SAFETY DATA SHEET

1. Identification

Product identifier	**Pennguard™ HP Epoxy Primer Resin Part A**
Other means of identification	None.
Recommended use	Not available.
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name	Armor Limited, Inc.
Address	2410 US-15 South, Sumter, SC 29150
After hours telephone number	1-877-982-7667
Normal work hours telephone number	1-877-982-7667
Website	www.armor-inc.com
E-mail	customerservice@armor-inc.com
Emergency 24-hour telephone number	CHEMTREC North America: 800-424-9300, International: +1-703-527-3887
Information on operation hours	8:00 a.m. to 5:00 p.m.

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Flammable liquid and vapor. Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. May cause allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wash thoroughly after handling.

Response IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Specific treatment (see this label). If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. In case of fire: Use appropriate media for extinction.

Storage Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) This material is a static accumulator. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. May form flammable/explosive vapour-mixture. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
BISPHENOL EPOXY RESIN		N/A	15 - 25
METHYL AMYL KETONE		110-43-0	10 - 20
1-BUTANOL		71-36-3	< 10
XYLENE		1330-20-7	< 10
CUMENE		98-82-8	< 0.1
ETHYLBENZENE		100-41-4	< 0.1
Other components below reportable levels			44.8

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell. Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device. Do not use mouth-to-mouth method if victim inhaled the substance. If unconscious, place in recovery position and get medical attention immediately. Maintain open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

Skin contact Wash skin thoroughly with soap and water. Immediately remove contaminated clothing. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. If unconscious, place in a recovery position and get medical attention immediately. Maintain an open airway. Do not use mouth-to-mouth method if victim ingested the substance. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical advice/attention if you feel unwell.

Most important symptoms/effects, acute and delayed Auditory system effects may include temporary hearing loss and/or ringing in the ears. Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Defatting of the skin. May cause skin dryness or cracking. Blisters. Swelling. Wheezing. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. Irritating to mouth, throat, and stomach. Skin irritation.

Indication of immediate medical attention and special treatment needed	If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. Induction of emesis (vomiting) is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position. Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. If you feel unwell, seek medical advice (show the label where possible).

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. If sufficient charge is accumulated, ignition of flammable mixtures can occur. During fire, gases hazardous to health may be formed. Fire may produce irritating, corrosive and/or toxic gases. Do not use forced stream as this could cause fire to spread.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray.
Specific methods	In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways. Ventilate area and avoid breathing vapors or mist.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Do not allow the spilled product to enter public drainage systems or open watercourses.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid breathing mist/vapors. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid contact with eyes and prolonged or repeated contact with skin.

Conditions for safe storage, including any incompatibilities	Store in a cool, dry place. Store locked up. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in tightly closed container. Avoid heat, sparks, open flames and other ignition sources. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
1-BUTANOL (CAS 71-36-3)	PEL	300 mg/m3
		100 ppm
CUMENE (CAS 98-82-8)	PEL	245 mg/m3
		50 ppm
ETHYLBENZENE (CAS 100-41-4)	PEL	435 mg/m3
		100 ppm
METHYL AMYL KETONE (CAS 110-43-0)	PEL	465 mg/m3
		100 ppm
XYLENE (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
1-BUTANOL (CAS 71-36-3)	TWA	20 ppm
CUMENE (CAS 98-82-8)	TWA	5 ppm
ETHYLBENZENE (CAS 100-41-4)	TWA	20 ppm
METHYL AMYL KETONE (CAS 110-43-0)	TWA	50 ppm
XYLENE (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
1-BUTANOL (CAS 71-36-3)	Ceiling	150 mg/m3
		50 ppm
CUMENE (CAS 98-82-8)	TWA	245 mg/m3
		50 ppm
ETHYLBENZENE (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
		100 ppm
METHYL AMYL KETONE (CAS 110-43-0)	TWA	465 mg/m3
		100 ppm
XYLENE (CAS 1330-20-7)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3
		100 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
ETHYLBENZENE (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
XYLENE (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

1-BUTANOL (CAS 71-36-3) Can be absorbed through the skin.
CUMENE (CAS 98-82-8) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

1-BUTANOL (CAS 71-36-3) Skin designation applies.
CUMENE (CAS 98-82-8) Skin designation applies.

US - Tennessee OELs: Skin designation

1-BUTANOL (CAS 71-36-3) Can be absorbed through the skin.
CUMENE (CAS 98-82-8) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

1-BUTANOL (CAS 71-36-3) Can be absorbed through the skin.
CUMENE (CAS 98-82-8) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

CUMENE (CAS 98-82-8) Can be absorbed through the skin.

Appropriate engineering controls Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Explosion-proof general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical goggles and face shield are recommended.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Nitrile, butyl rubber or neoprene gloves are recommended.

Other Wear suitable protective clothing. Use of an impervious apron is recommended. Plastic or rubber gloves, apron and boots.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Light Gray Liquid.

Physical state Liquid.

Form Liquid.

Color Varies

Odor Organic Solvent.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point 80.0 °F (26.7 °C) Tag Closed Cup

Evaporation rate 0.6 estimated

Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	1.4 %
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	> 1
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	> 930.2 °F (> 499 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	13.00 lb/gal estimated
Specific gravity	1.6 estimated
VOC	3.3 lb/gal estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Amines. Acids. Alkalis. Oxidizing agents.
Hazardous decomposition products	No decomposition products are expected to form during normal storage. Upon decomposition, this product emits oxides of sulfur, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Headache. Nausea, vomiting. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Harmful if inhaled. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns and eye damage. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	May be harmful if swallowed. Irritating to mouth, throat and stomach.
Symptoms related to the physical, chemical and toxicological characteristics	Contact may cause redness, burning, drying, and cracking of the skin, and skin damage. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Irritating to mouth, throat, and stomach.

Information on toxicological effects

Acute toxicity	Harmful if swallowed. Harmful if inhaled.

Product	**Species**	**Test Results**
Pennguard™ HP Epoxy Primer Resin Part A		
Acute		
Dermal		
LD50	Rabbit	23320 mg/kg

Components	Species	Test Results
1-BUTANOL (CAS 71-36-3)		
Acute		
Dermal		
LD50	Rabbit	3400 mg/kg
Oral		
LD50	Rat	790 mg/kg
CUMENE (CAS 98-82-8)		
Acute		
Inhalation		
LC50	-	24700 mg/m3, 2 Hours
Oral		
LD50	Rat	1400 mg/kg
ETHYLBENZENE (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	17800 mg/kg
Oral		
LD50	Rat	3500 mg/kg
METHYL AMYL KETONE (CAS 110-43-0)		
Acute		
Dermal		
LD50	Rabbit	12600 mg/kg
Oral		
LD50	Rat	1.67 g/kg
XYLENE (CAS 1330-20-7)		
Acute		
Dermal		
LD50	Rabbit	> 43 g/kg
Oral		
LD50	Rat	3523 - 8600 mg/kg

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

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization Corrosive to skin and eyes. May cause an allergic skin reaction.

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

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

CUMENE (CAS 98-82-8)	2B Possibly carcinogenic to humans.
ETHYLBENZENE (CAS 100-41-4)	2B Possibly carcinogenic to humans.
XYLENE (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

CUMENE (CAS 98-82-8) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness. May cause irritation to the respiratory system.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure. Ears.

Aspiration hazard May be harmful if swallowed and enters airways.

Chronic effects Prolonged exposure may cause chronic effects.

Further information Symptoms may be delayed.

12. Ecological information

Ecotoxicity Components of this product are hazardous to aquatic life. Accumulation in aquatic organisms is expected. Harmful to aquatic life with long lasting effects.

Product		Species	Test Results
Pennguard™ HP Epoxy Primer Resin Part A			
Aquatic			
Crustacea	EC50	Daphnia	15007.9111, 48 hours
Fish	LC50	Fish	481.4012, 96 hours
Acute			
Crustacea	EC50	Daphnia	939.5565, 48 hours estimated
Fish	LC50	Fish	56.4683, 96 hours estimated

Components		Species	Test Results
1-BUTANOL (CAS 71-36-3)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	>= 1897 - <= 2072 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	>= 100 - <= 500 mg/l, 96 hours
CUMENE (CAS 98-82-8)			
Aquatic			
Acute			
Crustacea	EC50	Brine shrimp (Artemia sp.)	>= 3.55 - <= 11.29 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.7, 96 hours
ETHYLBENZENE (CAS 100-41-4)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	>= 1.37 - <= 4.4 mg/l, 48 hours
Fish	LC50	Atlantic silverside (Menidia menidia)	>= 4.4 - <= 5.7 mg/l, 96 hours
METHYL AMYL KETONE (CAS 110-43-0)			
Aquatic			
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	>= 126 - <= 137 mg/l, 96 hours
XYLENE (CAS 1330-20-7)			
Aquatic			
Acute			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	>= 6.702 - <= 10.032 mg/l, 96 hours

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

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

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
1-BUTANOL	0.88
CUMENE	3.66
ETHYLBENZENE	3.15
METHYL AMYL KETONE	1.98

Mobility in soil No data available.

Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 F The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container. Recycle empty drums at an appropriate facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal. Ensure drums are tightly sealed.

14. Transport information

DOT

UN number	UN1263
UN proper shipping name	Paint related material including paint thinning, drying, removing, or reducing compound
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B1, B52, IB3, T2, TP1, TP29
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242

IATA

UN number	UN1263
UN proper shipping name	Paint related material (including paint thinning or reducing compounds)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1263
UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.

EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

DOT

IATA; IMDG

15. Regulatory information

US federal regulations

All components are on the U.S. EPA TSCA Inventory List.
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1-BUTANOL (CAS 71-36-3)	Listed.
CUMENE (CAS 98-82-8)	Listed.
ETHYLBENZENE (CAS 100-41-4)	Listed.
XYLENE (CAS 1330-20-7)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	Yes
Classified hazard categories	Flammable (gases, aerosols, liquids, or solids) Acute toxicity (any route of exposure) Skin corrosion or irritation Serious eye damage or eye irritation Respiratory or skin sensitization Carcinogenicity Specific target organ toxicity (single or repeated exposure) Aspiration hazard

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
1-BUTANOL	71-36-3	< 10
CUMENE	98-82-8	< 0.1
ETHYLBENZENE	100-41-4	< 0.1
XYLENE	1330-20-7	< 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

CUMENE (CAS 98-82-8)
ETHYLBENZENE (CAS 100-41-4)
XYLENE (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

1-BUTANOL (CAS 71-36-3)	Low priority
METHYL AMYL KETONE (CAS 110-43-0)	Other Flavoring Substances with OSHA PEL's

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

CUMENE (CAS 98-82-8)
ETHYLBENZENE (CAS 100-41-4)
XYLENE (CAS 1330-20-7)

California Proposition 65

WARNING: WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

CUMENE (CAS 98-82-8)	Listed: April 6, 2010
ETHYLBENZENE (CAS 100-41-4)	Listed: June 11, 2004

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 07-12-2022

Version # 01

Further information HMIS® is a registered trade and service mark of the NPCA.

NFPA ratings	Health: 2 Flammability: 3 Instability: 0
References	ACGIH EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Revision information	Composition / Information on Ingredients: Disclosure Overrides