

Sulfur Dichloride

Sulfur chlorides

Sulfur Dichloride is a reddish-orange to dark red fuming liquid with a pungent chlorine odor that reacts violently with water to produce toxic and corrosive gases.

CAS number
10545-99-0

Molecular weight
102.97

Molecular formula
SCl₂

Specifications

Sulfur Dichloride	74-80 wt%
Sulfur Monochloride	20-26 wt%
Total Chlorine	64.7-65.7 wt%
Specific Gravity (20°C/15.6°C)	1.627-1.631

Properties

Appearance	Red/Yellow fuming liquid
Melting point	-78°C (-108°F)
Boiling point	59°C (138°F)
Density, 20°C (68°F)	13.6 lb/gal
Flash point, COC	130°C (266°F)
Vapor pressure, 0°C	27 mm Hg
Vapor pressure, -22.8°C	7.6 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: 88 Short Ton Net Weight Tank Cars, 17 Short Ton Net Weight ISO tank containers

UN number

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

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