

DMDCS

Product Specification

DMDCS (dimethyldichlorosilane) is particularly useful for deactivating the surfaces of gas chromatography columns or other glassware, and GC supports. If reacted with a substrate, plus base (primarily triethylamine or pyridine), DMDCS will introduce a dimethylsilylene group into the substrate molecule. Simple alcohols, aromatic dihydroxy compounds, dihydrazines, diols, dithiols, hydroxycarboxylic acids, simple ketones, 1,3-diketones, oximes, thiophenol, anthranilic acid, salicylanilide, orthohydroxyacetophenone, and 1-amino-3-iminopropenes have been silylated with this reagent (see *Additional Reading*).

Features/Benefits

Chemically binds a thin, water-repellent film to glass, quartz, silica, and ceramics. Coated surfaces are neutral, hydrophobic, and non-oily, offer increased electrical resistivity, are not affected by solvents, are not readily hydrolyzed.

Can be wiped on or applied by immersion.

Applications

Treat chromatography columns, glass injection port liners, reaction vessels, sample storage containers, pipettes, beakers, certain plastics, ceramics and fiber optics to minimize nonspecific binding and sample loss.

Reduce absorption of polar compounds, including proteins and trace metals, onto glass surfaces; reduce leaching of trace materials into solution.

Protect delicate samples against the possible reactive effects of -OH sites present on all types of glassware.

Provide complete drainage; eliminate meniscus.

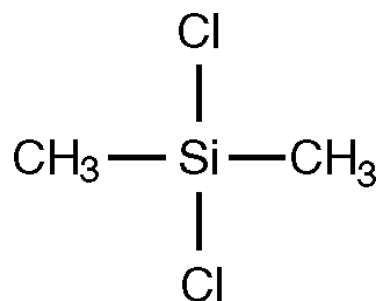
Prevent electric current tracking, minimize electrical leakage on glass and ceramic surfaces.

Typical Procedure

1. Coat the glass surface by rinsing with the reagent for 10 to 15 seconds, then discard the reagent.
2. Rinse the surface two times with toluene.
3. Rinse the surface three times (or until the rinsings are neutral) with methanol.
4. Dry the surface, using *clean* nitrogen. (Note: compressed air lines can contain oils, rust particles, etc.)

Properties

Structure:



CAS Number: 75-78-5

Molecular Formula: (CH₃)₂SiCl₂

Formula Weight: 129.06

bp: 70°C

Flash Point: 47°F (8°C)

d: 1.064

n_D: 1.4010 at 20°C

Appearance: clear, colorless liquid
moisture sensitive

796-0266

Toxicity – Hazards – Storage – Stability

DMDCS is a flammable, moisture-sensitive liquid. It may irritate eyes, skin, and/or the respiratory system. Store in a brown bottle or amber ampul at room temperature, in a dry, well ventilated area away from ignition sources. Use only in a well ventilated area and keep away from ignition sources.

Properly stored, this reagent is stable indefinitely. Recommended storage conditions for the unopened product are stated on the label. Moisture will reduce the effectiveness of the reagent. To exclude moisture, Supelco packages this product under nitrogen. If you store an opened container or transfer the contents to another container for later reuse, add desiccant. **Before reuse, validate that your storage conditions adequately protected the reagent.**

Additional Reading

- K. Blau and J. Halket *Handbook of Derivatives for Chromatography* (2nd ed.) John Wiley & Sons, New York, 1993.
- D.R. Knapp *Handbook of Analytical Derivatization Reactions* John Wiley & Sons, New York, 1979.
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- R.H. Cragg and R.D. Lane, J. Organomet. Chem., 212: 301 (1981).
- P. Rupani, *et al.*, J. Organomet. Chem., 162: 17 (1978).
- M. Bols, Tetrahedron 49: 10049 (1993).

Ordering Information

Description	Cat. No.
DMDCS 100mL	33009
For information about 5% DMDCS in toluene, refer to Product Specification 496023.	
Books	
<i>Handbook of Derivatives for Chromatography</i> K. Blau and J. Halket	Z246220
<i>Handbook of Analytical Derivatization Reactions</i> D.R. Knapp	23561

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