

SAFETY DATA SHEET

511 Fast Cure Hardener - Part B



HEALTH	3
FLAMMABILITY	2
PHYSICAL	0
PPE	X

Printed: 01/04/2016
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1. Product and Company Identification

Product Code: 511-FCB

Product Name: 511 Fast Cure Hardener - Part B

Trade Name: 511 Fast Cure Hardener - Part B

Manufacturer Information

Company Name: Key Resin Company
4050 Clough Woods Dr.
Batavia, OH 45103

Phone Number: +1 (513)943-4225

Emergency Contact: Chemtrec (USA) (800)424-9300

Alternate Emergency Contact: Chemtrec (International) +1 (703)527-3887

2. Hazards Identification

GHS Classification	Placard	Key word	GHS hazard phrase
Skin Sensitization, Category 1A	Exclamation point	Warning	May cause an allergic skin reaction
Skin Corrosion/Irritation, Category 1A	Corrosive	Danger	Causes severe skin burns and eye damage
Serious Eye Damage/Eye Irritation, Category 1	Corrosive	Danger	Causes serious eye damage
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed
Skin Sensitization, Category 1B	Exclamation point	Warning	May cause an allergic skin reaction
Aquatic Toxicity (Acute), Category 1	Pollution	Warning	Very toxic to aquatic life
Aquatic Toxicity (Chronic), Category 1	Pollution	Warning	Very toxic to aquatic life with long lasting effects

GHS Hazard Phrases

- H317 - May cause an allergic skin reaction.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H302 - Harmful if swallowed.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.

GHS Precaution Phrases

- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P362+364 - Take off contaminated clothing and wash it before reuse.
- P273 - Avoid release to the environment.
- P202 - Do not handle until all safety precautions have been read and understood.
- P281 - Use personal protective equipment as required.

GHS Response Phrases

- P302+352 - IF ON SKIN: Wash with plenty of soap and water. P333+313 - If skin irritation or rash occurs, seek medical advice/attention.
- P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P311 - Call a POISON CENTER or doctor/physician.

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P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P314 - Get medical attention/advice if you feel unwell.

P391 - Collect spillage.

GHS Storage and Disposal Phrases

P501 - Dispose of contents/container to local, state, and federal authority requirements.

Potential Health Effects (Acute and Chronic)

May cause sensitization. May cause skin irritation or burns. May cause respiratory tract irritation. May cause allergic skin reaction. Can cause severe eye irritation.

Inhalation

Corrosive to respiratory tract. May cause respiratory sensitization.

Skin Contact

Contact with substance may cause severe burns to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Eye Contact

Corrosive/irritation to eyes. Causes eye burns.

Ingestion

Harmful if swallowed. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

Recommended Exposure Limits

Not established.

Medical Conditions Generally Aggravated By Exposure

Skin disorders, Respiratory disorders, Eye disorders, Skin Allergies.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration
1. Phenol, 4-nonyl-, branched	84852-15-3	35 - 40 %
2. *Poly(oxy(methyl-1,2-ethanediyl)	9046-10-0	15 - 25 %
3. 1,5-Pentanediamine, 2-methyl-	15520-10-2	10 - 20 %
4. Triethanolamine	102-71-6	1.0 - 10 %
5. Bisphenol-a based epoxy resin	25068-38-6	1.0 - 10 %
6. 4-tert-Butylphenol	98-54-4	1.0 - 5.0 %
7. 1,3-Benzenedimethanamine	1477-55-0	1.0 - 3.0 %
8. Piperazine	110-85-0	1.0 - 3.0 %

4. First Aid Measures

Emergency and First Aid Procedures

In Case of Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If experiencing respiratory symptoms: Get medical attention immediately.

In Case of Skin Contact

In case of contact, immediately wash skin with soap and copious amounts of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists.

In Case of Eye Contact

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical attention immediately.

In Case of Ingestion

If swallowed, wash out mouth with water provided person is conscious. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Get medical attention immediately.

Signs and Symptoms Of Exposure

Eyes: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: Can cause severe skin burns. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Inhalation: Vapors are irritating to the respiratory system, may cause throat pain and cough.

5. Fire Fighting Measures

Flash Pt: > 181.00 F Method Used: Pensky-Marten Closed Cup

Explosive Limits: LEL: NE UEL: NE

Autoignition Pt: No data available.

Fire Fighting Instructions

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Flammable Properties and Hazards

Combustible material: may burn but does not ignite readily.

Hazardous Combustion Products

In a fire, product may produce the following: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Fire may produce irritating, corrosive and/or toxic gases.

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable Extinguishing Media

Do not use a direct water stream, which may spread fire.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL.

Absorb with sand or vermiculite and place in closed containers for disposal. Ventilate the area.

Protective Precautions, Protective Equipment and Emergency Procedures

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Where splashing is possible, full chemically resistant protective clothing, and boots are required.

Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas.

7. Handling and Storage

Hazard Label Information:

Avoid contact with eyes. Do not get on skin and clothing. Avoid inhalation of vapor or mist. Store in a closed container.

Precautions To Be Taken in Handling

Provide adequate ventilation. Wear all personal protection required in section 8.

Precautions To Be Taken in Storing

Keep container tightly closed in a dry and well-ventilated place. Store away from incompatible material.

Other Precautions

Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Phenol, 4-nonyl-, branched	84852-15-3	No data.	No data.	No data.
2. *Poly(oxy(methyl-1,2-ethanediyl)	9046-10-0	No data.	No data.	No data.
3. 1,5-Pentanediamine, 2-methyl-	15520-10-2	No data.	No data.	No data.
4. Triethanolamine	102-71-6	No data.	TLV: 5 mg/m3	No data.
5. Bisphenol-a based epoxy resin	25068-38-6	No data.	No data.	No data.
6. 4-tert-Butylphenol	98-54-4	No data.	No data.	No data.
7. 1,3-Benzenedimethanamine	1477-55-0	No data.	CEIL: mg/m3	No data.
8. Piperazine	110-85-0	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:

Neoprene gloves Safety glasses, or goggles. Impervious clothing. Chemical resistant boots

Respiratory Equipment (Specify Type)

Normally when good engineering controls are used, no respiratory protection is needed. However, if cured product is abraded by sanding or grinding use a NIOSH approved air-purifying respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Eye Protection

Safety glasses, or goggles.

Protective Gloves

Nitrile rubber and Neoprene are recommended.

Other Protective Clothing

Where splashing is possible, full chemically resistant protective clothing, safety glasses or face shield and boots are required.

Engineering Controls (Ventilation etc.)

Good general ventilation should be sufficient to control airborne levels. Safety shower and eye bath.

Work/Hygienic/Maintenance Practices

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

Environmental Exposure Controls

Avoid runoff into storm sewers and ditches which lead to waterways.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	NE
Boiling Point:	NE
Decomposition Temperature:	NE
Autoignition Pt:	No data.
Flash Pt:	> 181.00 F Method Used: Pensky-Marten Closed Cup
Explosive Limits:	LEL: NE UEL: NE
Specific Gravity (Water = 1):	~ .958
Density:	~ 8.0 LB/GL
Vapor Pressure (vs. Air or mm Hg):	NE

Vapor Density (vs. Air = 1): NE
Evaporation Rate: NE
Solubility in Water: No
Percent Volatile: N.A.
VOC / Volume: NP
HAP / Volume: NP
Saturated Vapor Concentration: NE

Appearance and Odor

Odor: amine-like.
 Appearance: Liquid. amber.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Reactivity

Avoid: acids, alkalis, oxidizing agents.

Conditions To Avoid - Instability

Extreme temperatures.

Incompatibility - Materials To Avoid

Avoid strong acids, bases, and oxidizing agents.

Hazardous Decomposition Or Byproducts

Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, and phenolics.

Possibility of Hazardous Will occur [] Will not occur [X]

Polymerization:

Conditions To Avoid - Hazardous Reactions

Will not undergo hazardous polymerization in normal storage conditions.

11. Toxicological Information

Toxicological Information

May cause sensitization by skin contact.

Chronic Toxicological Effects

Skin sensitization.

Irritation or Corrosion

Corrosive! Damages skin and eyes.

Symptoms related to Toxicological Characteristics

Skin: Contact with substance may cause severe burns to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Eyes: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Permanent eye damage including blindness could result.

Inhalation: Inhalation of vapors/fumes causes respiratory irritation with throat discomfort, coughing or difficulty breathing.

Sensitization

May cause sensitization by skin contact.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Phenol, 4-nonyl-, branched	84852-15-3	n.a.	n.a.	n.a.	n.a.
2. *Poly(oxy(methyl-1,2-ethanediyl)	9046-10-0	n.a.	n.a.	n.a.	n.a.
3. 1,5-Pentanediamine, 2-methyl-	15520-10-2	n.a.	n.a.	n.a.	n.a.
4. Triethanolamine	102-71-6	n.a.	3	n.a.	n.a.

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Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
5. Bisphenol-a based epoxy resin	25068-38-6	n.a.	n.a.	n.a.	n.a.
6. 4-tert-Butylphenol	98-54-4	n.a.	n.a.	n.a.	n.a.
7. 1,3-Benzenedimethanamine	1477-55-0	n.a.	n.a.	n.a.	n.a.
8. Piperazine	110-85-0	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information

Avoid release to the environment. Do not empty into drains. May be hazardous to the environment if released in large quantities.

Results of PBT and vPvB assessment

No data available.

Persistence and Degradability

Not readily biodegradable.

Bioaccumulative Potential

No data available.

Mobility in Soil

not reported, unknown.

13. Disposal Considerations

Waste Disposal Method

Incinerate or dispose of unused material, residues and containers in a licensed facility in accordance with all applicable local, state and federal regulations. Do not discharge substance/product into sewage system.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

CAUSTIC ALKALI LIQUID, N.O.S. (Aliphatic Amines) (Nonylphenol) MARINE POLLUTANT.

Marine Pollutant(s): Nonylphenol.

NOTE: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

DOT Hazard Class:

8

DOT Hazard Label:

CORROSIVE

UN/NA Number:

UN1719

Packing Group:

II

Precautionary Label

Corrosive! Damages skin and eyes. Avoid skin and eye contact. May cause eye and skin irritation. May cause skin sensitization. Wear protective equipment and clothing. Always read MSDS/SDS before use.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name

CAUSTIC ALKALI LIQUID, N.O.S. (Aliphatic Amines) (Nonylphenol) MARINE POLLUTANT.

Marine Pollutant(s): Nonylphenol.

NOTE: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

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UN Number: 1719
Hazard Class: 8 - CORROSIVE
Packing Group: II

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name CAUSTIC ALKALI LIQUID, N.O.S. (Aliphatic Amines) (Nonylphenol) MARINE POLLUTANT.

Marine Pollutant(s): Nonylphenol.

UN Number: 1719
Hazard Class: 8 - CORROSIVE
Packing Group: II
IMDG EMS Number: FA,SB
Marine Pollutant: Yes

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Phenol, 4-nonyl-, branched	84852-15-3	No	No	No	No
2. *Poly(oxy(methyl-1,2-ethanediyl)	9046-10-0	No	No	No	No
3. 1,5-Pentanediamine, 2-methyl-	15520-10-2	No	No	No	No
4. Triethanolamine	102-71-6	No	No	No	No
5. Bisphenol-a based epoxy resin	25068-38-6	No	No	No	No
6. 4-tert-Butylphenol	98-54-4	No	No	No	No
7. 1,3-Benzenedimethanamine	1477-55-0	No	No	No	No
8. Piperazine	110-85-0	No	No	No	No

Regulatory Information

SARA Section 311/312: Acute, Chronic Health Hazard.

16. Other Information

CA=CIRCA NA=NOT AVAILABLE NE=NOT ESTABLISHED NR=NOT REGULATED NP= NOT APPLICABLE PR=PROPRIETARY TS=TRADE SECRET ?=UNKNOWN.

Company Policy or Disclaimer

The information contained in this MSDS is taken from sources believed to be accurate as of the date hereof; however the Key Resin Company makes no expressed or implied warranty in respect to the accuracy of the information or the suitability of the recommendations, and assumes no liabilities to any user thereof.

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