



Value beyond chemistry

Effective Date: 7/27/98

Material Safety Data Sheet

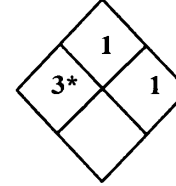
MSDS No: 60721

1. PRODUCT IDENTIFICATION

Trade Name: HARDENER HW 8811

Material Code: FPC3350

Chemical Family: Filled Modified Aromatic Amine



NFPA RATING

2. COMPOSITION / INFORMATION ON INGREDIENTS

| O<br>S<br>H<br>A | CAS#       | CHEMICAL IDENTITY   | EXPOSURE LIMITS |      |      |      |                     | CARCINOGEN STATUS |     |      |
|------------------|------------|---|-----------------|------|------|------|---------------------|-------------------|-----|------|
|                  |            |   | ACGIH           |      | OSHA |      | MFR.                | IARC              | NTP | OSHA |
|                  |            |   | TWA             | STEL | PEL  | STEL |                     |                   |     |      |
| *                | 102-60-3   | TETRAPROPOXYLATED<br>ETHYLENEDIAMINE<br>Concentration .00 - 10.00 % by wt                             | NE              | NE   | NE   | NE   | NE                  | NR                | NR  | NR   |
| *                | 1330-78-5  | PHOSPHORIC ACID,<br>TRIS(METHYLPHENYL) ESTER<br>Concentration 10.00 - 30.00 % by wt                   | NE              | NE   | NE   | NE   | NE                  | NR                | NR  | NR   |
| *                | 19900-65-3 | Benzenamine, 4,4'-methylenebis[2-ethyl-<br>Concentration 10.00 - 30.00 % by wt                        | NE              | NE   | NE   | NE   | TWA<br>.08<br>mg/m3 | NR                | NR  | NR   |
| *                | 5285-60-9  | BIS-(ALKYLAMINO)<br>DIPHENYLMETHANE<br>Concentration .00 - 10.00 % by wt                              | NE              | NE   | NE   | NE   | NE                  | NR                | NR  | NR   |
| *                | 67762-90-7 | Siloxanes and silicones, di-me,<br>reaction products with silica<br>Concentration .00 - 10.00 % by wt | NE              | NE   | NE   | NE   | NE                  | NR                | NR  | NR   |
| *                | 68333-79-9 | AMMONIUM<br>POLYPHOSPHATE<br>Concentration 30.00 - 60.00 % by wt                                      | NE              | NE   | NE   | NE   | NE                  | NR                | NR  | NR   |

NE = Not Established NR = Not Reviewed \* = OSHA Hazardous Ingredient

### 3. HAZARDS IDENTIFICATION

**Emergency Overview:** WARNING!!! Causes severe eye irritation. Causes skin irritation and possible allergic skin reaction. Harmful if inhaled. Harmful if swallowed.

**Primary Route(s) of Entry:** Dermal, inhalation.

**Potential Health Effects:** Breathing of large quantity of vapor or mist may cause neurological disturbances which may progress to delayed neurotoxicity characterized by ATAXIA. Substance is severely irritating to eyes and possibly permanent injury. Substance is severely irritating to skin and harmful if absorbed through skin. Swallowing of large quantity may cause neurological disturbances which may progress to delayed neurotoxicity characterized by ATAXIA.

**Chronic:** Prolonged or repeated exposure can cause allergic reaction and liver and thyroid damage. Repeated overexposure may cause neurological disturbances which may progress to delayed neurotoxicity characterized by ATAXIA.

### 4. FIRST AID MEASURES

**Ingestion:** If swallowed dilute by giving two (2) glasses water to drink. See a physician. Never give anything by mouth to an unconscious person.

**Skin:** For skin contact, wash affected areas with plenty of water, and soap, if available, for several minutes. Get medical attention if irritation occurs.

**Inhalation:** If inhaled, remove from area to fresh air. If not breathing, give artificial respiration. Get immediate medical attention. If breathing is difficult, transport to medical care and, if available, give supplemental oxygen.

**Eyes:** For eye contact, flush eyes with plenty of water for several minutes. Get medical attention if irritation occurs.

**Note to Physician:** Allergic dermatitis or respiratory response in susceptible individuals may be delayed. It may appear after weeks or even months of frequent and prolonged contact.

**Medical Conditions Aggravated by Exposure:** Allergy, eczema, eye or respiratory conditions.

**Additional Information:** Promptly remove wet contaminated non-impervious clothing. Wash before reuse.

### 5. FIRE FIGHTING MEASURES

**Flash Point:** > 94°C (> 201 °F)  
**Flash Point Method Used:** Closed Cup

**Fire Fighting Extinguishing Media:** Carbon dioxide, foam, dry chemical, water spray.

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**Fire Fighting Equipment:** Use self-contained breathing apparatus and full protective clothing.

**Fire and Explosion Hazards:** Do not use a solid stream of water. A solid stream of water can spread fire.

**Hazardous Combustion Products:** Decomposition and combustion products may be toxic.

## 6. ACCIDENTAL RELEASE MEASURES

**Accidental Release Measures:** Use protective equipment. Clean-up all traces of spill. As much as possible shovel material into clean, dry containers. On hard surfaces use absorbent material to pick up remainder and on loose surfaces shovel-up contaminated layer.

## 7. HANDLING AND STORAGE

**Signal Word:** Warning !

**Precautions:** Do NOT get in eyes, on skin, or clothing. Wear chemical splash goggles and impervious gloves when handling. Wash skin and clothing thoroughly after handling. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep containers closed when not in use. Do NOT take internally.

**Other Handling Information:** In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid contact with eyes and prolonged or repeated skin contact. Do not inhale mists. Use with adequate ventilation. For industrial use only.

**Storage Information:** STORAGE TEMPERATURE: 35°C, maximum. Store indoors in a cool, dry area with adequate ventilation.

**Additional Information:** PLEASE READ TECHNICAL DATA SHEET BEFORE HANDLING THE PRODUCT. KEEP OUT OF THE REACH OF CHILDREN. FOR INDUSTRIAL USE ONLY.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Personal Protective Equipment:** Eye bath and safety shower should be available. Wear protective clothing.

**Exposure Guidelines:** Wash thoroughly after handling and before eating, drinking, or using tobacco products.

**Skin Protection:** Wear impervious gloves.

**Respiratory Protection:** Wear respirator (MSHA/NIOSH or approved equivalent) suitable for concentrations and type of air contaminants encountered.

**Eye Protection:** Wear safety glasses or goggles.

**Engineering Controls:** Good general mechanical ventilation and local exhaust if needed.

**Emergency Response Protection:** Wear breathing apparatus (MSHA/NIOSH-approved, pressure demand, self-contained or equivalent) and full protective gear.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                             |                                      |
|-----------------------------|--------------------------------------|
| <b>Appearance:</b>          | Soft Paste                           |
| <b>Color:</b>               | Dark Brown                           |
| <b>Odor:</b>                | Ammoniacal                           |
| <b>Solubility in Water:</b> | Negligible                           |
| <b>Viscosity:</b>           | Soft Paste                           |
| <b>Vapor Pressure:</b>      | < 1 mm Hg at 20°C (68 °F)            |
| <b>Specific Gravity:</b>    | ~ 1.25                               |
| <b>Evaporation Rate:</b>    | < 1 (Butyl Acetate = 1)              |
| <b>Vapor Density:</b>       | ~ 1 (Air = 1)                        |
| <b>VOC:</b>                 | 14 g/L (This is an estimated value.) |

**10. STABILITY AND REACTIVITY****Conditions to Avoid:** Elevated temperatures.**Stability:** Stable under normal conditions.**Incompatibility:** Acids, amines, strong bases.**Hazardous Decomposition Products:** Carbon Monoxide, carbon dioxide, oxides of nitrogen, and phosphoric acid.**Hazardous Polymerization:** Will not occur.**11. TOXICOLOGICAL INFORMATION****Acute Oral Effects (LD50):** >742mg/Kg (rats) (components)**Skin Irritation:** Severe skin irritant.**Eye Irritation:** Severe eye irritant.**Mutagenicity:** Tests for Benzeneamine, 4,4'-methylenebis[2-ethyl-:

Ames Test - inactive without S9 and active with S9 activation

BALB/C3T3 Transformation Assay - inactive

BALB/C3T3 Transformation Assay with S9 activation - inactive

Chinese Hamster Ovary HGPRT Assay with activation - negative

Chinese Hamster Ovary Chromosomal Aberration: without S9 activation - negative

Chinese Hamster Ovary Chromosomal Aberration: with S9 activation - negative

Rat Hepatocyte DNA Repair Assay - positive

In vitro Liver Microsome N-hydroxylation Assay - positive

**Neurotoxicity:** Phosphoric acid, tris(phenyl methyl) ester: A commercially available tricresyl phosphate containing < 1% of tri-ortho-cresyl phosphate isomer was administered to mice and rats by stomach tube 5 days per week for 13 weeks at dose levels of 800, 400, 200, 100, 50 and 0 (vehicle control) mg/Kg body weight.

Exposed mice and rats exhibited evidence of neurotoxicity; decreased body, lung, thymus and testicle weight; increased liver weight; inhibition of serum cholinesterase, microscopic lesions in the spinal cord, adrenal cortex, testes and ovaries; and significant effects on the sperm morphology. (unpublished results of the National Toxicology Program {NTP}).

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**Chronic Exposure Effects:** Tests for Benzeneamine, 4,4'-methylenebis[2-ethyl-]: There is experimental evidence that analogous substances have caused tumors in rodents. Analogous substances have caused damage to liver and thyroid in test animals.

## 12. ECOLOGICAL INFORMATION

**Biodegradability:** No information available.

**Ecotoxicity:** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Incinerate in approved equipment. Landfill or incinerate contaminated material in accordance with local, state, and federal regulations.

**RCRA Hazard Class:** Not a hazardous waste under RCRA (40 CFR 261)

## 14. TRANSPORT INFORMATION

**DOT: Non-Bulk**

**Proper Shipping Name:** Not Regulated

**IATA: Non-Bulk**

**Proper Shipping Name:** Not Regulated

## 15. REGULATORY INFORMATION

**Occupational Safety and Health Act (OSHA):** This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Resource Conservation and Recovery Act (RCRA):** This product is not considered to be a hazardous waste under RCRA (40 CFR 261).

**SARA Title III: Section 311/312 - Hazard Communication Standard (HCS):** Immediate (acute) health hazard.  
Delayed (chronic) health hazard.

**SARA Title III: Section 313 - Toxic Chemical List (TCL):** This product does not contain a toxic chemical for routine annual 'Toxic Chemical Release Reporting' under Sec. 313 (40 CFR 372).

**TSCA Section 8(b) - Inventory Status:** All chemical(s) comprising this product are listed on the TSCA inventory.

**TSCA Section 12(b) - Export Notification:** This product does not contain any chemicals subject to Section 12(b) export notification.

**California Proposition 65:** This product does not contain any chemicals currently on the California list of Known Carcinogens and Reproductive Toxins.

**Pennsylvania Right-to-Know:** The following is required composition information:

Chemical Name : AMMONIUM POLYPHOSPHATE

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CASRN : 68333-79-9

Comment : Not on Pennsylvania Hazardous Substance List.

Chemical Name : Benzenamine, 4,4'-methylenebis[2-ethyl-

CASRN : 19900-65-3

Comment : Not on Pennsylvania Hazardous Substance List.

Chemical Name : PHOSPHORIC ACID, TRIS(METHYLPHENYL) ESTER

CASRN : 1330-78-5

Comment : Not on Pennsylvania Hazardous Substance List.

Chemical Name : BIS-(ALKYLAMINO) DIPHENYLMETHANE

CASRN : 5285-60-9

Comment : Not on Pennsylvania Hazardous Substance List.

Chemical Name : HIGHER MW ANALOGUS OF 4,4'-METHYLENE-BIS(2-ETHYLANILINE)

CASRN : LA9268-02

Comment : Not on Pennsylvania Hazardous Substance List.

**16. OTHER INFORMATION**

|                       |                 |
|-----------------------|-----------------|
| <b>MSDS No:</b>       | 60721           |
| <b>Reason Issued:</b> | New format      |
| <b>Approved By:</b>   | Rajesh S. Patel |
| <b>Title:</b>         | EH&S Chemist    |
| <b>Approved Date:</b> | 07/27/98        |

**Other Information:** L/M Codes: JS0597 - JH/NL (J10022730)

Material Code: FPC3350

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