

WATER-BORNE EPOXY PRIMER (Part A)

SAFETY DATA SHEET ACCORDING TO USA FEDERAL HAZCOM 012

1. IDENTIFICATION

1.1. Product Identifier

Code:

A-WBEPRIME-A

Product name

WATER-BORNE EPOXY PRIMER (Part A)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use

Water-borne epoxy Base A for priming hard, porous or non-porous surfaces. Recommended for professional use only.

1.3. Details of the supplier of the safety data sheet

Name

Armus LLC

Full address

137 Grand Street 3rd Floor
New York, NY 10013

Country

United States
Tel. (+1) 917-957-5383

E-mail address of the competent person responsible for the Safety Data Sheet

bill@armussolutions.com

1.4. Emergency telephone number

For urgent inquiries refer to

Tel. (+1) 917-957-5383 United States

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.

Any additional information concerning the risks for health and/or the environment is given in sections 11 and 12 of this sheet.

Classification and Hazard Statement

Serious eye damage, category 1
Skin irritation, category 2

Causes serious eye damage.
Causes skin irritation.

Hazard pictograms:



Signal words: **DANGER**

Hazard statements:

H318 Causes serious eye damage.
H315 Causes skin irritation.

Precautionary statements:**Prevention:**

P280 Wear protective gloves.
P264 Wash with plenty of water and soap thoroughly after handling.

Response:

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 contact a POISON CONTROL CENTER or a doctor.
P302+P352 IF ON SKIN: Wash with plenty of water / . . .
P362+P364 Take off contaminated clothing and wash it before reuse.

Storage:**Disposal:**

P501 Dispose of contents or container according to local/national/international regulations

2.2 Other hazards

None based on available information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Components

<i>Chemical Name</i>	<i>CAS-No</i>	<i>Conc. %</i>	<i>Classification</i>
Modified Polyaminoamide	68915-81-1	9 < x < 19	Serious eye damage, category 1, H318 Skin irritation, category 2, H315

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4. FIRST-AID MEASURES

4.1. Description of first aid measures**GENERAL ADVICE:**

Move out of work / application area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

EYES:

Remove contact lenses.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical attention.
Keep eyes wide open while rinsing.
Continue rinsing eyes for at least 15 minutes.

SKIN:

Take off contaminated clothing and shoes immediately.
Wash immediately with plenty of water.
If irritation persists, seek medical advice / attention.
Wash contaminated clothing before using it again.

INHALATION:

Move to fresh air.
In the event of breathing difficulties, seek medical advice/attention immediately.
If the subject stops breathing, administer artificial respiration.

INGESTION:

Seek medical advice / attention immediately.
Do not induce vomiting without medical advice.
Never give anything by mouth to unconscious persons, unless authorized by doctor.

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4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product is unknown.

4.3. Indication of any immediate medical attention and special treatment needed

None based on available information.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing equipment The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder, and water spray.

Unsuitable extinguishing equipment None in particular.

5.2. Special hazards arising from the substance or mixture

Specific hazards during fire fighting Do not breathe combustion products.

5.3. Advice for firefighters

General information Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

Special protective equipment for firefighters Normal firefighting clothing i.e., fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment, and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under section 8 of the safety data sheet) to prevent any contamination of skin, eyes, and clothing.

These indications apply for both product users and those involved in emergency procedures.

6.2. Environmental precautions

The product must not enter the sewer system or come into contact with surface water or groundwater.

6.3. Methods and material for containment and cleaning up

Collect leaked product into a suitable container.

Absorb spilled product with inert absorbent material.

Make sure the leakage site is well-aired.

Contaminated material should be disposed of in compliance with the provisions set forth in section 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet.

Do not eat, drink, or smoke during use.

Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

This product must not enter the sewer system or come into contact with surface water or groundwater.

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7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container.

Store the containers sealed, in a well-ventilated place, away from direct sunlight.

7.3. Specific end use(s)

Refer to section 1.2

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Not applicable based on available information.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well-aired through effective local ventilation.

Personal protective equipment must comply with current regulations.

<i>Hand Protection</i>	Protect hands with category III work gloves (OSHA 29 CFR 1910.138). The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability. The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
<i>Skin Protection</i>	Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing.
<i>Eye Protection</i>	Wear airtight protective goggles (OSHA 29 CFR 1910.133).
<i>Respiratory Protection</i>	If the threshold value (e.g., TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapors of various kinds and/or gases or vapors containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited. If the substance considered is odorless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.
<i>Environmental Exposure Controls</i>	This product must not enter the sewer system or come into contact with surface water or groundwater.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid-suspension
Color	Milky yellow
Odor	Slight
pH	8.5±0.5
Boiling point	> 212° F (100°C)
Flash point	> 212°F (100°C)
Relative density	67.42 lb/ft ³ (1.08 kg/L)
Solubility	Fully miscible with water
Auto-ignition temperature	> 842°F (450°C)

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Viscosity

> 278±1 cP

10. STABILITY AND REACTIVITY

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

None in particular. However, the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

None based on available information.

10.6. Hazardous decomposition products

None based on available information.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Not classified based on available information.

Information on likely routes of exposure

Not classified based on available information.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Not classified based on available information.

Interactive effects

Not classified based on available information.

Acute toxicity

Not classified based on available information.

Skin corrosion / irritation

Causes skin irritation.

Serious eye damage / irritation

Causes serious eye damage.

Respiratory or skin sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

This product is not considered to be a carcinogen by IARC, ACGIH, NTP and OSHA.

Reproductive toxicity

Not classified based on available information.

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STOT – single exposure

Not classified based on available information.

STOT – repeated exposure

Not classified based on available information.

Aspiration toxicity / hazard

Not classified based on available information.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Not applicable based on available information.

12.2. Persistence and degradability

Not applicable based on available information.

12.3. Bioaccumulative potential

Not applicable based on available information.

12.4. Mobility in soil

Not applicable based on available information.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bio-accumulative (vPvB) substances.

13. DISPOSAL CONSIDERATIONS

Disposal methods

<i>Waste from residues</i>	Reuse, when possible. Unused product should be considered special non-hazardous waste. Disposal must be performed through an authorized waste management firm, in compliance with local, national, and international regulations.
<i>Contaminated Packaging</i>	Contaminated packaging must be recovered or disposed of in compliance with all waste management regulations.

14. TRANSPORTATION INFORMATION

This product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Raid (RID) of the International Maritime Dangerous Codes Code (IMDG), and of the International Air Transport Association (IATA) regulations.

15. REGULATORY INFORMATION

U.S. Federal Regulations

<i>TSCA</i>	All components of this product are listed on US Toxic Substances Control Act (TSCA) Inventory considered as "existing" chemical substances in U.S. commerce.
<i>Clean Air Act Sections 112(b), 602 Class I Substances, 602 Class II Substances</i>	This product, in compliance to the Act, does not contain any substances regulated as pollutants.
<i>Clean Water Act Priority or/and Toxic Pollutants</i>	This product, in compliance to the Act, does not contain any substances regulated as pollutants.

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<i>DEA List I Chemicals (Precursor Chemicals) and List II Chemicals (Essential Chemicals)</i>	No component(s) listed; in compliance with the List.
<i>EPA List of Lists 313 Category Code:</i>	No component(s) listed; in compliance with the List.
<i>EPCRA 302 EHS TPQ</i>	No component(s) listed; in compliance with the List.
<i>CERCLA RQ</i>	No component(s) listed; in compliance with the List.
<i>EPCRA 313 TRI</i>	No component(s) listed; in compliance with the List.
<i>RCRA Code</i>	No component(s) listed; in compliance with the List.
<i>CAA 112 (r) TMP TQ</i>	No component(s) listed; in compliance with the List.

State Regulations

Massachusetts / Minnesota / New Jersey / New York / Pennsylvania / California:
No component(s) listed.

CA Proposition 65:

This product does not contain any substances known to the State of California to cause cancer, reproductive harm, or birth defects.

16. OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

H318	Causes serious eye damage.
H315	Causes skin irritation.

LEGEND:

313 CATEGORY CODE	Emergency Planning and Community Right-to-Know Act Section 313 Category Code
ADR	European Agreement concerning the carriage of Dangerous goods by Road
CAA 112 (r) RMP TQ	Risk Management Plan Threshold Quantity (Clean Air Act Section 112(R))
CAS NUMBER	Chemical Abstract Service Number
CE50	Effective concentration (required to induce a 50% effect)
CERCLA RQ	Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
CLP	EC Regulation 1272/2008
DEA	Drug Enforcement Administration
EmS	Emergency Schedule
EPA	US Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPCRA 302 EHS TPQ	Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
EPCRA 304 EHS RQ	Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
EPCRA 313 TRI	Toxics Release Inventory (Section 313 Category Code)
GHS	Globally Harmonized System of classification and labeling of chemicals
IATA DGR	International Air Transport Association Dangerous Goods Regulation
IC50	Immobilization Concentration 50%
IMDG	International Maritime Code for dangerous goods
IMO	International Maritime Organization
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
OEL	Occupational Exposure Level
PEL	Predicted Exposure Level
RCRA Code	Resource Conservation and Recovery Act Code
REL	Recommended Exposure Limit
RID	Regulation concerning the international transport of dangerous goods by train
TLV	Threshold Limit Value
TLV CEILING	Concentration that should not be exceeded during any time of occupational exposure.
TSCA	Toxic Substances Control Act
TWA STEL	Short-term Exposure Limit

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TWA	Time-weighted Average Exposure Limit
VOC	Volatile Organic Compounds
WHMIS	Workplace Hazardous Materials Information System

GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Department of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

NOTE FOR USERS:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Purchasers must provide product users with adequate training on how to use chemical products.

ARMUS MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. ARMUS SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR CONSEQUENTIAL DAMAGES AND SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHT HELD BY OTHERS.

CALCULATION METHODS FOR CLASSIFICATION

Product classification derives from criteria established by the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200), unless determined otherwise in Section 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.

WATER-BORNE EPOXY PRIMER (Part B)

SAFETY DATA SHEET ACCORDING TO USA FEDERAL HAZCOM 012

1. IDENTIFICATION

1.1. Product Identifier

Code:

A-WBEPRIME-B

Product name

WATER-BORNE EPOXY PRIMER (Part B)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use

Water-borne epoxy Hardener B for priming hard, porous or non-porous surfaces. Recommended for professional use only.

1.3. Details of the supplier of the safety data sheet

Name

Armus LLC

Full address

137 Grand Street 3rd Floor
New York, NY 10013

Country

United States
Tel. (+1) 917-957-5383

E-mail address of the competent person responsible for the Safety Data Sheet

bill@armussolutions.com

1.4. Emergency telephone number

For urgent inquiries refer to

Tel. (+1) 917-957-5383 United States

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.

Any additional information concerning the risks for health and/or the environment is given in sections 11 and 12 of this sheet.

Classification and Hazard Statement

Eye irritation, category 2

Causes serious eye irritation.

Skin irritation, category 2

Causes skin irritation.

Skin sensitization, category 1

May cause an allergic skin reaction.

Hazardous to the aquatic environment, chronic toxicity, category 2

Toxic to aquatic life with long lasting effects.

Hazard pictograms:



Signal words:

WARNING

Hazard statements:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:**Prevention:**

P261	Avoid breathing fume, mist, or spray.
P280	Wear protective gloves / eye protection / face protection.
P264	Wash with plenty of water and soap thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.

Response:

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice / attention.
P337+P313	If eye irritation persists: Get medical advice / attention.
P302+P352	IF ON SKIN: Wash with plenty of water
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.

Storage:**Disposal:**

P501	Dispose of contents or container according to local/national/international regulations
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2.2 Other hazards

Not applicable based on available information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Components

<i>Chemical Name</i>	<i>CAS-No</i>	<i>Conc. %</i>	<i>Classification</i>
Epoxy resin (number average molecular weight ≤ 700)	25068-38-6	46 < x < 66	Eye irritation, category 2 H319 Skin irritation, category 2 H315 Skin sensitization, category 1 H317 Hazardous to the aquatic environment, chronic toxicity, category 2 H411
Formaldehyde, polymer with (chloromethyl)oxirane and phenol, mw \leq 700	9003-36-5	15 < x < 25	Skin irritation, category 2 H315 Skin sensitization, category 1 H317 Hazardous to the aquatic environment, chronic toxicity, category 2 H411
oxirane, mono [(C12-14-alkyloxy)methyl] derivs.	68609-97-2	1 < x < 11	Skin irritation, category 2 H315, Skin sensitization, category 1 H317

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4. FIRST-AID MEASURES

4.1. Description of first aid measures**GENERAL ADVICE:**

Move out of work / application area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

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EYES:	Remove contact lenses. In the case of contact with eyes, rinse immediately with plenty of water and seek medical attention. Keep eyes wide open while rinsing. Continue rinsing eyes for at least 15 minutes.
SKIN:	Take off contaminated clothing and shoes immediately. Wash immediately with plenty of water. If irritation persists, seek medical advice / attention. Wash contaminated clothing before using it again.
INHALATION:	Move to fresh air. In the event of breathing difficulties, seek medical advice / attention immediately.
INGESTION:	Seek medical advice / attention immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person, unless authorized by a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product is unknown.

4.3. Indication of any immediate medical attention and special treatment needed

None based on available information.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing equipment The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder, and water spray.

Unsuitable extinguishing equipment None in particular.

5.2. Special hazards arising from the substance or mixture

Specific hazards during fire fighting Do not breathe combustion products.

5.3. Advice for firefighters

General information Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health.
Always wear full fire prevention gear.
Collect extinguishing water to prevent it from draining into the sewer system.
Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

Special protective equipment for fire-fighters Normal firefighting clothing i.e., fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment, and emergency procedures

Block the leakage.

Wear suitable protective equipment (including personal protective equipment referred to under section 8 of the safety data sheet) to prevent any contamination of skin, eyes, and personal clothing.

These indications apply for both product users and those involved in emergency procedures.

6.2. Environmental precautions

The product must not enter the sewer system or come into contact with surface water or groundwater.

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6.3. Methods and material for containment and cleaning up

Collect the leaked product.

Absorb spilled material with inert absorbent material.

Make sure the leakage site is well-aired.

Contaminated material should be disposed of in compliance with the provisions set forth in section 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet.

Do not eat, drink, or smoke during use.

Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

This product must not enter the sewer system or come into contact with surface water or groundwater.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container.

Store the containers sealed, in a well-ventilated place, away from direct sunlight.

7.3. Specific end use(s)

Refer to section 1.2

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Not applicable based on available information.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well-aired through effective local ventilation.

Personal protective equipment must comply with current regulations.

<i>Hand Protection</i>	Protect hands with category III work gloves (OSHA 29 CFR 1910.138). The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability. The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
<i>Skin Protection</i>	Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing.
<i>Eye Protection</i>	Wear airtight protective goggles (OSHA 29 CFR 1910.133).
<i>Respiratory Protection</i>	If the threshold value (e.g., TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapors of various kinds and/or gases or vapors containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited. If the substance considered is odorless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.

Environmental Exposure Controls

This product must not enter the sewer system or come into contact with surface water or groundwater.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid-suspension
Color	Milky yellow-white
Odor	Light
pH	9.0±0.5
Boiling point	> 212° F (100°C)
Flash point	> 212°F (100°C)
Relative density	69.92 lb/ft ³ (1.12 kg/L)
Solubility	Fully miscible with water
Auto-ignition temperature	> 842°F (450°C)
Viscosity	> 382±1 cP

10. STABILITY AND REACTIVITY

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

None in particular. However, the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

None based on available information.

10.6. Hazardous decomposition products

None based on available information.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Not classified based on available information.

Information on likely routes of exposure

Not classified based on available information.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Not classified based on available information.

Interactive effects

Not classified based on available information.

Acute toxicity

Epoxy resin (number average molecular weight ≤700)

LD50 (Oral (Rat)) > 10000 mg/kg

LD50 (Dermal (Rabbit)) > 20000 mg/kg

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Formaldehyde, polymer with (chloromethyl)oxirane and phenol, mw≤700

LD50 (Dermal (Rat)) > 400 mg/kg

oxirane, mono [(C12-14-alkyloxy)methyl] derivs

LD50 (Oral (Rat)) 17100 mg/kg

Skin corrosion / irritation

Causes skin irritation.

Serious eye damage / irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Sensitizing to the skin.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

This product is not considered to be a carcinogen by IARC, ACGIH, NTP and OSHA.

Reproductive toxicity

Not classified based on available information.

STOT – single exposure

Not classified based on available information.

STOT – repeated exposure

Not classified based on available information.

Aspiration toxicity / hazard

Not classified based on available information.

12. ECOLOGICAL INFORMATION

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it has negative effects on aquatic environment.

12.1. Toxicity

Epoxy resin (number average molecular weight ≤700)

Toxicity to fish	LC50 1.3 mg/ liter Exposure time: 96 h
Toxicity Crustacea	EC50 2.1 mg/ liter Exposure time: 48 h
Chronic NOEC for Crustacea	0.3 mg/ liter Exposure time: 21 d

Formaldehyde, polymer with (chloromethyl)oxirane and phenol, mw≤700

Toxicity to fish	LC50 2.54 mg/ liter Exposure time: 96 h
Toxicity Crustacea	EC50 (Daphnia Magna (Water Flea)): 2.55 mg/ liter Exposure time: 48 h
Toxicity to Algae / Aquatic Plants	EC50 > 1000 mg/ liter Exposure time: 72 h

12.2. Persistence and degradability

Not applicable based on available information.

12.3. Bioaccumulative potential

Not applicable based on available information.

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12.4. Mobility in soil

Not applicable based on available information.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bio-accumulative (vPvB) substances.



13. DISPOSAL CONSIDERATIONS

Disposal methods



<i>Waste from residues</i>	Reuse, when possible. Unused product should be considered special non-hazardous waste. Disposal must be performed through an authorized waste management firm, in compliance with local, national, and international regulations.
<i>Contaminated Packaging</i>	Contaminated packaging must be recovered or disposed of in compliance with all waste management regulations.

14. TRANSPORTATION INFORMATION

ADR/RID



UN/ID No.	UN 3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Packing Group	III
Labels	Label 9 
Environmental Hazards	Environmentally Hazardous
Environmental Labels	
HIN – Kemler:	90
Limited Quantities:	5L
Notes:	In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity 5Kg or 5L, is not submitted to ADR provisions.

IMDG

UN/ID No.	UN 3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Packing Group	III
Labels	Label 9 
Environmental Hazards	Marine Pollutant
Environmental Labels	
EMS:	F-A, S-F
Limited Quantities:	5L
Notes:	In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity 5Kg or 5L, is not submitted to IMDG Code provisions.

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IATA

UN/ID No.	UN 3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Packing Group	III
Labels	Label 9
	
Environmental Hazards	Environmentally Hazardous
Environmental Labels	
Packing instruction (cargo aircraft)	Maximum Quantity: 450L Packaging instructions: 964
Packing instruction (passenger aircraft)	Maximum Quantity: 450L Packaging instructions: 964
Special precautions for user:	A97, A158, A197
Notes:	In accordance with SP A197, this product, when is packed in receptacles of a capacity 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

15. REGULATORY INFORMATION

U.S. Federal Regulations

<i>TSCA</i>	All components of this product are listed on US Toxic Substances Control Act (TSCA) Inventory considered as "existing" chemical substances in U.S. commerce.
<i>Clean Air Act Sections 112(b), 602 Class I Substances, 602 Class II Substances</i>	This product, in compliance to the Act, does not contain any substances regulated as pollutants.
<i>Clean Water Act Priority or/and Toxic Pollutants</i>	This product, in compliance to the Act, does not contain any substances regulated as pollutants.
<i>DEA List I Chemicals (Precursor Chemicals) and List II Chemicals (Essential Chemicals)</i>	No component(s) listed; in compliance with the List.
<i>EPA List of Lists 313 Category Code:</i>	No component(s) listed; in compliance with the List.
<i>EPCRA 302 EHS TPQ</i>	No component(s) listed; in compliance with the List.
<i>CERCLA RQ</i>	No component(s) listed; in compliance with the List.
<i>EPCRA 313 TRI</i>	No component(s) listed; in compliance with the List.
<i>RCRA Code</i>	No component(s) listed; in compliance with the List.
<i>CAA 112 (r) TMP TQ</i>	No component(s) listed; in compliance with the List.

State Regulations

Massachusetts / Minnesota / New Jersey / New York / Pennsylvania / California:
No component(s) listed.

CA Proposition 65:

This product does not contain any substances known to the State of California to cause cancer, reproductive harm, or birth defects.

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16. OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

LEGEND:

313 CATEGORY CODE	Emergency Planning and Community Right-to Know Act Section 313 Category Code
ADR	European Agreement concerning the carriage of Dangerous goods by Road
CAA 112 (r) RMP TQ	Risk Management Plan Threshold Quantity (Clean Air Act Section 112(R))
CAS NUMBER	Chemical Abstract Service Number
CE50	Effective concentration (required to induce a 50% effect)
CERCLA RQ	Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
CLP	EC Regulation 1272/2008
DEA	Drug Enforcement Administration
EmS	Emergency Schedule
EPA	US Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPCRA 302 EHS TPQ	Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
EPCRA 304 EHS RQ	Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
EPCRA 313 TRI	Toxics Release Inventory (Section 313 Category Code)
GHS	Globally Harmonized System of classification and labeling of chemicals
IATA DGR	International Air Transport Association Dangerous Goods Regulation
IC50	Immobilization Concentration 50%
IMDG	International Maritime Code for dangerous goods
IMO	International Maritime Organization
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
OEL	Occupational Exposure Level
PEL	Predicted Exposure Level
RCRA Code	Resource Conservation and Recovery Act Code
REL	Recommended Exposure Limit
RID	Regulation concerning the international transport of dangerous goods by train
TLV	Threshold Limit Value
TLV CEILING	Concentration that should not be exceeded during any time of occupational exposure.
TSCA	Toxic Substances Control Act
TWA STEL	Short-term Exposure Limit
TWA	Time-weighted Average Exposure Limit
VOC	Volatile Organic Compounds
WHMIS	Workplace Hazardous Materials Information System

GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Department of Labor and Industry Hazardous Substances, Employee "Right to Know".

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- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

NOTE FOR USERS:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Purchasers must provide product users with adequate training on how to use chemical products.

ARMUS MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. ARMUS SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR CONSEQUENTIAL DAMAGES AND SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHT HELD BY OTHERS.

CALCULATION METHODS FOR CLASSIFICATION

Product classification derives from criteria established by the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200), unless determined otherwise in Section 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.