SAFETY DATA SHEET

Issue Date 03-Jun-2016 **Revision Date** 03-Jun-2016 **Version** 1

1. IDENTIFICATION

Product identifier
Product Name EC-R590 / CP-926 Hardener

Other means of identification
Product Code 946BC
UN/ID no UN3066
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Industrial Coatings
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
BLOME INTERNATIONAL
1450 Hoff Industrial Drive
O'Fallon, MO 63366

Emergency telephone number
Company Phone Number 636-379-9119
Emergency Telephone CHEMTREC: 800-424-9300
CHEMTREC: 703-527-3887
CANUTEC: 613-966-6666

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1

Label elements

Emergency Overview

Danger

Hazard statements
Harmful in contact with skin
Causes severe skin burns and eye damage
May cause an allergic skin reaction

Appearance viscous **Physical state** liquid **Odor** Amine

Precautionary Statements - Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

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
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
May be harmful if swallowed. Toxic to aquatic life with long lasting effects.

Unknown acute toxicity
40% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

Chemical Name	CAS No	Weight-%
Triethylenetetramine *	112-24-3	30 - 60
Polyamidoamine *	Proprietary	30 - 60
Tetraethylenepentamine *	112-57-2	1 - 5

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. For minor skin contact, avoid spreading material on unaffected skin. If skin irritation persists, call a physician.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Drink plenty of water. Do not induce vomiting without medical advice.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effects, both acute and delayed

Symptoms Causes skin and eye burns. May result in permanent damage including blindness. May cause allergic skin reaction. Coughing and/ or wheezing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Keep victim warm and quiet. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO2, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Runoff may pollute waterways.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

Environmental precautions

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

Methods and material for containment and cleaning up

Methods for containment Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Methods for cleaning up Cover liquid spill with sand, earth or other non-combustible absorbent material. Use personal protective equipment as required. Dam up. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible materials Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	viscous	**Odor**	Amine
Color	amber	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	

Melting point / freezing point	No information available	
Boiling point / boiling range	> 120 °C / 248 °F	
Flash point	> 100 °C / 212 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	0.96	
Water solubility	dispersible	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	Not an explosive	
Oxidizing properties	Not applicable	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	0 g/L
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
Hazardous polymerization does not occur.
Conditions to avoid
Elevated Temperature. Incompatible materials.
Incompatible materials
Strong oxidizing agents. Strong acids. Strong bases.
Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	May cause burns. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	Can burn mouth, throat, and stomach.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Triethylenetetramine	= 2500 mg/kg (Rat)	= 550 mg/kg (Rabbit)	-

112-24-3			
Tetraethylenepentamine 112-57-2	= 3990 mg/kg (Rat)	= 660 µL/kg (Rabbit)	-

Information on toxicological effects

Symptoms May cause an allergic skin reaction. Causes skin burns. May cause redness and tearing of the eyes. May result in permanent damage including blindness. Coughing and/ or wheezing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization in susceptible persons.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT - single exposure Target Organs. Respiratory system. Eyes. Skin.
STOT - repeated exposure Based on available data, the classification criteria are not met.
Target Organ Effects Eyes, Respiratory system, Skin.
Aspiration hazard Based on available data, the classification criteria are not met.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 2,206.00 mg/kg
ATEmix (dermal) 1,100.00 mg/kg mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life with long lasting effects

40 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Triethylenetetramine 112-24-3	2.5: 72 h Desmodesmus subspicatus mg/L EC50 20: 72 h Pseudokirchneriella subcapitata mg/L EC50 3.7: 96 h Pseudokirchneriella subcapitata mg/L EC50	570: 96 h Poecilia reticulata mg/L LC50 semi-static 495: 96 h Pimephales promelas mg/L LC50	31.1: 48 h Daphnia magna mg/L EC50
Tetraethylenepentamine 112-57-2	2.1: 72 h Pseudokirchneriella subcapitata mg/L EC50	420: 96 h Poecilia reticulata mg/L LC50 static	24.1: 48 h Daphnia magna mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation

Chemical Name	Partition coefficient
Triethylenetetramine 112-24-3	-1.4
Tetraethylenepentamine 112-57-2	<1

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and

regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number D002

14. TRANSPORT INFORMATION

DOT

UN/ID no	UN3066
Proper shipping name	Paint
Hazard Class	8
Packing Group	III
Special Provisions	B52, IB3, T4, TP1, TP29
Description	UN3066, Paint, 8, III
Emergency Response Guide Number	153

TDG

UN/ID no	UN3066
Proper shipping name	Paint
Hazard Class	8
Packing Group	III
Description	UN3066, Paint, 8, III

IATA

UN/ID no	UN3066
Proper shipping name	Paint
Hazard Class	8
Packing Group	III
ERG Code	8L
Special Provisions	A3, A72, A803, A192
Description	UN3066, Paint, 8, III

IMDG

UN/ID no	UN3066
Proper shipping name	Paint
Hazard Class	8
Packing Group	III
EmS-No	F-A, S-B
Special Provisions	163, 223
Description	UN3066, Paint, 8, III

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Triethylenetetramine 112-24-3	X	X	X
Tetraethylenepentamine 112-57-2	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 3	**Flammability** 1	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 3	**Flammability** 1	**Physical hazards** 0	**Personal protection** X

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Revision Note
No information available

Disclaimer

The information provided in this Material 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.

End of Safety Data Sheet