

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Identifier : **S-462 Seal Strong™ Resin (Part A)**
Product Code : FP00462108A 0321
Trade Name/Synonyms : S-462 Part A
Recommended Use : One-Coat Moisture Control System for Concrete to Receive Flooring Products.
Uses Advised Against : Use only as recommended in the product's Technical Data Sheet.
For Professional Use only.

Supplier's name and address:

ArmstrongFlooring™

Armstrong Flooring, Inc.
1740 Hempstead Road
Lancaster, PA 17601 USA

Information Telephone No. : (800) 233-3823
Website Address : <http://www.floorexpert.com> or <http://www.armstrongflooring.com>
24 Hr Emergency Telephone # : CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)

: Skin Sensitizer Category 1
Eye Irritant Category 2A
Skin Irritant Category 2
Reproductive Toxicity Category 1

GHS Pictograms :



Signal Word : Danger

Hazard Statements : Causes serious eye irritation.
May cause an allergic skin reaction.
Causes skin irritation.
May damage fertility or the unborn child.

Precautionary Statements : Obtain special instructions before use. (See Section 7.) Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Avoid breathing dust/vapors. Use only outdoors or in a well-ventilated area. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Identified : None

Unknown Acute Toxicity Content : Less than 30% of this product consists of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Polymer: Bisphenol F + epichlorohydrin epoxy resin	55492-52-9	10 – 30
Polymer: Bisphenol A + epichlorohydrin epoxy resin	25068-38-6	10 – 30
Alkyl (C12-14) glycidyl ether	68609-97-2	5 – 10
1-Methyl-2-pyrrolidone	872-50-4	0.1 – 1

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

SECTION 4 – FIRST AID MEASURES

- General** : Get medical attention if you feel unwell.
- Inhalation** : Remove person to fresh air and keep at rest in a position comfortable for breathing. Get medical attention.
- Skin contact** : Remove contaminated clothing. Flush affected skin with soap and water. In case of irritation or rash: seek medical attention/advice.
- Eye contact** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- Ingestion** : Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.
- Notes for Physician** : Treat symptomatically.
- Signs and symptoms of short-term (acute) exposure**
- Inhalation* : Inhalation of vapors may cause mild irritation of the respiratory system. Symptoms may include coughing.
- Skin* : Causes irritation. Symptoms may include redness and itching.
- Eyes* : Causes irritation. Symptoms may include redness, itching, tearing, or pain.
- Ingestion* : May cause stomach pain with nausea and vomiting.
- Effects of long-term (chronic) exposure**
- : Prolonged inhalation may cause adverse lung effects with symptoms including coughing. Some individuals may experience a sensitization reaction of the skin after an initial exposure. Subsequent exposures may cause a hypersensitive skin reaction (rash, swelling).
- Indication of need for immediate medical attention or special treatment**
- : Difficulty breathing persists after removing the person to fresh air.
Any exposure to the eye which causes irritation.
Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Carbon dioxide, dry chemical powder, alcohol-resistant foam, water mist/fog.
- Unsuitable extinguishing media** : Water jet may spread the flames.
- Hazardous combustion products** : Carbon dioxide, carbon monoxide and other gases from combustion processes.
- Special fire-fighting procedures/equipment**
- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.
- Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)**
- : Not flammable. Other Flammability properties are found in Section 9.
- NFPA Rating** : 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
- Health: 2 Flammability 1 Reactivity 0 Special Hazards 0*

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Wear chemically resistant personal protective equipment during cleanup. Restrict access to area until completion of clean-up. All persons dealing with clean-up should wear the appropriate chemically protective equipment.
- Protective equipment** : Refer to Section 8 for additional information on acceptable personal protective equipment.
- Emergency procedures** : This product does not contain any chemicals which require reporting spills or releases to the U.S. EPA. In case of a spill or release, call the emergency number listed in Section 1 for advice.
US CERCLA Reportable quantity (RQ): None reported.
- Spill response / clean-up** : Ventilate area of release. Stop spill or leak at source if safely possible. Contain product with inert absorbent material, preventing it from entering sewer lines or waterways. Gather up spilled material and place in suitable container for later disposal. (See Section 13.) Notify the appropriate authorities as required.
- Environmental precautions** : Do not allow product to enter waterways. Do not allow material to contaminate ground water system.
- Disposal of spilled material** : See Section 13.

SECTION 7 – HANDLING AND STORAGE

Special Instructions/Safe handling procedures

- : Observe good hygiene standards. Do not eat, drink or smoke in the work area. Wash thoroughly after handling. Avoid contact with skin and eyes. Avoid repeated or prolonged skin contact. Avoid breathing vapors. Wear protective clothing to prevent skin contact. Promptly remove any clothing that becomes contaminated. Clean contaminated clothing before reuse. Keep container tightly closed. Use only with adequate ventilation.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store locked up. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container. Keep tightly closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning.
- Incompatible materials** : Strong oxidizing agents.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Exposure limits** : No exposure limits have been established for the product. Below are exposure limits for the ingredients in the product.

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TWA	STEL	PEL	STEL
Polymer: Bisphenol F + epichlorohydrin epoxy resin	55492-52-9	N/Av	N/Av	N/Av	N/Av
Polymer: Bisphenol A + epichlorohydrin epoxy resin	25068-38-6	N/Av	N/Av	N/Av	N/Av
Alkyl (C12-14) glycidyl ether	68609-97-2	N/Av	N/Av	N/Av	N/Av
1-Methyl-2-pyrrolidone	872-50-4	N/Av	N/Av	N/Av	N/Av
10 ppm (USA WEEL)					

- Engineering measures** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.
- Eye / face protection** : Chemical goggles or safety glasses must be worn when using this product. A face shield is recommended if splashing is possible.
- Skin protection** : Wear chemical resistant protective clothing and impervious gloves. Materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended.
- Body protection** : Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.

- Respiratory protection** : If work process generates excessive quantities of vapor or dust, or exposures exceeding any PEL, wear a NIOSH-approved respirator for organic vapors.
- Site safety equipment** : An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene precautions** : Avoid contact with eyes, skin and clothing. Do not breathe vapors. Do not eat, drink or smoke when using this product. Clean all equipment and clothing at end of each work shift.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid	Appearance	: Metallic black
Odor	: Characteristic	Odor threshold	: N/Av
pH	: N/Av	Specific gravity	: 1.7 – 1.8
Boiling point	: >392°F (>200°C)	Coefficient of water/oil distribution	: N/Av
Melting/Freezing point	: N/Av	Solubility in water	: Immiscible
Vapor pressure (mm Hg @ 20°C / 68°F)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Vapor density (Air = 1)	: N/Av	Volatiles (% by weight)	: N/Av
Volatile organic compounds (VOCs)	: 19.9 g/L, A+B, per ASTM D2369		
Decomposition temperature	: N/Av	Flammable Classification	: Not Flammable
Flash point	: >212°F (>100°C)	Lower flammable limit (% by vol)	: Not available
Flash point method	: Setaflash closed	Upper flammable limit (% by vol)	: Not available
Auto-ignition temperature	: N/Av	Oxidizing properties	: None
Flame projection length	: Not available	Flashback observed	: Not available
Explosion data: Sensitivity to mechanical impact / static discharge			
	: Not expected to be sensitive to mechanical impact or static discharge.		
Viscosity	: Not available		

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Reactivity	: Product reacts with amines to form polymers. Heat is evolved by this reaction.
Stability and reactivity	: Stable under the recommended storage and handling conditions prescribed.
Hazardous polymerization	: Hazardous polymerization does not occur.
Conditions to avoid	: Avoid prolonged exposure to heat.
Materials to avoid and incompatibility	: Oxidizing agents.
Hazardous decomposition products	: None known, refer to hazardous combustion products in Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Exposure : *Inhalation*: NO *Skin Absorption*: NO *Skin and Eyes*: YES *Ingestion*: YES

Signs and symptoms of exposure : See Section 4.

Calculated Acute Toxicity Estimates for the Product

<i>Inhalation</i>	: Not Available
<i>Oral</i>	: > 4,000 mg/kg
<i>Dermal</i>	: > 5,000 mg/kg

Toxicological data : See below for individual ingredient acute toxicity data.

Ingredients	LC50 (4 hr)	LD50	
	Inhalation, rat	Oral, rat	Dermal, rabbit
Polymer: Bisphenol F + epichlorohydrin epoxyresin	N/Av	N/Av	N/Av

Polymer: Bisphenol A + epichlorohydrin epoxy resin	N/Av	11400mg/kg	> 23 500
Alkyl (C12-14) glycidyl ether	N/Av	17100 mg/kg	N/Av
1-Methyl-2-pyrrolidone	3.1 mg/L	3598 mg/kg	2000 mg/kg

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/eye irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Contains components which are known to cause skin sensitization reactions. Does not contain known respiratory sensitizers.
Germ cell mutagenicity	: None known.
Carcinogenic status	: No components present in concentration greater than 0.1% are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
Reproductive toxicity	: Contains 1-Methyl-2-pyrrolidone, a known developmental toxin.
Specific Target Organ Toxicity, Single Exposure	: None known.
Specific Target Organ Toxicity, Repeated Exposure	: None known.
Aspiration hazard	: None known.
Other important hazards	: See Section 2 for additional information.

SECTION 12 – ECOLOGICAL INFORMATION

Environmental effects	: The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.
Ecotoxicological	: No data is available on the product itself.
Biodegradability	: No data available.
Bioaccumulative potential	: No data available.
Mobility in soil	: No data available.
PBT and vPvB assessment	: No data available.
Other adverse effects	: No data available.

SECTION 13 – DISPOSAL CONSIDERATION

Handling for disposal	: Handle waste according to recommendations in Section 7.
Methods of disposal	: Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
Packaging	: Handle contaminated packaging in the same manner as the product.
RCRA	: For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 – TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN 3082	Environmentally hazardous substance, liquid, n.o.s. (Contains: Bisphenol A-Epichlorohydrin polymer; Bisphenol F-Epichlorohydrin polymer)	9	III	
TDG Additional Information	None				
49 CFR/DOT	UN 3082	Environmentally hazardous substance, liquid, n.o.s. (Contains: Bisphenol A-Epichlorohydrin polymer; Bisphenol F-Epichlorohydrin polymer)	9	III	

49 CFR/DOT Additional Information	None
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Marine Pollutant : Yes

SECTION 15 – REGULATORY INFORMATION

Canadian Information:

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all information required by the HPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:

Skin Sensitizer Category 1
Eye Irritant Category 2A
Skin Irritant Category 2
Reproductive Toxicity Category 1

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The threshold for this product is 10,000 pounds.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above *de minimus* concentrations.

U.S. State Right to Know Laws

California Proposition 65:

 **WARNING:** This product can expose you to chemicals including Cumene, which is known to the State of California to cause cancer, and N-Methylpyrrolidone, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Other State Right to Know Laws: 1-Methyl-2-pyrrolidone [CAS# 872-50-4] (MA, MN, NJ, PA).

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
*Health: *2 Flammability 1 Physical Hazard 0* PPE: Gloves, safety glasses

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substances List
EPA: Environmental Protection Agency
GHS: Globally Harmonized System
HPR: Hazardous Products Regulations
IARC: International Agency for Research on Cancer
Inh: Inhalation
N/Av: Not Available

N/Ap: Not Applicable
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user determines the adequacy of the safety procedures employed during the use of this product. No warranty of any kind is given or implied. Armstrong Flooring, Inc. will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

Prepared By:
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Visit our Website: <http://www.floorexpert.com> or <http://www.armstrongflooring.com>

Revision date: : 29-Apr-2021

End of Document

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Identifier : **S-462 Seal Strong™ Hardener (Part B)**
Product Code : FP00462108B 0321
Trade Name/Synonyms : S-462 Part B
Recommended Use : One-Coat Moisture Control System for Concrete to Receive Flooring Products.
Uses Advised Against : Use only as recommended in the product's Technical Data Sheet.
For Professional Use only.

Supplier's name and address:

ArmstrongFlooring™

Armstrong Flooring, Inc.
1740 Hempstead Road
Lancaster, PA 17601 USA

Information Telephone No. : (800) 233-3823
Website Address : <http://www.floorexpert.com> or <http://www.armstrongflooring.com>
24 Hr Emergency Telephone # : CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)

Skin Corrosion/Irritation, Category 1
Serious Eye Damage/Eye Irritation, Category 1
Acute Toxicity, Oral, Category 4
Sensitization, Skin, Category 1
Reproductive toxicity, Category 2
Specific Target Organ Toxicity, Respiratory Irritation, Category 3

GHS Pictograms



Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage.
Harmful if swallowed.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation.

Precautionary Statements

Obtain special instructions before use. (See Section 7.) Do not handle until all safety precautions have been read and understood. Do not breathe vapors. Use only in a well-ventilated area. Do not eat, drink or smoke when using this product. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Classified None.

% **Unknown acute toxicity** 25% of this product consists of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
4-tert-Butylphenol	98-54-4	30.00 – 60.00
m-Xylene- α,α' -diamine [Synonym: 1,3-Bis(aminomethyl)benzene]	1477-55-0	10.00 – 30.00
2,2,4- and 2,4,4-Trimethylhexamethylenediamine	25620-58-0	10.00 – 30.00
2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	1.00 – 5.00
Benzyl alcohol	100-51-6	1.00 – 5.00
3-(Dimethylamino)-propylamine	109-55-7	1.00 – 5.00

Exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

SECTION 4 – FIRST AID MEASURES

General	: IF exposed or concerned: Get medical advice/attention. If medical advice is needed, have product container or label at hand. Symptoms may be delayed. Treat exposures immediately to prevent harm.
<i>Inhalation</i>	: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
<i>Skin contact</i>	: Remove/Take off immediately all contaminated clothing. Rinse SKIN with soap and water/shower. IF SKIN irritation or rash occurs: get medical advice/attention.
<i>Eye contact</i>	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<i>Ingestion</i>	: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

Notes for Physician : Symptoms of chemical burns may be delayed. Treat proactively.

Signs and symptoms of short-term (acute) exposure

<i>Inhalation</i>	: Inhalation of vapors may cause irritation of the respiratory system. Symptoms may include coughing and shortness of breath.
<i>Skin</i>	: Causes chemical burns. Initial symptoms may include redness, itching, swelling, and pain.
<i>Eyes</i>	: Causes chemical burns, permanent eye damage, possibly including blindness. Initial symptoms may include redness, itching, tearing, blurred vision, and pain.
<i>Ingestion</i>	: Causes chemical burns to the mouth, throat, and digestive tract. May cause stomach pain with nausea and vomiting.

Effects of long-term (chronic) exposure

<i>Inhalation</i>	: Prolonged inhalation may cause adverse lung effects with symptoms including coughing and shortness of breath.
<i>Skin</i>	: Some individuals may experience a sensitization reaction of the skin after an initial exposure. Subsequent exposures may cause a hypersensitive skin reaction (rash, swelling).
<i>Eyes</i>	: Same symptoms as acute exposure to the eyes.
<i>Ingestion</i>	: Same symptoms as acute exposure via ingestion.

Indication of need for immediate medical attention or special treatment

- : Difficulty breathing persists after removing the person to fresh air.
- Any exposure to the eye which causes irritation.
- Chemical burns to the skin.
- Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media	: Water spray, dry chemical, carbon dioxide, alcohol-resistant foam.
Unsuitable extinguishing media	: High pressure water jet may spread the fire.

Hazardous combustion products : Carbon monoxide carbon dioxide, nitrogen oxides and/or low molecular weight hydrocarbons and amines. In a fire, vapors and gases may be poisonous and corrosive.

Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)

: Not flammable.
Flash Point > 100°C (> 212°F). See Section 9 for other Flammability information.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.

Environmental precautions : Do not allow product to enter waterways. Do not allow material to contaminate ground water system.

NFPA Rating Hazard Rating Scale: 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe

Health: 3 Flammability 1 Reactivity 0 Special Hazards 0

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions : See Section 7 for safe handling procedures. Wear chemically resistant personal protective equipment during cleanup. Restrict access to area until completion of clean-up. All persons dealing with clean-up must be properly trained and wear the appropriate chemically protective equipment. Refer to Section 8 for additional information on personal protective equipment.

Environmental precautions : Do not allow product to enter waterways. Do not allow material to contaminate ground water system.

Spill response / clean-up : Ventilate area of release. Stop spill or leak at source if safely possible. Contain product with inert absorbent material. Gather up spilled material and place in suitable container for later disposal. (See Section 13.) Notify the appropriate authorities as required.

Prohibited materials : Avoid strong oxidizing agents. Do not allow spilled material to mix with epoxy resins. Chemical reaction with epoxides causes polymerization and release of heat energy.

Special spill response procedures : This product does not contain any chemicals requiring EPA notification for spills. If a chemical spill occurs, call the emergency telephone number listed in Section 1.
US CERCLA Reportable quantity (RQ): None reported.

References to other sections : See Section 13 for information regarding disposal.

SECTION 7 – HANDLING AND STORAGE

Special instructions/Safe handling procedures

: Do NOT get into eyes, on skin or on clothing. Do NOT breathe vapors. Do NOT swallow. Observe good hygiene standards. Do not eat, drink or smoke when using this product. Wash hands and exposed skin thoroughly after handling. Wear safety glasses, gloves, and protective clothing to prevent contact. Remove/Take off immediately all contaminated clothing. Clean contaminated clothing before reuse. Keep container tightly closed. Use only with adequate ventilation.

Storage requirements : Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container. Keep tightly closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning.

Incompatible materials : See Section 10.

Special packaging materials : Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible exposure limits : No exposure limits have been established for the product itself. See below for the permissible exposure limits for the components of the product.

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TLV	STEL	PEL	STEL
4-tert-Butylphenol	98-54-4	N/Av	N/Av	N/Av	N/Av
m-Xylene- α,α' -diamine	1477-55-0	0.1 mg/m ³ CEIL	N/Av	N/Av	0.1 mg/m ³ NIOSH REL CEIL
2,2,4- and 2,4,4-Trimethylhexamethylenediamine	25620-58-0	N/Av	N/Av	N/Av	N/Av
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	N/Av	N/Av	N/Av	N/Av
Benzyl alcohol	100-51-6	10 ppm WEEL	N/Av	10 ppm AIHA	N/Av
3-(Dimethylamino)-1-propylamine	109-55-7	N/Av	N/Av	N/Av	N/Av

Ventilation and engineering measures: Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.

Personal protection equipment

Respiratory protection : If work process generates excessive quantities of vapor, or exposures exceeding any PEL, wear an appropriate, NIOSH-approved organic vapor respirator.

Hand protection : Wear impervious gloves. Materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended. Refer to glove manufacturer for breakthrough time for the chemicals in this product. (See Section 3.)

Body (skin) protection : Wear chemical resistant protective clothing. Where extensive exposure to product is possible, use resistant coveralls, apron, and boots to prevent contact.

Eye / face protection : Chemical goggles must be worn when using this product. A face shield is recommended if splashing is possible.

Other protective equipment : An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations : Do NOT get into eyes, on skin or on clothing. Do not breathe vapors. Do not eat, drink or smoke when using this product. Clean all equipment and clothing at end of each work shift.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid	Appearance	: Yellow
Odor	: Amine	Odor threshold	: N/Av
pH	: Alkaline	Specific gravity	: 1.01
Boiling point	: >392°F (>200°C)	Coefficient of water/oil distribution	: N/Av
Melting/Freezing point	: N/Av	Solubility in water	: Immiscible
Vapor pressure (mm Hg @ 20°C / 68°F)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Vapor density (Air = 1)	: N/Av	Volatiles (% by weight)	: N/Av
Volatile organic compounds (VOCs)	: 19.9 g/L A+B per ASTM D2369		
General information	: N/Av	Particle size	: N/Av
Flash point	: >212°F (>100°C)	Lower flammable limit (% by vol)	: 1.2 %
Flash point method	: Setaflash closed cup	Upper flammable limit (% by vol)	: Not available
Auto-ignition temperature	: 662°F (350°C)	Oxidizing properties	: None
Flame projection length	: Not available	Flashback observed	: Not available
Explosion data: Sensitivity to mechanical impact/ static discharge			
: Not expected to be sensitive to mechanical impact or static discharge.			

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Reactivity	: Product is formulated to react with epoxides, forming a polymer. This reaction evolves heat.
Stability	: Stable under the recommended storage and handling conditions prescribed.

Hazardous polymerization : Hazardous polymerization does not occur.

Conditions to avoid : Avoid prolonged exposure to heat.

Materials to avoid and incompatibility : Oxidizing agents.

Hazardous decomposition products : Refer to hazardous combustion products in Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Exposure : *Inhalation*: YES *Skin Absorption*: YES *Skin and Eyes*: YES *Ingestion*: YES

Symptoms of overexposure: See Section 4.

Calculated Acute Toxicity Estimates for the Product

Inhalation : > 3. mg/L (Mist)

Oral : > 1200 mg/kg

Dermal : > 2000 mg/kg

Toxicological data : Contains components that may be absorbed through the skin in harmful amounts. See below for individual ingredient acute toxicity data.

Ingredients	CAS Nos.	LC50 (4 hr)	LD50	
		Inhalation, rat	Oral, rat	Dermal, rabbit
4-tert-Butylphenol	98-54-4	> 5.6 mg/L	2990 mg/kg	2318 mg/kg
m-Xylene- α,α' -diamine	1477-55-0	1.95 mg/L	930 mg/kg	2000 mg/kg
2,2,4- and 2,4,4-Trimethylhexamethylenediamine	25620-58-0	N/Av	910 mg/kg	2980 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	N/Av	1000 mg/kg	1280 mg/kg
Benzyl alcohol	100-51-6	8.8 mg/L	1230 mg/kg	2000 mg/kg
3-(Dimethylamino)-propylamine	109-55-7	24.8 mg/L	922 mg/kg	560 mg/kg

Corrosivity/ Irritation to the skin : May cause chemical burns to the skin.

Corrosivity/ Irritation to the eyes : Causes serious chemical burns to the eyes. May cause permanent damage to eyes, including blindness.

Skin/Respiratory Sensitization : Contains multiple components which are known to cause skin sensitization reactions.

Carcinogenic status : No components present at greater than 0.1% are listed as carcinogens by ACGIH, IARC, OSHA, or NTP.

Teratogenicity : None known.

Reproductive effects : 4-tert-Butylphenol is suspected of damaging fertility.

Germ Cell Mutagenicity : None known.

Epidemiology : Not available.

Target Organ Effects, Single exposure : Contains a component which causes respiratory irritation.

Target Organ Effects, Repeated exposure : None known.

Risk of aspiration : None known.

Synergistic materials : N/Av

Other important hazards : See hazards listed in Section 2.

SECTION 12 – ECOLOGICAL INFORMATION

Environmental effects : The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.

Important environmental characteristics : N/Av

Ecotoxicological : No data available.

Biodegradability	: No data available.
Bioaccumulative potential	: No data available.
Mobility in soil	: No data available.
PBT and vPvB assessment	: No data available.
Other adverse effects	: Material is highly alkaline and should not be discharged into sewers or waterways.

SECTION 13 – DISPOSAL CONSIDERATION

Handling for disposal	: Handle waste according to recommendations in Section 7.
Methods of disposal	: Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
Packaging	: Handle contaminated packaging in the same manner as the product.
RCRA	: For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 – TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN 1760	Corrosive liquids, n.o.s. (Contains: m-Xylene- α , α' -diamine; Trimethylhexamethylenediamine)	8	III	
TDG Additional Information	None				
49 CFR/DOT	UN 1760	Corrosive liquids, n.o.s. (Contains: m-Xylene- α , α' -diamine; Trimethylhexamethylenediamine)	8	III	
49 CFR/DOT Additional Information	None.				

SECTION 15 – REGULATORY INFORMATION

Canadian Information:

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all information required by the HPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL).

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:

- Skin Corrosion/Irritation, Category 1
- Serious Eye Damage/Eye Irritation, Category 1
- Acute Toxicity, Oral, Category 4
- Sensitization, Skin, Category 1
- Reproductive toxicity, Category 2
- Specific Target Organ Toxicity, Respiratory Irritation, Category 3

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The threshold for this product is 10,000 pounds.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above *de minimus* concentrations.

U.S. State Right to Know Laws

California Proposition 65: To the best of our information, the Part B component of this product does not contain any chemicals on the California Proposition 65 List.

Other State Right to Know Laws:

Component	CAS	CA	MA	MN	NJ	NY	PA	RI
4-tert-Butylphenol	98-54-4	No	No	Yes	No	No	No	No
m-Xylene- α,α' -diamine	1477-55-0	Yes	Yes	No	Yes	No	Yes	Yes
2,2,4- and 2,4,4-Trimethylhexamethylenediamine	25620-58-0	No	No	No	Yes	No	No	No
Benzyl alcohol	100-51-6	No	Yes	No	No	No	Yes	No
3-(Dimethylamino)-1-propylamine	109-55-7	No	Yes	Yes	Yes	No	Yes	No

SECTION 16 – OTHER INFORMATION

HMIS Rating

: * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe

*Health: *3 Flammability 1 Physical Hazard 0*

Recommended PPE: Gloves, safety glasses with side shields, protective clothing

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substances List
EPA: Environmental Protection Agency
GHS: Globally Harmonized System
HPR: Hazardous Products Regulations
IARC: International Agency for Research on Cancer
Inh: Inhalation
N/Av: Not Available
N/Ap: Not Applicable
NIOSH: National Institute of Occupational Safety and Health
n.o.s.: not otherwise specified
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user determines the adequacy of the safety procedures employed during the use of this product. No warranty of any kind is given or implied. Armstrong Flooring, Inc. will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

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Revision date: : 29-Apr-2021

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