



Product Safety Summary Sheet

DuPont™ Phenol, 4,4',4''-ethylidynetris (THPE)

Chemical Identification, Product Identification or Common Name:

CAS number: 27955-94-8

CAS name: 1,1,1-Tris(p-hydroxyphenyl)ethane

EINICS Number: 405-800-7

IUPAC name: 4-[1,1-bis(4-hydroxyphenyl)ethyl]phenol

Product Uses and Applications:

Phenol, 4,4',4''-ethylidynetris (THPE) is used in industrial polymer applications to help facilitate cross-linking or branching of thermoplastic polymer materials such as adhesives, epoxies, polycarbonates, and coatings where mechanical strength and hardness are important attributes. THPE can also enhance key properties including adhesion, heat resistance and solvent resistance. THPE can be used in aerospace composites, laminates, and harsh environment applications.

Physical Properties of the Chemical or Product:

THPE is a stable, odorless, white powder with a boiling point 989.24°F (531.8 °C) and a melting point of 474.8 – 478.4°F (246-248 °C). THPE should not be mixed with oxidizing agents due to chemical incompatibility. It does not possess any explosive properties though toxic vapors may be given off at high temperatures.

Exposure Potential:

Workplace exposure:

Because THPE is a powder, proper exhaust ventilation needs to be present in the workplace environment. Prolonged or repeated exposure may cause digestive tract irritation and possibly liver and kidney effects. Ignition sources should be avoided as residual dust can accumulate and become explosive.

Workers should follow the recommended safety measures contained within the (Material) Safety Data Sheet ((M)SDS) and on any product packaging. Employees should be trained in the appropriate work processes and safety equipment to limit exposure to chemical substances. Occupational use of this substance is considered to be safe provided the recommended safety measures given in the (M)SDS are followed.

Consumer exposure:

Consumer exposure is generally not expected as THPE is used in industrial settings.

Environmental exposure:

Because THPE can be toxic to aquatic life, any THPE in residual wash water should not be allowed to enter into waste streams. Wash water containing THPE should be collected for treatment before allowing it to enter the environment. If treatment cannot occur, dispose of THPE at hazardous waste collection sites. In some circumstances, THPE can be recycled.

Health Information

Note: The information contained in this section may be useful to someone handling the pure undiluted substance such as a manufacturer or transporter. Consumers are not likely to come in contact with the pure substance. For more information on health hazards and recommended protective equipment, please refer to the (M)SDS.

Exposures may affect human health as follows:

Effect Assessment	Result
Acute Toxicity	Not acutely toxic.
Irritation	Practically non-irritating to eyes and skin
Sensitization	Does not cause sensitization.
Mutagenicity	Not a mutagen.
Carcinogenicity	Not listed by IARC, NTP, OSHA or ACGIH

Environmental Information

Note: The information in this chapter is intended to provide brief and general information of this substance's environmental impact. The results in the table below refer to testing performed with the non formulated, undiluted substance. The data does not replace the data given in the (M)SDS. For more information and recommended protective measures, please refer to the (M)SDS.

Effect Assessment	Result
Aquatic Toxicity	Toxic to aquatic life and may cause long-term adverse effects.

Biodegradability Persistence	Not readily biodegradable. Persistent; dangerous to the ozone layer.
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Risk Management

Workplace Management:

Proper protection against airborne dust must be implemented during the use, recovery, or disposal of THPE. Adequate ventilation and fresh air inclusion will reduce prolonged exposures in the workplace.

Risk management measures for industrial site use include containment through engineering controls and the use of personal protective equipment (PPE) as appropriate. Always refer to the (Material) Safety Data Sheet ((M)SDS) for guidance on the appropriate personal protective equipment to be used and on the safe handling of this material.

Regulatory Information:

Always refer to the (Material) Safety Data Sheet ((M)SDS) for guidance on regulatory restrictions that may govern the manufacture, sale, transportation, use and/or disposal of this chemical or product. Regulations may vary by region, country, state, county, city, or local government.

First Aid Information:

For all First Aid or Emergency information, consult the (Material) Safety Data Sheet ((M)SDS).

Information Sources:

Data is compiled from a variety of sources, including publicly available documents, internal data and other sources such as, but not limited to, Chemical Safety Reports and (Material) Safety Data Sheets ((M)SDS).

Contact Information:

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