NAME OF PRODUCT: PROTECT-AM-W-GRE-B MSDS DATE: 1/10/14

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Protect-AM-W-GRE-B

PRODUCT CODES: Protect- AM-W-GRE-B /1, Protect- AM-W-GRE-B /5F, Protect- AM-W-GRE-B /5

MANUFACTURER: Protective Industrial Polymers

ADDRESS: 7875 Bliss Parkway North Ridgeville, Ohio 44039

EMERGENCY PHONE:

CHEMTREC PHONE: 800-424-9300 (outside USA) 703-527-3887

OTHER CALLS: 440-243-4560

PRODUCT USE: Industrial Use Only

PREPARED BY: MEY

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

CAS NO. <u>% WT</u> <u>Name</u> 9046-10-0 30-55 Alpha-(2-aminomethylethyl)-omega-(2-aminoethylethoxy)poly(oxy(methyl-1,2-ethandiyl) 25154-52-3 20-40 Nonyl Phenol 140-31-8 5-20 1-(2-Ainoethyl) piperazine 98-54-4 5-15 4-tert-butylphenol

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful if swallowed; Harmful in contact with skin; Corrosive, Severe skin irritant; Severe eye irritant; Severe respiratory irritant; May cause sensitization by skin contact.

Pale yellow syrupy liquid with a mild amine odor.

ROUTES OF ENTRY: Eyes, Skin, respiratory tract

POTENTIAL HEALTH EFFECTS

EYE: May cause severe irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Vapors may irritate eyes.

SKIN CONTACT: May cause severe injury to skin following prolonged or repeated contact, and may cause skin sensitization or other allergic responses.

SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts.

INGESTION: Single dose oral toxicity is low. The oral LD50 is 1750 mg/Kg (rat). Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat. INHALATION: May cause respiratory sensitization or asthma in susceptible individuals.

Excessive exposure may cause irritation to upper respiratory tract.

SYSTEMIC & OTHER EFFECTS: Results of in vitro ("test tube") mutagenicity tests have been negative

ACUTE HEALTH HAZARDS: yes

CHRONIC HEALTH HAZARDS: contains no listed carcinogens. Repeated and long term contact will cause sensitization. May cause asthma and eczema

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: This material or its emissions may aggravate pre-existing eye disease. Pre-existing skin disorders.

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SECTION 4: FIRST AID MEASURES

EYES:Immediately flush the eye with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower lids. If pain or irritation persists, promptly obtain medical attention.

SKIN: Remove contaminated clothing as needed. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. If stickly, use waterless cleaner first. Seek medical attention of ill effect or irritation develops.

INGESTION: If product is ingested, do not induce vomiting and contac a physican or Poisin Control Center.

INHALATION: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically. Corticosteroid cream has been very effective at teating skin irritation.

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Alcohol resistant foam (preferred), water, Water fog, , CO2, dry chemical, dry sand, limestone powder. FIRE & EXPLOSION HAZARDS: None known, treat as combustible.

FIRE-FIGHTING EQUIPMENT: Use a positive pressure, self-contained breathing apparatus and protective clothing.

NFPA HAZARD CLASSIFICATION

HEALTH: 3 FLAMMABILITY: 1 REACTIVITY: 0

OTHER:

HMIS HAZARD CLASSIFICATION

HEALTH: 3 FLAMMABILITY: 1 REACTIVITY: 0

PROTECTION:

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus and turnout gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions

Follow facility/company's emergency plans.

Environmental Precautions

Stop the flow of material, if this is without risk. Eliminate sources of ignition. Ventilate the contaminated area. Contain the spill and prevent the material from obtaining access to any confined spaces, public sewers, or waterways.

Methods for Clean-Up

Ventilate the contaminated area. Eliminate ignition sources including sources of electrical, static or frictional sparks. Collect the material

using absorbents, non-sparking tools, explosion-proof vacuums or other equipment required by the size of the release.

Decontaminate

the area, collecting any cleaning and rinsing media for proper reclamation or disposal.

Other Information

Wear appropriate protective equipment and clothing during clean-up. Determine appropriate course of action for the collected material.

Regulations vary. Consult local authorities before disposal.

Exposure Guidelines

All PPE use is to be determined by a qualified person.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid all sources of ignition: heat, sparks, and open flames.

OTHER PRECAUTIONS:For Industrial Use Only. Keep container tightly closed when not in use. Do not store together with oxidizing and acidic materials. Store between 5 and 40 degrees c (40- 110 degrees farenheit) and avoid contact with skin and eyes. Do not store near acids. This product should not come in contact with copper or copper-bearing equipment.

SECTION 7 NOTES: Keep container tightly closed and dry; store in a cool place.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Control airborne concentration below the exposure guideline. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure quideline. When respiratory protection is required for certain operations, use an approved airpurifying respirator.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse. Contaminated leather items, such as shoes, belts and watchbands, should be removed and destroyed.

ENGINEERING CONTROLS:Proper industrial hygiene practices are required for workers and should be achieved through engineering controls including ventilation with a high turn over rate whenever feasible. When such controls are not available or not feasible to achieve full protection, respirators for workers and other personal protective equipment is mandated. Exhause air may need to be filters to reduce environmental contamination and odors.

EYE PROTECTION: Wear Safety goggles or safely glasses with side shields when handling and mixing this material.

WORK HYGIENIC PRACTICES: Always follow Good personal hygiene practices when working with this material.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: straw colored liquid

ODOR: ammonical-amine PHYSICAL STATE: liquid

Relative Density: 1.00

Vapor Pressure: <21 mm Hg at 20 degrees C

Boiling Point: >435 degrees F Flash Point: > 100 degrees C

Water Solubility: very slightly soluble

pH; 12-1 % solution Viscosity: 400 mPa.s

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:

(CONDITIONS TO AVOID) Store away from oxidizing agents

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) no further relevant information available.

HAZARDOUS DECOMPOSITION PRODUCTS: irritant gases/vapors, nitrogen oxides, ammonia, carbon monoxide and carbon

dioxide, nitrogen oxides

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: Toxicological Information

TOXICOLOGICAL INFORMATION: LD50 data is not available for this product. Toxicity of this product may be attributed to the combination of the chemicals contained in this product.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

No environmental data has been established or is available for this product. Please refer to the information for each individual component.

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SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Dispose of in a licensed facility. Do not discharge into waterways or swere systems without proper authorization.

SECTION 14: TRANSPORT INFORMATION

D.O.T. Shipping Name:

UN 2735, Amines, Liquid, Corrosive, n.o.s. (contains polyetheramine, nonyl phenol), 8,PGIII

SECTION 15: REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown in this document are maximum or ceiling levels (expressed in weight %, unless otherwise specified) to be used for regulations. Trade Secrets are indicated by "TS". FEDERAL EPA:

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, and LIABILITY ACT of 1980 (CERCLA):

Requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQ's) in 40 CFR 302.4. Components present in this product at level which could require reporting under the statute are: Chemical Name CAS Number % By Weight RQ NONE

SUPERFUND AMENDMENTS and REAUTHORIZATION ACT of 1986 (SARA) TITLE III: Sections 301-304 require emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355. Components present in this product at a level which could require reporting under this statute are: Chemical Name CAS Number % By Weight

NONE

Sections 311-312 require products be reviewed and applicable EPA Hazard Definitions be identified and made known.

EPA HAZARD CLASSIFICATIONS:

Acute Chronic Fire Pressure Reactive Hazard Hazard Hazard Hazard Hazard Yes ves no no no no

Section 313 requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at level which could require reporting under the statute are:

Chemical Name CAS Number % By Weight

NONE U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT):

All ingredients in this mixture are listed with the TSCA Chemical Substance Inventrory

STATE REGULATIONS:

INTERNATIONAL REGULATIONS: The components in this product are listed on or are exempt from the European Inventory of Existing Chemical Substances (EINECS) or the European List of Notified Chemical Substances (ELINCS)

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER: This MSDS to the best of our knowledge conforms to the requirements of OSHA 20 CFR 1910.1200, 91/155/EEC and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Eash user mush review the MSDS in the context of how the product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Responsibility for the product sold is subject to our standard terms and conditions, a copy of which is available upon request. This company warrants only that its products meet the specifications stated in the sales contract. Typical

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MSDS DATE: 1/10/14 properties, where stated, are to be considered as representative of current production and should not be treated as specifications. While all the information presented in this document is believed to be relable and to represent the best available data on these prudcts, NO Guarantee, Warranty, or representation is made, intended, or implied as to the correctness, or sufficiency of any information, or as to the merchantability or suitability or fitness of any chemical compounds or other products for any use therof and are not subject to a claim by a third party for infringement of any patent or other intellectual property right. Some of the information presented and conclusions drawn herin are from sources other than direct test data on the product itself. Liability by this company for all claims, whether arising out of breach of warranty, negligence, strict liability, or otherwise, is limited to the purchase price of the material. Products may be toxic and require special precautions in handling. For all products listed, the user should obtain detailed information on toxicity, together with the proper standards. Toxicity and risk characteristics of chemical compounds of products may differ when used with other materials or in a manufacturing or other process. Those risk characteristics should be determined by the user and made know to handlers, processors, and end users.