50
BUTYL GLYCIDYL ETHER		2426-08-6	< 10
EPICHLOROHYDRIN		106-89-8	< 0.1

4. First-aid measures

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention, if needed.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. For minor skin contact, avoid spreading material on unaffected skin. Take off contaminated clothing and wash before reuse.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing. Get medical attention immediately.

Ingestion
Call a physician or poison control center immediately. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and delayed
Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash. Irritant effects. May cause redness and pain. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information
Take off contaminated clothing and shoes immediately. In case of shortness of breath, give oxygen IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Alcohol foam. Carbon dioxide (CO2).

Unsuitable extinguishing media
Water. Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters
Wear suitable protective equipment. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out. Water runoff can cause environmental damage.

Specific methods
In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid skin contact and inhalation of vapors during disposal of spills. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Extinguish all flames in the vicinity.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not taste or swallow. Avoid contact with skin. Avoid prolonged exposure. Avoid contact with clothing. Do not use in areas without adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

CAUTION Store locked up. Keep away from heat, sparks and open flame. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Store in accordance with local/regional/national/international regulation.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
BUTYL GLYCIDYL ETHER (CAS 2426-08-6)	PEL	270 mg/m3
		50 ppm
EPICHLOROHYDRIN (CAS 106-89-8)	PEL	19 mg/m3
		5 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
BUTYL GLYCIDYL ETHER (CAS 2426-08-6)	TWA	3 ppm
EPICHLOROHYDRIN (CAS 106-89-8)	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
BUTYL GLYCIDYL ETHER (CAS 2426-08-6)	Ceiling	30 mg/m3
		5.6 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

EPICHLOROHYDRIN (CAS 106-89-8)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

EPICHLOROHYDRIN (CAS 106-89-8)	Skin designation applies.

US - Tennessee OELs: Skin designation

EPICHLOROHYDRIN (CAS 106-89-8)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

BUTYL GLYCIDYL ETHER (CAS 2426-08-6)	Can be absorbed through the skin.
EPICHLOROHYDRIN (CAS 106-89-8)	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

EPICHLOROHYDRIN (CAS 106-89-8)	Can be absorbed through the skin.

Appropriate engineering controls Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses. If risk of splashing, wear safety goggles or face shield.

Skin protection

Hand protection Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

Other Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Clear, straw colored liquid

Physical state Liquid.

Form Liquid.

Color Clear. Straw

Odor Mild. Sweet.

Odor threshold Not available.

pH Not Applicable

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point > 230.0 °F (> 110.0 °C) Pensky-Martens Closed Cup

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Heavier than air

Relative density Not available.

Solubility(ies)

Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not Evaluated

Other information

Specific gravity	1.11 at 25° C

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport
Chemical stability	Stable.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Peroxides. Chlorine. Strong acids, alkalies and oxidizing agents.
Hazardous decomposition products	If product is burned hazardous gases such as oxides of carbon and nitrogen and various hydrocarbons may be produced.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Ingestion	Suspected of causing cancer by ingestion. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation. Exposure may cause temporary irritation, redness, or discomfort.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
BUTYL GLYCIDYL ETHER (CAS 2426-08-6)		
Acute		
Dermal		
LD50	Rabbit	0.788 g/kg
Inhalation		
LC50	Rat	> 670 mg/l, 8 Hours
Oral		
LD50	Rat	2.05 g/kg
EPICHLOROHYDRIN (CAS 106-89-8)		
Acute		
Oral		
LD50	Rat	90 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Irritating and may cause redness and pain.
Serious eye damage/eye irritation	Irritating to eyes.

Respiratory or skin sensitization

ACGIH sensitization

N-BUTYL GLYCIDYL ETHER (BGE) (CAS 2426-08-6) Dermal sensitization

Respiratory sensitization Not available.

Skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

EPICHLOROHYDRIN (CAS 106-89-8) 2A Probably carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

EPICHLOROHYDRIN (CAS 106-89-8) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
Thinset Resin			
Aquatic			
Crustacea	EC50	Daphnia	6.75 mg/l, 48 hours estimated
Fish	LC50	Fish	3.7496 mg/l, 96 hours estimated

Components		Species	Test Results
EPICHLOROHYDRIN (CAS 106-89-8)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	9.1 - 12.3 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

Thinset Resin	> 3
BUTYL GLYCIDYL ETHER	0.63
EPICHLOROHYDRIN	0.45

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

Not regulated as dangerous goods.

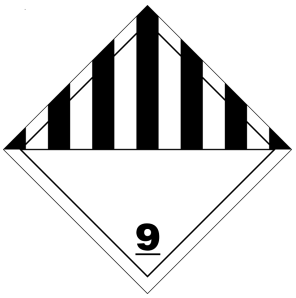
IATA

Not regulated as dangerous goods.

IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Not available.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

IMDG



Marine pollutant

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

EPICHLOROHYDRIN (CAS 106-89-8) Listed.

SARA 304 Emergency release notification

EPICHLOROHYDRIN (CAS 106-89-8) 100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
EPICHLOROHYDRIN	106-89-8	100	1000		

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
EPICHLOROHYDRIN	106-89-8	< 0.1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

EPICHLOROHYDRIN (CAS 106-89-8)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

EPICHLOROHYDRIN (CAS 106-89-8)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65

WARNING: WARNING: This product contains a chemical known to the State of California to cause cancer.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

EPICHLOROHYDRIN (CAS 106-89-8) Listed: October 1, 1987

California Proposition 65 - CRT: Listed date/Male reproductive toxin

EPICHLOROHYDRIN (CAS 106-89-8) Listed: September 1, 1996

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

EPICHLOROHYDRIN (CAS 106-89-8)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	04-17-2015
Revision date	10-15-2019
Version #	05
NFPA ratings	Health: 2 Flammability: 0 Instability: 0
References	EPA: AQUIRE database US. IARC Monographs on Occupational Exposures to Chemical Agents HSDB® - Hazardous Substances Data Bank IARC Monographs. Overall Evaluation of Carcinogenicity National Toxicology Program (NTP) Report on Carcinogens ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Revision information	Composition / Information on Ingredients: Undisclosed Ingredient Statement Physical & Chemical Properties: Multiple Properties Transport Information: Proper Shipping Name/Packing Group