
CYTOP[®] 341

Organophosphine

Triisobutylphosphine

CYTOP 341 organophosphine is a very strong reducing agent and is classified as a pyrophoric liquid. Triisobutylphosphine is thermally stable and has an indefinite shelf life when stored under an inert atmosphere.

It is a useful intermediate for the preparation of tetraalkylphosphonium salts through nucleophilic displacement reactions with alkylhalides. It readily undergoes oxidation to the corresponding oxide, or sulfide, when treated with H₂O₂ or S₈. This property makes it useful as an oxygen or sulfur scavenger. Like other tertiary alkylphosphines, triisobutylphosphine can be used as a monodentate catalyst ligand where hindered alkyl groups are important.

Typical Properties

Formula Weight	202
Molecular Formula	C ₁₂ H ₂₇ P
Appearance	Clear, colorless to light yellow liquid with a garlic-like odor
Boiling Point	215°C
Specific Gravity	0.8 @ 20° C

Handling and Storage

Keep from contact with clothing and other combustible materials. Do not store near 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. Store in tightly closed container. 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 estimated acute oral (rat) and dermal (rabbit) LD50 values are >220 mg/kg and 1150 mg/kg, respectively. Direct contact with this material may cause burns of the eyes and skin. This product is easily oxidized and contact with materials such as hair, clothing and paper may cause autoignition resulting in thermal burns.

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

Shipping

CYTOP 341 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

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility or as an assumption of a duty on our part. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information, products or vendors referred to herein. NO WARRANTY OF FITNESS FOR PARTICULAR PURPOSE IS MADE. Nothing herein is to be taken as permission, inducement or recommendation to practice any patented invention without a license.

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