

1. Identification

Product identifier	RI90 Part A
Other means of identification	
Synonyms	RI90
Recommended use	Not available.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company Name	ErgonArmor, a division of Ergon Asphalt & Emulsions, Inc.
Address	2829 Lakeland Drive Jackson, MS 39232 USA
After hours telephone number	1-800-222-7122
Normal work hours telephone number	1-877-982-7667
Website	www.ergonarmor.com
E-mail	sds@ergon.com
Emergency 24-hour telephone number	CHEMTREC: North America 1-800-424-9300 International 1-800-527-3887
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 1
	Carcinogenicity	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning
Hazard statement	Causes skin irritation. May cause an allergic skin reaction. Causes eye irritation. Suspected of causing cancer.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.
Response	Specific treatment see Section 4 of this SDS. 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 exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store in accordance with local/regional/national regulations. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
BISPHENOL A-(EPICHLORHYDRIN) EPOXY RESIN		25068-38-6	45-55
QUARTZ		14808-60-7	5-15
CASHEW, NUTSHELL LIQ., GLYCIDYL ETHERS		171263-25-5	1-10
1-METHOXYPROPAN-2-OL		107-98-2	<1
EPICHLOROHYDRIN		106-89-8	<1
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.		64742-95-6	<1
Other components below reportable levels			37.72

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Rinse with water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.
Ingestion	Rinse mouth. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Call a POISON CENTER or doctor/physician if you feel unwell.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
--	---

Methods and materials for containment and cleaning up

This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

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. Absorb in vermiculite, dry sand or earth and place into containers. 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. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
EPICHLOROHYDRIN (CAS 106-89-8)	PEL	19 mg/m ³ 5 ppm

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.3 mg/m ³ 0.1 mg/m ³ 2.4 mppcf	Total dust. Respirable. Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
1-METHOXYPROPAN-2-OL (CAS 107-98-2)	STEL	100 ppm	
EPICHLOROHYDRIN (CAS 106-89-8)	TWA	50 ppm	
QUARTZ (CAS 14808-60-7)	TWA	0.5 ppm	
QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
1-METHOXYPROPAN-2-OL (CAS 107-98-2)	STEL	540 mg/m ³	
	TWA	150 ppm 360 mg/m ³ 100 ppm	
QUARTZ (CAS 14808-60-7)	TWA	0.05 mg/m ³	Respirable dust.

Biological limit values

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

Exposure guidelines**US - California OELs: Skin designation**

1-METHOXYPROPAN-2-OL (CAS 107-98-2) Can be absorbed through the skin.
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

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	Wear safety glasses; chemical goggles (if splashing is possible).
Skin protection	
Hand protection	Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.
Other	Wear suitable protective clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
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	Liquid.
Physical state	Liquid.
Form	Viscous Liquid.
Color	Silver.
Odor	Slight.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	2876 °F (1580 °C) estimated
Initial boiling point and boiling range	> 500 °F (> 260 °C)
Flash point	> 220.0 °F (> 104.4 °C)
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	1053.32 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	None
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	13.50 lb/gal estimated
Percent volatile	0.05 % estimated

Specific gravity 1.62

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation May be harmful if inhaled.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes eye irritation.

Ingestion May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
1-METHOXYPROPAN-2-OL (CAS 107-98-2)		
Acute		
Dermal		
LD50	Rabbit	13 g/kg
Inhalation		
LC50	Rat	54.6 mg/l, 4 Hours
Oral		
LD50	Rat	5.71 g/kg
EPICHLOROHYDRIN (CAS 106-89-8)		
Acute		
Dermal		
LD50	Rabbit	300 mg/kg
Inhalation		
LC50	Rat	500 ppm, 4 Hours
Oral		
LD50	Rat	40 mg/kg

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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization May cause allergic skin disorders in sensitive individuals. May cause irritation.

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

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

EPICHLOROHYDRIN (CAS 106-89-8)

2A Probably carcinogenic to humans.

QUARTZ (CAS 14808-60-7)

1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

EPICHLOROHYDRIN (CAS 106-89-8)

Reasonably Anticipated to be a Human Carcinogen.

QUARTZ (CAS 14808-60-7)

Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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 contains a substance which is toxic to aquatic organisms.

Product	Species	Test Results	
RI90 Part A			
Aquatic			
Crustacea	EC50	Daphnia	5.2879 mg/l, 48 hours estimated
Fish	LC50	Fish	2.9904 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

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

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

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

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 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.

US RCRA Hazardous Waste U List: Reference

EPICHLOROHYDRIN (CAS 106-89-8) U041

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.

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. (BISPHENOL A-(EPICHLORHYDRIN) EPOXY RESIN, OXIRANE, MONO[(C12-14-ALKYLOXY)METHYL] DERIVS.), MARINE POLLUTANT (EPICHLOROHYDRIN)

Transport hazard class(es)

Class 9
Subsidiary risk -
Packing group III

Environmental hazards

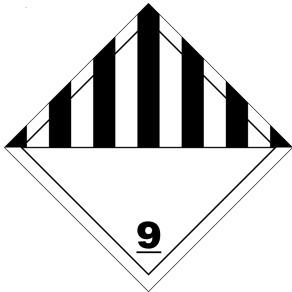
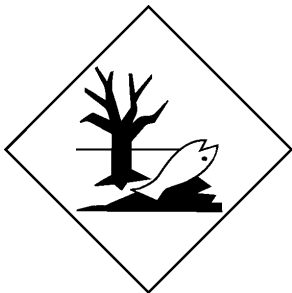
Marine pollutant Yes

EmS F-A, S-F

Special precautions for user Not available.

EPICHLOROHYDRIN

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

IMDG**Marine pollutant**

General information DOT Regulated Marine Pollutant. IMDG Regulated 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.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1-METHOXYPROPAN-2-OL (CAS 107-98-2) Listed.
 EPICHLOROHYDRIN (CAS 106-89-8) Listed.

US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity

EPICHLOROHYDRIN (CAS 106-89-8) 100 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

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 No

Hazardous chemical

SARA 313 (TRI reporting)

Not regulated.

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

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

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

QUARTZ (CAS 14808-60-7) Listed: October 1, 1988

US - 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))

1-METHOXYPROPAN-2-OL (CAS 107-98-2)

EPICHLOROHYDRIN (CAS 106-89-8)

QUARTZ (CAS 14808-60-7)

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM. (CAS 64742-95-6)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
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)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	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	07-10-2015
Revision date	01-12-2018
Version #	04
Further information	HMIS® is a registered trade and service mark of the NPCA.
NFPA ratings	Health: 2 Flammability: 0 Instability: 0
References	ACGIH EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents 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	Product and Company Identification: Synonyms Hazard(s) identification: Response Physical & Chemical Properties: Multiple Properties