SAFETY DATA SHEET

1. Identification

Product identifier	**6711 Hardener**
Other means of identification	None.
Recommended use	Liquid catalyst for epoxy resin
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	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1A
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful in contact with skin. Causes serious eye damage.

Precautionary statement

Prevention	Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace.
Response	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Specific treatment see Section 4 of this SDS. Take off contaminated clothing and wash it before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 doctor/physician. If skin irritation or rash occurs: Get medical advice/attention.
Storage	Store locked up.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
BENZYL ALCOHOL		100-51-6	30 - 50
3-AMINOMETHYL-3,5,5-TRIMETHYL CYCLOHEXYLAMINE		2855-13-2	25 - 45
TRIMETHYLHEXAMETHYLENE DIAMINE		25620-58-0	1 - 20
2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL		90-72-2	1 - 10
Other components below reportable levels			14.55

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists. Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Take along these instructions.
Ingestion	If swallowed, do NOT induce vomiting. Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.
Most important symptoms/effects, acute and delayed	Irritation of eyes. May cause an allergic skin reaction. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical powder. Water fog. Dry sand. Limestone powder.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Upon decomposition, this product may yield poisonous gases including oxides of nitrogen, hydrogen gas and ammonia. Do not release runoff from fire control measures to sewers or waterways.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Avoid contact with skin.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: 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.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid prolonged exposure. Use care in handling/storage. All handling to take place in well-ventilated area. Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines. Eye wash facilities and emergency shower must be available when handling this product. Avoid contact with eyes. All handling to take place in well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. Do not eat, drink or smoke when using the product.

Conditions for safe storage, including any incompatibilities Do not store in metal reactive containers. Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Do not store near acids. Keep tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
BENZYL ALCOHOL (CAS 100-51-6)	TWA	44.2 mg/m3 10 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses; chemical goggles (if splashing is possible).

Skin protection

Hand protection Nitrile, butyl rubber or neoprene gloves are recommended. Impervious gloves. PVC disposable gloves. Chemical resistant gloves.

Other Wear appropriate clothing to prevent any possibility of skin contact.

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.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Not available.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point 4.64 °F (-15.2 °C) estimated

Initial boiling point and boiling range 212 °F (100 °C) estimated

Flash point 199.4 °F (93.0 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.09 hPa estimated
Vapor density	Not available.
Relative density	Not available.

Solubility(ies)

Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	816.8 °F (436 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.

Other information

Density	8.29 g/cm3
Specific gravity	0.995

10. Stability and reactivity

Reactivity	Corrosive vapors.
Chemical stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature.
Incompatible materials	Product corrodes copper, aluminum, zinc, and galvanized surfaces. Oxidizing agents. Mineral Acids. Sodium Hypochlorite. Organic Acids. Nitrous acid and other nitrosating agents. Strong acids. Strong bases.
Hazardous decomposition products	Aldehydes. Nitrosamine. Nitric Acid. Nitrogen oxides (NOx). Ammonia. Carbon monoxide. Carbon dioxide. Hydrocarbon fragments.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns and eye damage. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Not available.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
BENZYL ALCOHOL (CAS 100-51-6)		
Acute		
Dermal		
LD50	Rabbit	2000 mg/kg
Inhalation		
LC50	-	> 4.178 mg/l, 4 Hours
Oral		
LD50	Rat	1230 - 3100 mg/kg

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 available.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Not available.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
6711 Hardener			
Aquatic			
Crustacea	EC50	Daphnia	43.0044, 48 hours
Fish	LC50	Fish	416.6667, 96 hours
Acute			
Crustacea	EC50	Daphnia	43.0044, 48 hours estimated
Fish	LC50	Fish	416.6667, 96 hours estimated

Components		Species	Test Results
3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE (CAS 2855-13-2)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	>= 14.6 - <= 21.5 mg/l, 48 hours
BENZYL ALCOHOL (CAS 100-51-6)			
Aquatic			
Acute			
Fish	LC50	Bluegill (Lepomis macrochirus)	10, 96 hours

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

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

BENZYL ALCOHOL	1.1

Mobility in soil Not 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 Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code 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	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Not available.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s. (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN2735
UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-B
Special precautions for user	Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

DOT

IATA; IMDG

Marine pollutant

15. Regulatory information

US federal regulations

Toxic Substances Control Act (TSCA)

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not 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	Acute toxicity (any route of exposure) Skin corrosion or irritation Serious eye damage or eye irritation Respiratory or skin sensitization

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.

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	05-01-2019
Revision date	04-11-2022
Version #	03
NFPA ratings	Health: 3 Flammability: 1 Instability: 0
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	First-aid measures: Most important symptoms/effects, acute and delayed Accidental release measures: Personal precautions, protective equipment and emergency procedures HazReg Data: North America GHS: Classification