CYTOP® 320 Organophosphine

Triethylphosphine

Neat triethylphosphine is a pyrophoric liquid – B.Pt. 127-128ºC. As a 67% solution in isopropanol it is classified as a flammable, corrosive liquid. It is a powerful reducing agent, and, consequently, must be handled under an inert atmosphere. It is, however, very thermally stable, and it will remain so when stored properly.

The chemistry of triethylphosphine is typical of most trialkylphosphines. It can readily be converted to the corresponding oxide or sulfide by treatment with H_2O_2 or S_8. When heated with alkyl halides, air stable phosphonium salts are formed. Triethyphosphine can also serve as a catalyst ligand.

Typical Properties

	320	320P
Triethylphosphine	98-99%	67% (in isopropanol)
Formula Weight	118	118
Appearance	--Clear, colorless liquid with a disagreeable odor--	
Boiling Point	127-128°C	80°C (isopropanol)
Specific Gravity	0.8 @ 24°C	0.8 @ 24°C
Flash Point	45°C	19°C
Autoignition Temperature	26ºC	59ºC

Handling and Storage

Keep away from heat, sparks, and flame. Keep from contact with clothing and other combustible materials. Avoid contact with air or other oxidizing agents. Handle in an atmosphere of inert gas such as nitrogen. Do not get in eyes, on skin, on clothing. Avoid breathing vapor. Store in a tightly closed container. Use with adequate ventilation. Wash thoroughly after handling. Remove and wash contaminated clothing promptly.

Exposure to air and other oxidizing material must be avoided. This material is a strong reducing agent. Contact with other combustible materials may cause fire. Store and handle under an atmosphere of inert gas such as nitrogen.

Health and Safety

The toxicological properties of this material have not been fully investigated. Direct contact with this material may cause severe eye and severe skin irritation. Inhalation of this reducing agent would be expected to cause severe respiratory tract irritation. As would happen with strong reducing agents of this type, contact with organic matter such as hair or skin may result in ignition and burning.

Before handling this material, read the corresponding Cytec Industries Inc. Material Safety Data Sheet (MSDS) for safety and health data.

Shipping

CYTOP 320 organophosphine is available in up to ten gal (37.85 L) "pope" vessels, 700 lb (317.5 kg) cylinders, and bulk quantities.

Government Approval/Regulatory Information

For chemical inventory regulatory control listing information for the United States, Canada and European Union, see the Material Safety Data Sheet.

IMPORTANT NOTICE

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