



## Safety Data Sheet

Prepared in Accordance with HCS 29  
C.F.R. 1910.1200

### 1. Identification of the Substance/Mixture and the Company/Undertaking

- 1.1 Product Identifier** 1111A1NL **Revision Date:** 04/07/2022
- Product Name:** THERMALINE 450 EP **Supersedes Date:** 09/03/2020  
PART A
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Component of multicomponent industrial coatings - Industrial use.
- 1.3 Details of the supplier of the safety data sheet**
- Manufacturer:** Carboline Global Inc.  
2150 Schuetz Road  
St. Louis, MO USA 63146
- Regulatory / Technical Information:  
Contact Carboline Technical Services at  
1-800-848-4645
- Datasheet Produced by:** Beebe, Hayli - regulatory@carboline.com
- 1.4 Emergency telephone number:** CHEMTREC 1-800-424-9300 (Inside US)  
CHEMTREC +1 703 5273887 (Outside US)  
HEALTH - Pittsburgh Poison Control 1-412-681-6669

### 2. Hazard Identification

#### 2.1 Classification of the substance or mixture

Hazardous to the aquatic environment, Chronic, category 2  
Carcinogenicity, category 1A  
Eye Irritation, category 2  
Flammable Liquid, category 2  
STOT, repeated exposure, category 1  
Skin Irritation, category 2  
Skin Sensitizer, category 1

## 2.2 Label elements

### Symbol(s) of Product



### Signal Word

Danger

### Named Chemicals on Label

EPOXY RESIN BASED ON BISPHENOL F, MICROCRYSTALLINE SILICA, BISPHENOL A EPOXY RESIN

### HAZARD STATEMENTS

Flammable Liquid, category 2	H225	Highly flammable liquid and vapour.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Carcinogenicity, category 1A	H350-1A	May cause cancer.
STOT, repeated exposure, category 1	H372	Causes damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment, Chronic, category 2	H411	Toxic to aquatic life with long lasting effects.

### PRECAUTION PHRASES

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P235	Keep cool.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention
P314	Get medical advice/attention if you feel unwell.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

## 2.3 Other hazards

No Information

### Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

## 3. Composition/Information On Ingredients

### 3.2 Mixtures

**Hazardous ingredients**

<u>Name According to EEC</u>	<u>EINEC No.</u>	<u>CAS-No.</u>	<u>%</u>	<u>Classifications</u>	
BISPHENOL A EPOXY RESIN	500-033-5	25068-38-6	25 - <50	H315-317-319-411	Aquatic Chronic 2, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1
MICROCRYSTALLINE SILICA	238-878-4	14808-60-7	25 - <50	H350-372	Carc. 1A, STOT RE 1
TITANIUM DIOXIDE	236-675-5	13463-67-7	10 - <25		
METHYL ETHYL KETONE	201-159-0	78-93-3	2.5 - <10	H225-319-336	Eye Irrit. 2, Flam. Liq. 2, STOT SE 3 NE
BLACK IRON MANGANESE OXIDE		75864-23-2	2.5 - <10	H373	
TOLUENE	203-625-9	108-88-3	1.0 - <2.5	H225-304-315-319-332-335-336-361-370-412	Acute Tox. 4 Inhalation, Aquatic Chronic 3, Asp. Tox. 1, Eye Irrit. 2, Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 1, STOT SE 3 NE, STOT SE 3 RTI
EPOXY RESIN BASED ON BISPHENOL F	701-263-0	9003-36-5	1.0 - <2.5	H315-317-411	Aquatic Chronic 2, Skin Irrit. 2, Skin Sens. 1

<u>CAS-No.</u>	<u>M-Factors</u>
25068-38-6	0
14808-60-7	0
13463-67-7	0
78-93-3	0
75864-23-2	0
108-88-3	0
9003-36-5	0

**Remarks:** CAS No. 25068-38-6 identified as CAS No. 1675-54-3, EC No. 216-823-5 under REACH Registration

**Additional Information:** The text for GHS Hazard Statements shown above (if any) is given in Section 16.

## 4. First-aid Measures

### 4.1 Description of First Aid Measures

**AFTER INHALATION:** Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.

**AFTER SKIN CONTACT:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.

**AFTER EYE CONTACT:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**AFTER INGESTION:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness. Toxic to aquatic organisms.

### 4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

When symptoms persist or in all cases of doubt seek medical advice.

## 5. Fire-fighting Measures

### 5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Flammable liquid. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Provide adequate ventilation. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Electrical installations / working materials must comply with the technological safety standards. Wear shoes with conductive soles.

**FOR SAFETY REASONS NOT TO BE USED:** No Information

### 5.2 Special hazards arising from the substance or mixture

No Information

### 5.3 Advice for firefighters

**SPECIAL FIREFIGHTING PROCEDURES:** In the event of fire, wear self-contained breathing apparatus. Cool containers / tanks with water spray. Flammable.

**SPECIAL FIREFIGHTING PROTECTION EQUIPMENT:** No Information

## 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. For personal protection see section 8.

### 6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

### 6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

### 6.4 Reference to other sections

No Information

## 7. Handling and Storage

### 7.1 Precautions for safe handling

**INSTRUCTIONS FOR SAFE HANDLING :** Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Do not breathe vapours or spray mist. Ensure all equipment is electrically grounded before beginning transfer operations. Do not use sparking tools. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection. Wash thoroughly after handling.

**PROTECTION AND HYGIENE MEASURES :** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

**CONDITIONS TO AVOID:** Heat, flames and sparks.

**STORAGE CONDITIONS:** Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

### 7.3 Specific end use(s)

No specific advice for end use available.

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Ingredients with Occupational Exposure Limits (US)

<u>Name</u>	<u>CAS-No.</u>	<u>ACGIH TWA</u>	<u>ACGIH STEL</u>	<u>ACGIH Ceiling</u>
BISPHENOL A EPOXY RESIN	25068-38-6	N/E	N/E	N/E
MICROCRYSTALLINE SILICA	14808-60-7	0.025 MGM3	N/E	N/E
TITANIUM DIOXIDE	13463-67-7	10 mg/m3	N/E	N/E
METHYL ETHYL KETONE	78-93-3	200 PPM	300 PPM	N/E
BLACK IRON MANGANESE OXIDE	75864-23-2	N/E	N/E	N/E
TOLUENE	108-88-3	20 PPM	N/E	N/E
EPOXY RESIN BASED ON BISPHENOL F	9003-36-5	N/E	N/E	N/E

<u>Name</u>	<u>CAS-No.</u>	<u>OSHA PEL</u>	<u>OSHA STEL</u>
BISPHENOL A EPOXY RESIN	25068-38-6	N/E	N/E
MICROCRYSTALLINE SILICA	14808-60-7	0.05 MGM3	N/E
TITANIUM DIOXIDE	13463-67-7	15 MGM3	N/E
METHYL ETHYL KETONE	78-93-3	590 MGM3, 200 PPM	85 MGM3, 300 PPM
BLACK IRON MANGANESE OXIDE	75864-23-2	N/E	N/E
TOLUENE	108-88-3	200 ppm	560 MGM3, 150 PPM
EPOXY RESIN BASED ON BISPHENOL F	9003-36-5	N/E	N/E

**FURTHER ADVICE:** Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation.

### 8.2 Exposure controls

#### Personal Protection

**RESPIRATORY PROTECTION:** In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

**EYE PROTECTION:** Safety glasses with side-shields.

**HAND PROTECTION:** Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious gloves. Request information on glove permeation properties from the glove supplier. Lightweight protective clothing

**OTHER PROTECTIVE EQUIPMENT:** Ensure that eyewash stations and safety showers are close to the workstation location.

**ENGINEERING CONTROLS:** Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance:</b>	Red Or Grey Viscous Liquid
<b>Physical State</b>	Liquid
<b>Odor</b>	Epoxy
<b>Odor threshold</b>	N/D
<b>pH</b>	N/D
<b>Melting point / freezing point (°C)</b>	N/D
<b>Boiling point/range (°C)</b>	173 F (78 C) - 500 F (260 C)
<b>Flash Point (°C)</b>	52F (11C)
<b>Evaporation rate</b>	Slower Than Ether
<b>Flammability (solid, gas)</b>	Not determined
<b>Upper/lower flammability or explosive limits</b>	1.3 - 10.1
<b>Vapour Pressure, mmHg</b>	N/D
<b>Vapour density</b>	Heavier than Air
<b>Relative density</b>	Not determined
<b>Solubility in / Miscibility with water</b>	N/D
<b>Partition coefficient: n-octanol/water</b>	Not determined
<b>Auto-ignition temperature (°C)</b>	Not determined
<b>Decomposition temperature (°C)</b>	Not determined
<b>Viscosity</b>	Unknown
<b>Explosive properties</b>	Not determined
<b>Oxidising properties</b>	Not determined

### 9.2 Other information

<b>VOC Content g/l:</b>	119
<b>Specific Gravity (g/cm<sup>3</sup>)</b>	1.576

## 10. Stability and Reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agents.

**10.6 Hazardous decomposition products**Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.**11. Toxicological Information****11.1 Information on toxicological effects****Acute Toxicity:**

Oral LD50: N/D

Inhalation LC50: N/D

**Irritation:** Eye Irritation and Skin Irritation, category 2**Corrosivity:** Unknown**Sensitization:** Skin Sensitizer, category 1**Repeated dose toxicity:** STOT, repeated exposure, category 1**Carcinogenicity:** Carcinogenicity, category 1A**Mutagenicity:** Unknown**Toxicity for reproduction:** Unknown**STOT-single exposure:** Unknown**STOT-repeated exposure:** Unknown**Aspiration hazard:** Unknown

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested.  
Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>	<u>Gas LC50</u>	<u>Dust/Mist LC50</u>
25068-38-6	BISPHENOL A EPOXY RESIN	11400 mg/kg, rat, oral	23000 mg/kg, dermal, rabbit	>20 mL/kg skin, sensitizer		
14808-60-7	MICROCRYSTALLINE SILICA	22500 mg/kg	Not Available	Not Available	0.000	0.000
13463-67-7	TITANIUM DIOXIDE	25000 mg/kg, oral (rat)	Not Available	Not Available	No Information	No Information
78-93-3	METHYL ETHYL KETONE	2194 mg/kg rat, oral	Not Available	34.5 mg/L/ 4 hour rat, inhalation	0.000	0.000
75864-23-2	BLACK IRON MANGANESE OXIDE	Not Available		Not Available	0.000	0.000
108-88-3	TOLUENE	5000 mg/kg rat oral	12267 mg/kg, dermal, rabbit	8000 ppm/4 hrs, rat, inhalation	0.000	0.000
9003-36-5	EPOXY RESIN BASED ON BISPHENOL F	>5000 mg/kg, oral, rat		Not Available	0.000	0.000

**Additional Information:**

This product contains silica which is classified by IARC as a known human carcinogen (Group 1). Crystalline silica is known to cause silicosis. The classification(s) is/are relevant when exposed to these respirable substances in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

## 12. Ecological Information

**12.1 Toxicity:**

EC50 48hr (Daphnia):	Unknown
IC50 72hr (Algae):	Unknown
LC50 96hr (fish):	Unknown

**12.2 Persistence and degradability:** Unknown

**12.3 Bioaccumulative potential:** Unknown

**12.4 Mobility in soil:** Unknown

**12.5 Results of PBT and vPvB assessment:** The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

**12.6 Other adverse effects:** Unknown

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
25068-38-6	BISPHENOL A EPOXY RESIN	2.1 mg/l (daphnia)	11 mg/l (algae)	1.3 mg/l (fish)
14808-60-7	MICROCRYSTALLINE SILICA	No information	No information	No information
13463-67-7	TITANIUM DIOXIDE	No information	No information	No information
78-93-3	METHYL ETHYL KETONE	308 mg/l (Daphnia magna)	No information	2993 mg/l (Pimephales promelas)
75864-23-2	BLACK IRON MANGANESE OXIDE	No information	No information	No information
108-88-3	TOLUENE	6 mg/l (Daphnia magna)	12.5 mg/L (Algae)	5.8 mg/L (Fish)
9003-36-5	EPOXY RESIN BASED ON BISPHENOL F	1.6 mg/l (Daphnia Magna)	1.8 mg/l (Green Algae)	0.55 mg/l (Rainbow Trout)

## 13. Disposal Considerations

**13.1 WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.



## 14. Transport Information

14.1 UN number	UN1263
14.2 UN proper shipping name	Paint
Technical name	N/A
14.3 Transport hazard class(es)	3
Subsidiary shipping hazard	N/A
14.4 Packing group	II
14.5 Environmental hazards	Marine Pollutant: Yes (Epoxy Resin)
14.6 Special precautions for user	Unknown
EmS-No.:	F-E, S-E
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Unknown

## 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation for the substance or mixture:

### U.S. Federal Regulations: As follows -

#### CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Flammable (gases, aerosols, liquids, or solids), Carcinogenicity, Skin Corrosion or Irritation, Respiratory or Skin Sensitization, Serious eye damage or eye irritation, Specific target organ toxicity (single or repeated exposure)

#### Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>%</u>
METHYL ETHYL KETONE	78-93-3	6.52
TOLUENE	108-88-3	2.17

#### Toxic Substances Control Act:

All components of this product are either listed on the TSCA Inventory or are exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

### U.S. State Regulations: As follows -

#### New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS-No.</u>
IRON OXIDE	1309-37-1
ALUMINUM SILICATE	1332-58-7

## Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS-No.</u>
IRON OXIDE	1309-37-1
ALUMINUM SILICATE	1332-58-7
black iron oxide	68186-94-7

## CALIFORNIA PROPOSITION 65

WARNING: Cancer and Reproductive Harm -- [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## International Regulations: As follows -

### \* Canadian DSL:

All chemical ingredients included on inventory (DSL)

### 15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## 16. Other Information

### Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

### Reasons for revision

No Information

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.