Safety Data Sheet

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SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Amine

Product Name: Dampseal 101B

Intended Use of the Product

Intended use of the substance/mixture: Epoxy primer

Company

GAF 1 Campus Drive Parsippany, NJ 07054 USA 1-800-766-3411

Emergency Number: CHEMTREC [DAY OR NIGHT] 1-800-424-9300

Outside USA and Canada: 1 703-741-5970 Emergency Number : (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION

OSHA/HCS status:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:

- FLAMMABLE LIQUIDS Category 4
- SKIN CORROSION/IRRITATION Category 1B
- SERIOUS EYE DAMAGE/ EYE IRRITATION Category1
- SKIN SENSITIZATION Category 1
- SPECIFIC TARGET ORGAN TOXICITY(REPEATED EXPOSURE) -Category 2
- AQUATIC HAZARD (ACUTE) Category 1
- AQUATIC HAZARD (LONG-TERM) Category 1

GHS label elements

Hazard pictograms:



Signal word: Danger

Hazard Statements: Combustible liquid.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause damage to organs through prolong or repeated exposure.

Very toxic to aquatic life with long lasting effects.

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Precautionary Statements:

Wear protective gloves: > 8 hours (breakthrough time): butyl rubber, Ethyl Vinyl Alcohol Laminate (EVAL). Wear eye or face protection. Wear protective clothing. Keep away from flames and hot surfaces. - No smoking. Avoid release to the environment. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Collect spillage. Get medical attention if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Store locked up. Store in a well-ventilated place. Keep cool. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification: None known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Mixture

Ingredient name	%	CAS number
Fatty acids, tall-oil, reaction products with bisphenol A, glycidyl tolyl ether and triethylenetetramine	60-100	186321-96-0
Benzyl Alcohol 3-aminopropyldimethylamine 2,4,6-tris(dimethylaminomethyl)phenol	13-30 3-7 3-7	100-51-6 109-55-7 90-72-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

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SECTION 4: FIRST AID MEASURES

Description of necessary first aid measures

Eye contact: Get medical attention immediately. Call a poison center or physician. Immediately flush

eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns

must be treated promptly by a physician.

Inhalation: Get medical attention immediately. Call a poison center or physician. Remove victim to

fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition

under medical surveillance for 48 hours.

Skin contact: Get medical attention immediately. Call a poison center or physician. Wash with plenty

of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse.

products in a fire, symptoms may be delayed. The exposed person may need to be kept

Clean shoes thoroughly before reuse.

Ingestion: Get medical attention immediately. Call a poison center or physician. Wash out mouth

with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effect, acute and delayed

Potential acute health effects

Eye contact: Causes serious eye damage.

Inhalation: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Exposure to decomposition products may cause a health hazard. Serious effects may be

delayed following exposure.

Skin contact: Causes severe burns. May cause and allergic skin reaction.

Ingestion: May cause burns to mouth, throat and stomach.

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Over-exposure Signs/Symptoms:

Eye contact: Adverse symptoms may include the following:

Pain or irritation Watering

Redness

Inhalation: No specific data.

Skin contact: Adverse symptoms may include the following:

Pain or irritation

Redness

Blistering may occur

Ingestion: Adverse symptoms may include the following:

Stomach pain

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Symptomatic and supportive therapy as needed. Following severe exposure,

medical follow-up should be monitored for at least 48 hours.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it

is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing

thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

SECTION 5: FIRE-FIGHTING MEASURES

Flash point: Closed cup: 76°C (168.8°F) [DIN 51758 EN 22719 (Pensky-Martens Closed

Cup)]

Extinguishing media:

Suitable extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media: Do not use water jet.

Specific hazards arising from

the chemical:

Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or

drain.

Hazardous thermal

decomposition products:

Decomposition products may include the following materials:

Carbon dioxide Carbon monoxide Nitrogen oxides

Special protective actions for

firefighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk.

Use water spray to keep fire-exposed containers cool.

Special protective equipment

for fire-fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure

mode.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

For nonemergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unnecessary unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up:

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent materiale.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Protective measures:

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupation hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities:

Store between the following temperatures: 2 to 40°C (35.6 to 104°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Appropriate engineering controls:

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures:

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products,

before eating, smoking and using the lavatory and at the end of the working

period.

Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash

stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a

risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection

should be worn, unless the assessment indicates a higher degree of

protection: chemical splash goggles and/or face shield. If inhalation hazards

exist, a full-face respirator may be required instead.

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard

should be worn at all times when handling chemical products if a risk

assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): butyl

rubber, Ethyl Vinyl Alcohol Laminate (EVAL)

Body protection: Personal protective equipment for the body should be selected based on the

task being performed and the risks involved and should be approved by a

specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be

selected based on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an

approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards

of the product and the safe working limits of the selected respirator.

Thermal hazards: Not available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state: Liquid

Color: Light yellow Odor: Amine-like. Odor threshold: Not available.

pH: 10-12 [conc. (% w/w): 10%].

Not available.

Melting

point/Freezing point:

Boiling/ 135°C (275°F)

Condensation point:

Flash point: Closed cup: 76°C (168.8°F) [DIN 51758 EN 22719 (Pensky-Martens Closed Cup)]

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Evaporation rate: Not available. **Flammability** Not available.

(solid, gas)

Lower and upper

explosive flammable limits:

Not available.

Vapor pressure: Not available. Vapor density: Not available. Relative density: Not available. Solubility in water: Not available. Not available.

Partition coefficient n-octanol/water

Auto-ignition temperature:

Not available.

Decomposition

>150°C (>302°F)

temperature:

Density: 1.01 g/cm³ [20°C (68°F)]

Dynamic (room temperature): 700 to 2000 mPa·s (700 to 2000 cP) Viscosity:

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SECTION 10: STABILITY AND REACTIVITY

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of

Under normal conditions of storage and use, hazardous reactions will not occur.

hazardous reactions: Conditions to avoid:

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld,

braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat - Male, Female	>2000 mg/kg
mentylenetettamme	OECD 423 Acute Oral toxicity - Acute Toxic Class Method	LD50 Oral	Rat - Female	>2000 mg/kg
Benzyl Alcohol	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat - Male, Female	>4178 mg/m ³
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male	1620 mg/kg
3-aminopropyldimethylamine	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat - Male, Female	24.8 mg/l
	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat	>1000 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	410 mg/kg
2,4,6-tris (dimethylaminomethyl) phenol	Unknown guidelines	LD50 Dermal	Rat - Male	>971 mg/kg
•	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	2169 mg/kg

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Irritation Corrosion

Product/ingredient name	Test	Species	Result
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	OECD OECD 439- In Vitro Skin Irritation - Reconstructed Human Epidermis Test Method	Human skin model	Skin - Irritant
	OECD Bovine Corneal Opacity and Permeability Test Method for Identifying Ocular Corrosives and Severe Irritants	Mammal - species unspecified	Eyes - Severe irritant
Benzyl Alcohol	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.
	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Irritant
3-aminopropyldimethylamine	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Corrosive
2,4,6-tris(dimethylaminomethyl) phenol	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Corrosive
	EPA CFR	Rabbit	Eyes - Corrosive

Conclusion/Summary

Skin	Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	Irritating to skin
	Benzyl Alcohol	Non-irritating to skin.
	3-aminopropyldimethylamine	Corrosive to the skin.
	2,4,6-tris (dimethylaminomethyl) phenol	Corrosive to the skin.
Eyes	Fatty acids, tall-oil reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	Irritating to eyes.
	Benzyl Alcohol	Irritating to eyes.
	3-aminopropyldimethylamine	No additional information.
	2,4,6-tris (dimethylaminomethyl) phenol	Corrosive to eyes.
Respiratory	Fatty acids, tall-oil reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	No additional information.
	Benzyl Alcohol	No additional information.
	3-aminopropyldimethylamine	No additional information.
	2,4,6-tris (dimethylaminomethyl) phenol	No additional information.

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Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine		skin	Mouse	Sensitizing
Benzyl Alcohol		skin	Mouse	Not Sensitizing
3-aminopropyldimethylamine		skin	Guinea pig	Sensitizing
2,4,6-tris (dimethylaminomethyl) phenol		skin	Guinea pig	Not Sensitizing

Mutagenicity

Test	Result
Experiment: In vitro. Subject: Bacteria Metabolic activation: +/- Experiment: In vitro. Subject: Mammalian- Animal Metabolic activation: +/- Experiment: In vitro Subject: Mammalian-	Negative Negative
Experiment: In vivo Subject: Mammalian-Animal	Negative
Experiment: In vitro. Subject: Bacteria Metabolic activation: +/-	Negative
Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Negative
Experiment: In vitro Subject: Mammalian-Human Metabolic activation: +/-	Negative
Experiment: In vivo Subject: Mammalian-Animal	Negative
Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Negative
Experiment: In vitro Subject: Mammalian-Human Cell: Somatic Metabolic activation: +/-	Negative
	Experiment: In vitro. Subject: Bacteria Metabolic activation: +/- Experiment: In vitro. Subject: Mammalian-Animal Metabolic activation: +/- Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: +/- Experiment: In vivo Subject: Mammalian-Animal Experiment: In vitro. Subject: Bacteria Metabolic activation: +/- Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/- Experiment: In vitro Subject: Mammalian-Human Metabolic activation: +/- Experiment: In vivo Subject: Mammalian-Animal Experiment: In vitro Subject: Bacteria Metabolic activation: +/- Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/- Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/- Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-

Conclusion/Summary:

Product/ingredient name

Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine 3-aminopropyldimethylamine

2,4,6-tris (dimethylaminomethyl) phenol

Summary Result

Not mutagenic in a standard battery of genetic toxicological tests

Not mutagenic in a standard battery of genetic toxicological tests

Not mutagenic in a standard battery of genetic toxicological tests

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Carcinogenicity:

Product/ingredient name	Test	Species	Dose	Exposure	Result/Result type
Benzyl Alcohol	OECD 453 Combined Chronic Toxicity/Carcin ogenicity Studies	Rat - Male, Female	400 mg/kg	103 weeks; 5 days per week	Negative - Oral - NOAEL

Conclusion/Summary

3-aminopropyldimethylamine – In accordance with column 2 of Annex VII-X of Regulation (EC) No 1907/2006, the test for this property of the substance does not need to be conducted.

Reproductive toxicity

Product/ingredient name	Test	Species	Maternal toxicity	Fertility	Developmental effects
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction Developmental Toxicity Screening Test	Rat - Male, Female	Negative	Negative	Negative
3-aminopropyldimethylamine	OECD 421 Reproduction/ Developmental Toxicity Screening Test	Rat - Male, Female	Negative	Negative	Negative
2,4,6-tris (dimethylaminomethyl) phenol	OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/Development al Toxicity Screening Test	Rat - Male, Female	Negative	Negative	Negative

Teratogeicity

Product/ingredient name	Test	Species	Result/Result type
Benzyl Alcohol 3-aminopropyldimethylamine	OECD 421 Reproduction/ Developmental Toxicity Screening Test	Mouse – Female Rat – Male, Female	Negative – Oral Negative - Oral

Specific target organ toxicity (single exposure): Not available

Specific target organ toxicity (repeated exposure):

Product/ingredient name	Category	Route of exposure	Target organs
2,4,6-tris (dimethylaminomethyl) phenol	Category 2	Not determined	Brain

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Aspiration hazard: Not available.

Information on the likely routes of exposure: Not available

Potential acute health effects:

Eye contact: Causes serious eye irritation.

Inhalation: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory

system. Exposure to decomposition products may cause a health hazard. Serious

effects may be delayed following exposures.

Skin contact: Causes severe burns. May cause an allergic skin reaction.

Ingestion: May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics:

Eye contact: Adverse symptoms may include the following:

Pain Watering Redness

Inhalation: No specific data

Skin contact: Adverse symptoms may include the following:

Pain or irritation

Redness

Blistering may occur

Ingestion: Adverse symptoms may include the following: stomach pains.

<u>Delayed and immediate effects and also chronic effects from short and long term exposure</u> Short term exposure

Potential immediate effects: Not available Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available Potential delayed effects: Not available

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Potential chronic health effects

Product/ingredient name	Test	Endpoint	Species	Result
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test	Sub-acute NOAEL Oral	Rat – Male, Female	1000 mg/kg/d
Benzyl Alcohol		Sub-chronic NOAEL Oral	Rat – Male, Female	400 mg/kg
	OECD 412 Repeated Dose Inhalation Toxicity: 28-day or 14-day Study	Sub-chronic NOEC Inhalation Dusts and mists	Rat – Male, Female	1072 mg/m ³
3-aminopropyldimethylamine	OECD 407 Repeated Dose 28-Day Oral Toxicity Study in Rodents	Sub-acute NOAEL Oral	Rat – Male, Female	50 mg/kg/d
2,4,6-tris (dimethylaminomethyl) phenol	OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test	Sub-acute NOEL Oral	Rat – Male, Female	15 mg/kg

General: May cause damage to organs through prolonged or repeated exposure. Once sensitized,

a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental No known significant effects or critical hazards.

effects:

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates:

Route	ATE value
Oral	3845.4 mg/kg
Dermal	26216.7 mg/kg

Other information: Not available.

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SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	EC50	3 hours	Bacteria	157.6	mg/l
and a yiell containing	OECD 202 Daphnia sp. Acute Immobilization Test	Acute	EC50	48 hours Static	Daphnia	0.705	mg/l
	OECD 201 Alga, Growth Inhibition Test	Acute	ErC50 (growth rate)	72 hours Static	Algae	0.186	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours Static	Fish	1.806	mg/l
	OECD 201 Alga, Growth Inhibition Test	Chronic	LOAEL	72 hours Static	Algae	0.057	mg/l
Benzyl Alcohol	OECD 202 Daphnia sp. Acute Immobilization Test	Acute	EC50	48 hours	Daphnia	230	mg/l
	OECD 201 Alga, Growth Inhibition Test	Acute	EgC50	72 hours Static	Algae	770	mg/l
	EPA OPPTS	Acute	LC50	96 hours Static	Fish	460	mg/l
	OECD 201 Alga, Growth Inhibition Test	Chronic	NOEC	72 hours Static	Algae	310	mg/l
	OECD 211 Daphnia Magna Reproduction Test	Chronic	NOEC	21 days Semi-static	Daphnia	51	mg/l
3-aminopropyldimethylamine	DIN DIN 38412 Part	Acute	EC50	17 hours Static	Bacteria	95	mg/l
	EU EC C.2 Acute Toxicity for Daphnia	Acute	EC50	48 hours Static	Daphnia	59.5	mg/l
	DIN	Acute	EbC50 (biomass)		Algae	53.5	mg/l
	DIN DIN 38412 Part 15		LC50	96 hours Static	Fish	122	mg/l
	DIN DIN 38412 part 9 DIN DIN 38412 Part	Chronic	EbC10	72 hours Static 17 hours	Algae Bacteria	43 94.5	mg/l
2,4,6-tris	8 OECD 201 Alga,	Chronic Acute	NOEC ErC50	Static 72 hours	Algae	84	mg/l mg/l
(dimethylaminomethyl)phenol	Growth Inhibition Test	Acute	(growth rate)	Static	Algae		1119/1
	Unknown guidelines	Acute	LC50	96 hours Static	Daphnia	718	mg/l
	-	Acute	LC50	96 hours Static	Fish	175	mg/l
	-	Chronic	NOEC	72 hours	Algae	6.25	mg/l

Conclusion/Summary:

Benzyl Alcohol

Not toxic or harmful to aquatic organisms

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Persistence and degradability

Product/ingredient name	Test	Period	Result
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	OECD 301D Ready Biodegradability- Closed Bottle Test	28 days	9 %
Benzyl Alcohol	OECD 301A Ready Biodegradability-	21 days	95 to 97 %
Benzyi / Noonei	DOC Die-Away Test	21 days	30 10 37 70
3-aminopropyldimethylamine	1	20 days	65 %
2,4,6-tris (dimethylaminomethyl)phenol	OECD 301D Ready Biodegradability-	28 days	4 %

Conclusion/Summary:

3-aminopropyldimethylamine

Readily biodegradable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and	-	-	Not readily
triethylenetetramine Benzyl Alcohol	-	- 	Readily
3-aminopropyldimethylamine 2,4,6-tris (dimethylaminomethyl)phenol	-	50%; 0.14 day(s) -	Readily Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	3.38	-	low
2,4,6-tris	0.219	1	low low low
(dimethylaminomethyl)phenol			

Mobility in soil: Not available

Other adverse effects: No known significant effects or critical hazards.

Other ecological information:

BOD5: Not determined.
COD: Not determined.
TOC: Not determined.

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SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: The generation of waste should be avoided or minimized wherever possible.

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: TRANSIT INFORMATION

Proper shipping name

DOT: Amines, liquid, corrosive, n.o.s. ((3-aminopropyldimethylamine, 2,4,6-tris(dimethylaminomethyl) TDG: Amines, liquid, corrosive, n.o.s. ((3-aminopropyldimethylamine, 2,4,6-tris(dimethylaminomethyl) Amines, liquid, corrosive, n.o.s. ((3-aminopropyldimethylamine, 2,4,6-tris(dimethylaminomethyl) Amines, liquid, corrosive, n.o.s. ((3-aminopropyldimethylamine, 2,4,6-tris(dimethylaminomethyl)

Regulatory			Packing		Additional
Information	UN Number	Classes	Group	Label	Information
DOT Classification	UN2735	8	II	Corrosee	The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes.
TDG Classification	UN2735	8	II	MARTINE POLLUTANI	The marine pollutant mark is not required when transported by road or rail.
IMDG Classification	UN2735	8	II	***	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-A S-B

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Regulatory Information	UN Number	Classes	Packing Group	Label	Additional Information
IATA Classification	UN2738	8	II	8	The environmentally hazardous substance mark may appear if required by other transportation regulations. Passenger and Cargo Aircraft Quantity limitation: 1 L Packaging instructions: 851 Cargo Aircraft Only Quantity limitation: 30 L Packaging instructions: 855

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory: All components are listed or exempted.

TSCA 5(a) 2 final significant

new use rule (SNUR): No ingredients listed

TSCA 5(e) substance

consent order:No ingredients listed **TSCA 12(b) export notification:**No ingredients listed

SARA 311/312: Fire hazard

Immediate (acute) health hazard Delayed (chronic) health hazard

Clean Air Act - Ozone Depleting

Substances (ODS): This product does not contain nor is it manufactured with ozone

depleting substances.

SARA 313: No ingredients listed.

CERCLA Hazardous Substances

Section 304 CERCLA Product
Ingredient Name % CERCLA Reportable Quantity Reportable
Hazardous Substance (Lbs.) Quantity (Lbs.)

Toluene 0.0003592 Listed 1000 278396437

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State regulations

PENNSYLVANIA – RTK: Benzyl Alcohol, 3-aminopropyldimethylamine

California Prop 65: This product contains no listed substances known to the State of California to cause

cancer, birth defects or other reproductive harm, at levels which would require a

warning under the statute.

Ingredient name Cancer Reproductive

Toluene No Yes

Canadian regulations:

CEPA DSL: At least one component is not listed.

WHMIS Classes: Class B-3: Combustible liquid with a flash point between 37.8°C (100°) and 93.3°C (200°F)

Class D-2B: Material causing other toxic effects (Toxic)

Class E: Corrosive material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled ProductsRegulations.

Brazil Regulations Norma ABNT-NBR 14725-2:2012

Classification system used:

International lists: Australia inventory (AICS): At least one component is not listed.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: Not determined.

Korea inventory: At least one component is not listed.

Malaysia Inventory (EHS Register): Not determined.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): At least one component is not listed.

Taiwan inventory (CSNN): Not determined.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATON OR LAST REVISION

DisclaimerThis information relates to the specific material designated and may not be valid for such material

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our knowledge and belief accurate and reliable as of the date compiled. However, no

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Revision Information Conversion to GAF SDS.

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