

Sulfur Monochloride

Sulfur chlorides

Sulfur Monochloride is a dark yellow fuming liquid with a pungent chlorine odor that reacts violently with water to produce toxic and corrosive gases.

CAS number
10025-67-9

Molecular weight
135.05

Molecular formula
 S_2Cl_2

Specifications

Total Chlorine	50.7-52.5 wt%
Free sulfur	≤ 3.5 wt%
Specific Gravity (20°C/15.6°C)	1.680-1.687

Properties

Appearance	Dark/Yellow fuming liquid
Melting point	-76°C (-105°F)
Boiling point	138°C (280°F)
Density, 20°C (68°F)	14.0-14.1 lb/gal
Flash point, COC	130°C (266°F)
Vapor pressure, 0°C	3.6 mm Hg
Vapor pressure, 37.8°C	26.0 mm Hg

Applications

Sulfur dichloride and sulfur monochloride are collectively known as sulfur chlorides, which are versatile reagents for the introduction of sulfur or chlorine in the synthesis of organic and other industrial products. They are used in the preparation of additives for extreme pressure lubricants from phenols and in vulcanizing agents for natural and synthetic rubbers. They also play a role in the synthesis of insecticides, pharmaceuticals, and dyes. Synthesis of sulfur chlorides is by the controlled reaction of chlorine gas with elemental sulfur.

Packaging and transport

Containers: 85 Short Ton Net Weight Tank Cars, 19 Short Ton Net Weight ISO tank containers

UN number

3390 (Toxic by inhalation liquid, corrosive, n.o.s.(Sulphur monochloride))

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