TRIMETHYLPHOSPHINE 98% (TMP)  
CAS No. 594-09-2  

Product Names  
Trimethylphosphine, TMP

Formula  
C₃H₉P

Appearance  
Colorless to light yellow liquid

Application  

Product Specification  
Guaranteed*  
Trimethylphosphine, wt %  98 min

* This product can be made to agreed upon customer specifications.

Solvent  
Neat

Physical Properties  
- Molecular weight  76.08
- Density @20°C  0.735 g/cc
- Boiling point  38 ºC
- Volatiles, % by weight  100%
- Flash Point  -2 ºC
- Pyrophoricity  Non–pyrophoric

Solubility  
Trimethylphosphine is very soluble in aliphatic, aromatic and ethereal solvents.

Thermal Stability  
Trimethylphosphine is stable at ambient temperature. However, it is very susceptible to oxidation and must be maintained under an inert atmosphere.
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Toxicity/Safety Data
Flammable liquid. Air and oxygen sensitive. Expected to be extremely irritating to eyes, skin and respiratory system. Strong stench. Inhalation of vapors may cause dizziness, nausea, anesthesia, numbness, motor weakness in fingers and toes, incoordination, and headache. If ingested, may produce a lung aspiration hazard.

COMPLETE INFORMATION ON TOXICITY AND SAFETY IS CONTAINED IN THE OPTIMA MATERIAL SAFETY DATA SHEET (MSDS) AVAILABLE FOR THIS PRODUCT.

Handling/Storage/Disposal
Use in a closed system under argon or nitrogen. Do not get in eyes, on skin or clothing. Do not breathe vapors or mist. Store in a cool place. Keep container closed. Keep away from sources of ignition, air, acids and oxidizing agents.

Shipping Containers
- Cylinders: #5-420 L
- Glass Bottles: 125 mL, 500 mL and 1 L

Shipping Limitations
Shipments of trimethylphosphine are described as "Flammable Liquid, N.O.S. (TRIMETHYLPHOSPHINE, TETRAHYDROFURAN, SOLUTION) 3, UN1993, PG II." Shipments require "Flammable Liquid" labels.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Class</th>
<th>Limitations</th>
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<tbody>
<tr>
<td>Post, Parcel</td>
<td>Class 3</td>
<td>Not acceptable (IMDG)</td>
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<tr>
<td>Sea</td>
<td>Class 3</td>
<td>(DOT, RID/ADR)</td>
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<tr>
<td>Road, Rail</td>
<td>Class 3</td>
<td>(IATA)</td>
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<td>Air</td>
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<td>2.5 L maximum per inner glass container.</td>
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<td>60 L maximum per single/outer container.</td>
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<td>Cargo aircraft only.</td>
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For shipments within Europe, labeling for supply requirements are:

- F: Highly Flammable
- Xi: Irritant
- R&S Phrases: See Material Safety Data Sheet

Responsible Care® initiative dictates that all shipments must be transported in a DOT-approved vehicle in a responsible manner (i.e., no flat bed trucks).

Additional Resources