



SAFETY DATA SHEET

Issue Date 06-Sep-2011

Revision Date 29-May-2013

Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name PC ROT TERMINATOR, HARDENER

Other Means of Identification

SDS # 130519-13

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Adhesives.

Details of the Supplier of the Safety Data Sheet

Supplier Address

Protective Coatings Co.
221 S Third St.
Allentown, PA 18102 USA

Emergency Telephone Number

Company Phone Number 610-432-3543 / 800-220-2103
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin sensitization	Category 1

Signal Word

Warning

Hazard Statements

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction



Appearance Light yellow liquid

Physical State Liquid

Odor Amine-like

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapors/spray
 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
 Get medical attention if irritation occurs
 IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash it before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
TOFA, reaction products with TEPA	68953-36-6	70-90
Tetraethylenepentamine	112-57-2	10-20

Product contains a proprietary mixture of ingredients.

4. FIRST AID MEASURES

First Aid Measures

General Advice	Provide this SDS to medical personnel for treatment. After first aid, get appropriate in-plant, paramedic, or community medical support.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation occurs.
Skin Contact	Wash with soap and water. Remove and wash contaminated clothing before reuse. Get medical attention if irritation occurs.
Inhalation	Remove to fresh air. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. If a person vomits when lying on his back, place him in recovery position. Prevent aspiration of vomit. Turn victim's head to the side.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms

Causes eye irritation. Causes skin irritation. Direct contact may cause temporary redness and discomfort. If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. May cause delayed lung injury. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

Indication of any Immediate Medical Attention and Special Treatment Needed**Note to Physicians**

Skin and eye conditions may be aggravated by long term exposure.
Medical Conditions Aggravated by Long-Term Exposure: skin disorders, asthma, allergies and eye conditions.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Alcohol-resistant foam, Carbon dioxide (CO₂), Dry chemical, Dry sand and Limestone powder.

Unsuitable Extinguishing Media Water.

Specific Hazards Arising from the Chemical

May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses. Incomplete combustion may form carbon monoxide. Downward personnel must be evacuated. Burning produces obnoxious and toxic fumes.

Hazardous Combustion Products CO, CO₂, ammonia, and nitrogen compounds.

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. Wear butyl rubber boots, gloves, and bodysuit. Keep containers cool with water spray. Wear positive pressure self-contained breathing apparatus (SCBA). Do not release runoff from fire control methods to sewers or waterways. NFPA Class IIIB.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures**Personal Precautions**

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid breathing vapors, mist or gas. Remove any contaminated clothing and wash thoroughly before reuse. Evacuate personnel to safe areas.

For Emergency Responders

Follow applicable OSHA regulations (29 CFR 1910.120).

Environmental Precautions

See Section 12 for additional ecological information.

Methods and Material for Containment and Cleaning Up**Methods for Containment**

Prevent further leakage or spillage if safe to do so. For large spills, dike far ahead of liquid spill for later disposal.

Methods for Cleaning Up

Soak up in adsorbent material such as sand and collect in suitable containers. Residual resin may be removed using steam or hot soapy water. Dispose of contents/container to an approved waste disposal plant. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Do not eat, drink or smoke when using this product. Wash face, hands, and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store contents under <90F (32C) . NFPA Class IIIB storage.

Incompatible Materials Strong acids, Bases, Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines The following information is given as general guidance

Appropriate Engineering Controls

Engineering Controls Provide general or local exhaust ventilation if product is sanded or ground.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection Chemical safety goggles/faceshield.

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid	Odor	Amine-like
Appearance	Light yellow liquid	Odor Threshold	Not determined
Color	Yellow		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	Not determined		
Melting Point/Freezing Point	Not data		
Boiling Point/Boiling Range	> 204 °C / >399.2 °F		
Flash Point	195 °C / 383 °F	CC (closed cup)	
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Not determined		
Upper Flammability Limits	Not available		
Lower Flammability Limit	Not available		
Vapor Pressure	<5.17mm Hg	@ 21 °C (70 °F)	
Vapor Density	Not data		
Relative Density (Specific Gravity)	0.95	(1=Water)	
Water Solubility	Slightly soluble		
Solubility in Other Solvents	Not determined		
Partition Coefficient	Not determined		

Autoignition Temperature	Not available
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive Properties	Not determined
Oxidizing Properties	Not determined
VOC Content	0 grams/liter

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Strong acids, Bases, Oxidizing agents.

Hazardous Decomposition Products

Thermal oxidative decomposition can produce CO, CO₂ in a fire.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Eye Contact	Causes serious eye irritation.
Skin Contact	Causes skin irritation.
Inhalation	May cause irritation of respiratory tract.
Ingestion	May cause discomfort if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Tetraethylenepentamine 112-57-2	= 2100 mg/kg (Rat)	= 660 mg/kg (Rabbit)	-

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Sensitization May cause an allergic skin reaction.

Carcinogenicity

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical Measures of Toxicity

Product Information

Oral LD50	> 2000 mg/kg (rat)
Dermal LD50	8550 mg/kg (rabbit)
Inhalation LC50	No Data

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
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

Not determined

Bioaccumulation

Not determined

Mobility

Chemical Name	Partition Coefficient
Tetraethylenepentamine 112-57-2	<1

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods**Disposal of Wastes**

Contact your supplier or a licensed contractor for detailed recommendations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Listed
DSL	Listed
EINECS	Listed
ENCS	Listed
IECSC	Listed
KECL	Listed
PICCS	Listed
AICS	Listed

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

Not determined

US State Regulations

U.S. State Right-to-Know Regulations

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

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards 2	Flammability 1	Instability 0	Special Hazards Not determined
<u>HMIS</u>	Health Hazards 2	Flammability 1	Physical Hazards 0	Personal Protection B- Safety Glasses, Gloves

Issue Date	06-Sep-2011
Revision Date	29-May-2013
Revision Note	New format

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.

End of Safety Data Sheet



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Revision Date 29-May-2013

Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name PC ROT TERMINATOR, RESIN

Other Means of Identification

SDS # 130519-12

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Adhesives.

Details of the Supplier of the Safety Data Sheet

Supplier Address

Protective Coatings Co.
221 S Third St.
Allentown, PA 18102 USA

Emergency Telephone Number

Company Phone Number 610-432-3543 / 800-220-2103
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin sensitization	Category 1

Signal Word

Warning

Hazard Statements

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction



Appearance Colorless liquid

Physical State Liquid

Odor Epoxy

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapors/spray
 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
 Get medical attention if irritation occurs
 IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash it before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Polymer of epichlorohydrin and bisphenol A	25085-99-8	60-80
Neopentyl Glycol diglycidyl ether	17557-23-2	10-20
Alkyl (C12-14) glycidyl ether	68609-97-2	10-20

Product contains a proprietary mixture of ingredients.

4. FIRST AID MEASURES

First Aid Measures

General Advice	Provide this SDS to medical personnel for treatment. After first aid, get appropriate in-plant, paramedic, or community medical support.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation occurs.
Skin Contact	Wash with soap and water. Remove and wash contaminated clothing before reuse. Get medical attention if irritation occurs.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Remove stomach contents by medical personnel only. Immediate medical attention is required.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms	Causes eye irritation. Direct contact may cause temporary redness and discomfort. Causes skin irritation. May cause respiratory irritation. Ingestion may cause nausea, vomiting, dizziness, and headache, Coma.
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Indication of any Immediate Medical Attention and Special Treatment Needed**Note to Physicians**

Skin and eye conditions may be aggravated by long term exposure.
 Medical Conditions Aggravated by Long-Term Exposure: skin disorders and allergies and eye conditions.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO₂), Dry chemical, Alcohol foam.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Ignition will give rise to a Class B fire. May generate toxic or irritating combustion products. May generate carbon monoxide gas.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO₂), Phenolic compounds.

Protective Equipment and Precautions for Firefighters

Keep containers cool with water spray. Wear butyl rubber boots, gloves, and bodysuit. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Do not release runoff from fire control methods to sewers or waterways. NFPA Class IIIB.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures**Personal Precautions**

Wear protective gloves/protective clothing and eye/face protection. Remove any contaminated clothing and wash thoroughly before reuse.

For Emergency Responders

Follow applicable OSHA regulations (29 CFR 1910.120).

Environmental Precautions

See Section 12 for additional ecological information.

Methods and Material for Containment and Cleaning Up**Methods for Containment**

Prevent further leakage or spillage if safe to do so. For large spills, dike far ahead of liquid spill for later disposal.

Methods for Cleaning Up

Dispose of contents/container to an approved waste disposal plant. Soak up in adsorbent material such as sand and collect in suitable containers. Residual resin may be removed using steam or hot soapy water. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Precautions for Safe Handling**Advice on Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Do not eat, drink or smoke when using this product. Wash face, hands, and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Conditions for Safe Storage, Including any Incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store contents under <90F (32C) . NFPA Class IIIB storage.

Incompatible Materials Strong acids, Bases, Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines The following information is given as general guidance

Appropriate Engineering Controls

Engineering Controls Provide general or local exhaust ventilation systems if possible. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection Chemical safety goggles/faceshield.

Skin and Body Protection Wear chemically protective gloves to prevent skin contact. Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid	Odor	Epoxy
Appearance	Colorless liquid	Odor Threshold	Not determined
Color	Colorless		
Property	Values	Remarks • Method	
pH	Not determined		
Melting Point/Freezing Point	0 °C / 32 °F		
Boiling Point/Boiling Range	> 148.88 °C / >300 °F		
Flash Point	177 °C / 350 °F	CC (closed cup)	
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Not determined		
Upper Flammability Limits	Not available		
Lower Flammability Limit	Not available		
Vapor Pressure	0.06 mm Hg	@ 21 °C (70 °F)	
Vapor Density	Not data		
Relative Density (Specific Gravity)	1.11 @ 4 °C	(1=Water)	
Water Solubility	Insoluble in water		
Solubility in Other Solvents	Not determined		
Partition Coefficient	Not determined		
Autoignition Temperature	Not available		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Same as water		
Dynamic Viscosity	Same as water		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		
VOC Content	0 grams/liter		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Strong acids, Bases, Oxidizing agents.

Hazardous Decomposition Products

Thermal oxidative decomposition can produce CO, CO₂ in a fire.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Eye Contact Causes serious eye irritation.

Skin Contact Causes skin irritation.

Inhalation May cause irritation of respiratory tract.

Ingestion May cause nausea, vomiting, stomach ache, and diarrhea.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Polymer of epichlorohydrin and bisphenol A 25085-99-8	>2000 mg/kg (rat)	>2000 mg/kg (rabbit)	-
Alkyl (C12-14) glycidyl ether 68609-97-2	= 17100 mg/kg (Rat)	-	-
Neopentyl Glycol diglycidyl ether 17557-23-2	= 4500 mg/kg (Rat)	-	-

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Sensitization May cause an allergic skin reaction.

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical Measures of Toxicity

Not determined

12. ECOLOGICAL INFORMATION**Ecotoxicity**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and Degradability

Not determined

Bioaccumulation

Not determined

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Contact your supplier or a licensed contractor for detailed recommendations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated

IATA

Not regulated

IMDG

Not regulated

15. REGULATORY INFORMATION**International Inventories**

Not Determined

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

US Federal Regulations**SARA 313**

Not determined

US State Regulations**U.S. State Right-to-Know Regulations**

Not Determined

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	1	1	0	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	1	1	0	B- Safety Glasses, Gloves

Issue Date	06-Sep-2011
Revision Date	29-May-2013
Revision Note	New format

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End of Safety Data Sheet