
CYTOP[®] 380

Organophosphine

Tri-n-octylphosphine

CYTOP 380 organophosphine is a very strong reducing agent and is classified as a corrosive liquid. Although it is not pyrophoric, it will readily oxidize in air and, consequently, must be stored under an inert atmosphere. When properly stored, the shelf life is indefinite.

Trioctylphosphine is a useful intermediate for the preparation of long chain phosphonium salts through nucleophilic reactions with alkylhalides. Such compounds are used as phase transfer catalysts. Trioctylphosphine can also be converted to a phosphine oxide, or sulfide, by treatment with H₂O₂ or S₈. These derivatives have found utility as solvent extractants.

Typical Properties

Formula Weight	370
Molecular Formula	C ₂₄ H ₅₁ P
Appearance	Clear, colorless to light yellow liquid with a slightly sweet odor
Boiling Point	240°C @ 10 mm Hg
Specific Gravity	> 93° C
Autoignition Temperature	168° C

Handling and Storage

Keep from contact with clothing and other combustible materials. Do not store near combustible materials. Avoid contact with air. 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 acute oral (rat) and acute dermal (rabbit) LD50 values are 5600 mg/kg and 5800-6600 mg/kg, respectively. Direct contact with this material may cause eye irritation and skin burns. This material was not mutagenic in the Ames Assay.

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

Shipping

CYTOP 380 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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