

# SAFETY DATA SHEET

Moisture Vapor Armor - Part B  
Jun 18, 2018

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## SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION

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**Product ID:** 80-11603-8303  
**Product Name:** Moisture Vapor Armor - Part B  
**Revision Date:** Jun 18, 2018 **Date Printed:** Jun 18, 2022  
**Version:** 1.0 **Supersedes Date:** N.A.  
**Manufacturer's Name:** Armor Polymers LLC  
**Address:** 9030 Carroll Way Suite 7, San Diego CA 92121  
**Emergency Phone:** Chemtrec:800-424-9300 (account: CCN1217) OR International:703-527-3887 (account:CCN1217)  
**Product/Recommended Uses:** For Further Information, Refer to the Product Technical Data Sheet.

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## SECTION 2) HAZARDS IDENTIFICATION

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### Classification

Acute aquatic toxicity - Category 2  
Acute toxicity Dermal - Category 5  
Acute toxicity Oral - Category 4  
Chronic aquatic toxicity - Category 2  
Reproductive Toxicity - Category 1B  
Serious Eye Damage - Category 1  
Skin Corrosion - Category 1B  
Skin Sensitizer - Category 1  
Specific Target Organ Toxicity - Repeated Exposure - Category 2

### Pictograms



### Signal Word

Danger

### Hazardous Statements - Health

H313 - May be harmful in contact with skin  
H302 - Harmful if swallowed  
H360 - May damage fertility or the unborn child.  
H318 - Causes serious eye damage  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H373 - May cause damage to organs through prolonged or repeated exposure.

### **Hazardous Statements - Environmental**

H401 - Toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

### **Precautionary Statements - General**

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

### **Precautionary Statements - Prevention**

P273 - Avoid release to the environment.

P264 - Wash thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P272 - Contaminated work clothing should not be allowed out of the workplace.

### **Precautionary Statements - Response**

P312 - Call a POISON CENTER/doctor if you feel unwell.

P301 + P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 - Rinse mouth.

P391 - Collect spillage.

P308 + P313 - IF exposed or concerned: Get medical advice/attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P363 - Wash contaminated clothing before reuse.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P321 - Specific treatment (see section 4 on this SDS).

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.

P362 + P364 - Take off contaminated clothing. And wash it before reuse.

P314 - Get Medical advice/attention if you feel unwell.

### **Precautionary Statements - Storage**

P405 - Store locked up.

### **Precautionary Statements - Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant.

**Acute toxicity of 15.7% of the mixture is unknown**

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## **SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS**

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CAS	Chemical Name	% By Weight
PROPRIETARY	CYCLOALIPHATIC AMINE	39% - 72%
N/A	EPOXY POLYAMINE ADDUCT	12% - 22%
0000098-54-4	PARATERTIARYBUTYLPHENOL	8% - 15%
0002855-13-2	ISOPHORONEDIAMINE	8% - 14%
0084852-15-3	4-NONYL PHENOL BRANCHED	1.7% - 3%
0009046-10-0	POLYOXYPROPYLENEDIAMINE	1.4% - 2%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

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## SECTION 4) FIRST-AID MEASURES

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### Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

### Skin Contact

Rinse/wash with lukewarm, gently flowing water and mild soap for 15-20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

IF exposed or concerned: Get medical advice/attention.

### Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

### Ingestion

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

Give 3 or 4 glasses of water to drink. Never give anything by mouth to an unconscious person.

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## SECTION 5) FIRE-FIGHTING MEASURES

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### Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

### Unsuitable Extinguishing Media

If water is used, use very large quantities of cold water.

### Specific Hazards in Case of Fire

Excessive pressure or temperature may cause explosive rupture of containers.

### Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

### Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Care should always be exercised in dust/mist areas.

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## SECTION 6) ACCIDENTAL RELEASE MEASURES

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### Emergency Procedure

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).  
Do not touch or walk through spilled material.  
Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.  
If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

### Recommended Equipment

Appropriate dust or face mask to eliminate breathing foam dust particulates.

### Personal Precautions

Avoid breathing vapors. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

### Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

### Methods and Materials for Containment and Cleaning up

Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

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## SECTION 7) HANDLING AND STORAGE

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### General

Wash hands after use.  
Do not get in eyes, on skin or on clothing.  
Do not breathe vapors or mists.  
Use good personal hygiene practices.  
Eating, drinking and smoking in work areas is prohibited.  
Remove contaminated clothing and protective equipment before entering eating areas.  
Eyewash stations and showers should be available in areas where this material is used and stored.  
Individuals with existing respiratory disease such as chronic bronchitis, emphysema, or asthma should not be exposed.

### Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

### Storage Room Requirements

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool dry area. Store liquid in containers above ground and surround by dikes to contain spills or leaks.

Do not cut, drill, grind, weld, or perform similar operations on or near containers.

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## SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

### Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC,

neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

### Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

In poorly ventilated areas, a cartridge mask NIOSH approved for organic vapors is recommended under the following conditions: emergency situations, when product vapor concentration is greater than 20 ppm for a period longer than 15 min., during repair and cleaning of equipment, during transfer or discharge of the product.

### Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

None of the chemicals in Section 3 are regulated under "OSHA\_Tables\_Z1\_Z2\_Z3", "OSHA\_Carcinogen - OSHA Carcinogen", "OSHAtpm", "OSHAatmg", "OSHAspm", "OSHAsmg", "ACGIHtpm", "ACGIHtmg", "ACGIHspm", "ACGIHsmg", "nioshtpm", "nioshtmg", "nioshsppm", "nioshsmg", "NIOSH\_carcinogen", "OSHA\_SkinDesignation", "ACGIH\_carcinogen", "ACGIH\_TLV\_Basis", "ACGIH\_Notations"

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## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

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### Physical and Chemical Properties

Density	8.41 lb/gal
Specific Gravity	1.01
VOC Regulatory	0.00 lb/gal
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VOC Part A & B Combined	0.13 lb/gal
Appearance	Light yellow liquid
Odor Threshold	N.A.
Odor Description	Ammonia-like
pH	N.A.
Water Solubility	N.A.
Flammability	N/A
Flash Point Symbol	N.A.
Flash Point	100 °C
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	Heavier than air
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	200 °C
High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Decomposition Pt	N.A.
Evaporation Rate	Slower than ether
Coefficient Water/Oil	N.A.

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## SECTION 10) STABILITY AND REACTIVITY

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### Stability

Material is stable at standard temperature and pressure.

### Conditions to Avoid

Heat, high temperature, open flame, sparks, and moisture. Contact with incompatible materials in a closed system will cause buildup of pressure.

### Hazardous Reactions/Polymerization

Will not occur.

### Incompatible Materials

This product will react with epoxies, isocyanates, and strong oxidizing agents. Some reactions can be violent.

### Hazardous Decomposition Products

Combustion products: organic vapors and thermal decomposition fragments.

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## SECTION 11) TOXICOLOGICAL INFORMATION

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### Skin Corrosion/Irritation

Causes severe skin burns and eye damage

### Serious Eye Damage/Irritation

Any contact should not be left untreated.

Causes serious eye damage

### Respiratory/Skin Sensitization

Exposure may cause mucous membrane and respiratory tract irritation, tightness of chest, headache, shortness of breath, and a dry cough. The effects of acute exposure may be delayed in onset up to 12-24 hours. Repeated exposure above current occupational limits may cause an allergic sensitization of the respiratory tract. This is characterized by an asthma-like response upon re-exposure to the chemical. The symptoms may include coughing, wheezing, shortness of breath and chest tightness.

May cause an allergic skin reaction

### Carcinogenicity

No data available

### Germ Cell Mutagenicity

No data available

### Reproductive Toxicity

May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

### Specific Target Organ Toxicity - Single Exposure

No data available

### Specific Target Organ Toxicity - Repeated Exposure

Repeated exposure generally aggravates the following medical conditions : Cardiovascular disease and Chronic respiratory disease.

May cause damage to organs through prolonged or repeated exposure.

### Aspiration Hazard

No data available

### Acute Toxicity

If ingested : In humans, irritation or chemical burns of the mouth, pharynx, esophagus and stomach can develop following ingestion, and injury may be severe and cause death.

May be harmful in contact with skin

Harmful if swallowed

0009046-10-0 POLYOXYPROPYLENEDIAMINE

LD50 (dermal,rabbit): 2090 mg/kg (based on raw material SDS)

LD50 (oral, rat): 480 mg/kg (based on raw material SDS)

0002855-13-2 ISOPHORONEDIAMINE

LD50 (rat,oral): 1,030 mg/kg (based on raw material SDS)

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## SECTION 12) ECOLOGICAL INFORMATION

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### Toxicity

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

### Persistence and Degradability

No data available.

### Bioaccumulative Potential

No data available.

### Mobility in Soil

No data available.

### Other Adverse Effects

No data available.

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## SECTION 13) DISPOSAL CONSIDERATIONS

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### Waste Disposal

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

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## SECTION 14) TRANSPORT INFORMATION

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### U.S. DOT Information

UN/NA #: 2735

UN Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE)

Hazard Class: 8

Packing Group: III

Placard: Corrosive

### IMDG Information

UN/NA #: 2735

UN Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE)

Hazard Class: 8

Packing Group: III

Placard: Corrosive

Marine Pollutant: No data available

### IATA Information

UN/NA #: 2735

UN Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE)  
Hazard Class: 8  
Packing Group: III  
Placard: Corrosive

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## SECTION 15) REGULATORY INFORMATION

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CAS	Chemical Name	% By Weight	Regulation List
0000098-54-4	PARATERTIARYBUTYLPH ENOL	8% - 15%	DSL,SARA312,TSCA
0002855-13-2	ISOPHORONEDIAMINE	8% - 14%	DSL,SARA312,VOC,TSCA
0084852-15-3	4-NONYL PHENOL BRANCHED	1.7% - 3%	SARA313, DSL,SARA312,TSCA
0009046-10-0	POLYOXYPROPYLENE DI AMINE	1.4% - 2%	DSL,TSCA

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## SECTION 16) OTHER INFORMATION

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### OTHER INFORMATION

Note: As per GHS, category 1 is the greatest level of hazard within each class.

### GLOSSARY

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; CA Prop65- California Proposition 65; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

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