



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

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TQ0020 POLY(P-HYDROXYSTYRENE) E-GRADE
Revised 17-DEC-2008

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Product Use

To manufacture resins for the electronics industry.

Tradenames and Synonyms

PHS-E
4-Ethenylphenol Homopolymer

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-800-441-7515 (outside the U.S.
302-774-1000)
Transport Emergency : CHEMTREC 1-800-424-9300(outside U.S.
703-527-3887)
Medical Emergency : 1-800-441-3637 (outside the U.S.
302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Poly(p-Hydroxystyrene) E-Grade	24979-70-2	100

Components (Remarks)

Poly(p-Hydroxystyrene) E-Grade
PMN# P91-816

HAZARDS IDENTIFICATION

Emergency Overview

WARNING!
White to off-white powder
Dust clouds from this material have the potential to explode
when exposed to an ignition source.
May cause eye irritation.

(HAZARDS IDENTIFICATION - Continued)

Potential Health Effects

INHALATION

No known adverse effect.

EYE CONTACT

May cause irritation.

SKIN CONTACT

No known adverse effect.

INGESTION

No known adverse effect.

TARGET ORGANS

None have been identified.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Overexposure may aggravate existing eye irritation.

POTENTIAL ENVIRONMENTAL EFFECTS

No information is available.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

In case of contact, flush with water. Get medical attention if irritation is present.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

(FIRST AID MEASURES - Continued)

If conscious, give water to drink, but do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

Notes to Physicians

Treat symptomatically as required by the condition of the patient.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : Unknown
Flammable limits in Air, % by Volume
LEL : Unknown
UEL : Unknown
Autoignition : Unknown

UNUSUAL FIRE AND EXPLOSION HAZARDS

Based on laboratory tests with similar material, dust clouds from this material have the potential to explode when exposed to an ignition source. Toxic vapors may be given off at high temperatures. Will burn if exposed to fire conditions.

Extinguishing Media

For small fires, use carbon dioxide or dry chemical. For large fires, use water spray or alcohol-type aqueous film-forming foam (AFFF).

Fire Fighting Instructions

Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Shut off source of fuel, if possible and without risk. Isolate area. Cool tank/container with water spray. Apply extinguishent from a distance to prevent splashing of personnel.

Wear self-contained breathing apparatus (SCBA) and complete personal protective equipment when exposed to products of combustion. If there is a potential for skin exposure to PHS-E Grade, see Exposure Controls/Personal Protection section of this MSDS.

HAZARDOUS COMBUSTION PRODUCTS

Carbon monoxide and phenol.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Eliminate all sources of ignition - heat, sparks, flame, electricity, impact and friction.

Avoid eye or skin contact.

Spill Clean Up

All clean up and disposal should be carried out in accordance with local, State and Federal regulations. Consult with Federal, State, and local regulatory agencies to determine acceptable clean-up levels.

Wet or dampen before removal. Use wet cloth/mop to pick up and place in suitable container for disposal. Do not dry sweep as this causing dusting.

REPORTING

If required under Federal, State, and local regulations, any spill of this material may need to be reported. Comply with Federal, State, and local regulations on reporting releases. See Regulatory Information section of this msds for detailed regulatory information.

HANDLING AND STORAGE

Handling (Personnel)

Avoid inhalation. Avoid contact with eyes, skin or clothing. Avoid breathing dust. Wash clothing after use. Wash thoroughly after handling.

Prevent the build-up of dust. Whenever dusts can develop, use non-sparking tools and eliminate all ignition sources.

Handling (Physical Aspects)

Open container only in well-ventilated area. Avoid dust generation.

Storage

Keep away from heat, sparks and flames. Close container after each use. Keep container tightly closed. Store in original container.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use sufficient ventilation to keep employee exposure below recommended limits.

Mechanical (General): Not recommended as the sole means of controlling employee exposure.

Personal Protective Equipment

RESPIRATORY PROTECTION

Use NIOSH-approved respirator within the limitations of the equipment or use a self-contained breathing apparatus (SCBA).

PROTECTIVE CLOTHING

Use chemical resistant gloves. Check gloves for leaks before use.

EYE/FACE PROTECTION

Wear safety glasses with side shields or chemical safety goggles.

OTHER PROTECTIVE EQUIPMENT

For operations where spills may occur, use chemical resistant gloves and clothing. A safety shower and an eye bath should be available

Exposure Guidelines

Exposure Limits

POLY(P-HYDROXYSTYRENE) E-GRADE

PEL (OSHA) : None Established
TLV (ACGIH) : None Established

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point : Not reported
Vapor Pressure : Not volatile
Vapor Density : Unknown
Freezing Point : Not Applicable
Evaporation Rate : Not Applicable
pH : Not reported
Specific Gravity : 1.16
Color : White, Off-White.
Form : Powder.
Melting Point : 266-365 F (130-185 C) Glass Transition
Temperature (measured)
Odor : None.
Solubility in Water : <0.1 % @ 20 C (68 F)

(PHYSICAL AND CHEMICAL PROPERTIES - Continued)

% Volatiles : <1 % (by volume)

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Conditions to Avoid

Dust clouds and ignition sources, and high temperatures above 680 °F (360 °C).

Decomposition

Carbon monoxide and phenol.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

No data is available on this substance. Toxicological properties based on a related substance.

INHALATION

No information is available.

EYE CONTACT

Slightly irritating. Considered a "non-irritant" by EEC criteria.

SKIN CONTACT

LD50, rabbit: > 2000 mg/kg, not harmful.
Not irritating to rabbits.
Not a sensitizer in guinea pigs.

INGESTION

LD50, rat: > 2000 mg/kg, not harmful.

GENOTOXICITY

Not mutagenic to bacterial cells (*Salmonella typhimurium*).

TARGET ORGANS

None have been identified.

ECOLOGICAL INFORMATION

Ecotoxicological Information

ECOTOXICOLOGICAL(Classified by EU criteria)
Information not available.

FATE
Information not available.

DISPOSAL CONSIDERATIONS

Waste Disposal

Consult 40 CFR, Parts 261 and 268, State and local regulations for guidance on disposal of this product. Incineration at a facility with proper Federal and State issued permits is the recommended method for disposal.

Container Disposal

Observe all label warnings.

Keep away from heat, sparks, and flames. Do not distribute, make available, or reuse empty containers except for storage and shipment of original product. Remove all hazardous product residue, and puncture or otherwise destroy empty containers before disposal. Consult 40 CFR, Parts 261 and 268 for guidance on disposal.

TRANSPORTATION INFORMATION

Shipping Information

Poly(p-Hydroxystyrene) is not subject to DOT, IATA/ICAO or IMO/IMDG transportation regulations.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA (TOXIC SUBSTANCES CONTROL ACT)
Components of this product are listed on the TSCA Inventory.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 Hazard Categories: Acute

313

This product is not subject to the reporting requirements of Section 313 of the Emergency Planning and Community

(REGULATORY INFORMATION - Continued)

Right-To-Know Act of 1986 and of 40 CFR 372.

INTERNATIONAL REGULATIONS

International :The following are listed:
POLY(P-HYDROXYSTYRENE) 100% (24979-70-2)

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION AND LIABILITY ACT)

Reportable Quantity (RQ): None

We recommend you contact local authorities to determine if there may be other local reporting requirements.

OTHER INFORMATION

Additional Information

Because the long term human health effects from exposure to PHS-E Grade have not been fully evaluated, exposure should be kept to the lowest level possible.

This material is for industrial use. Use only under the supervision of a technically qualified individual.

LABEL TEXT

POLY(P-HYDROXYSTYRENE)		
{Customer or Grade Specific Code/Name, if any}		
COMPONENT(S)	CAS#(S)	PERCENT
Poly(p-Hydroxystyrene)-E Grade	24979-70-2	100%
	PMN# P91-816	

WARNING!

May cause eye irritation.
Dust clouds from this material have the potential to explode when exposed to an ignition source.

Avoid contact with eyes, skin or clothing. Avoid breathing dust. Wash clothing after use. Use thoroughly after handling.

FIRST AID MEASURES

INHALATION:
Remove to fresh air. If not breathing, give artificial respiration and call for medical help.

EYE CONTACT:
Immediately flush eyes for fifteen (15) minutes with water. If irritation develops, get medical attention.

SKIN CONTACT:

(Continued)

In case of contact, flush with water. Get medical attention if irritation is present.

INGESTION:

If conscious, give water to drink but do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

FIRE: In case of fire, use water, foam, dry chemical or carbon dioxide (CO₂). Cool tank/container with water spray.

SPILL OR LEAK: Wet or dampen before removal. Use wet cloth/mop to pick up and place in suitable container. Avoid causing dust. Use appropriate Personal Protective Equipment (PPE).

STORAGE: Keep away from heat, sparks and flames. Store in original container. Use with adequate ventilation.

SEE MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : DuPont Electronic Polymers L.P.
MSDS Coordinator
Telephone : 757-686-8663

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS