



## Industrial Grade

### *A Technical Grade for Basic Applications*

Bulletin 140P

Oct 2007

DMSO Industrial quality is a technical grade of Dimethyl Sulfoxide, suitable for use in common industrial formulations (such as solvent cleaning applications and paint stripping). This aprotic solvent plays an important role in the synthesis and processing of polymers, including polyacrylonitrile (PAN) and polyethersulfone (PES).

The dimethyl sulfoxide manufactured by Gaylord Chemical Company, L.L.C. is produced from lignin, a renewable, three dimensional biomaterial, and is recyclable. Additionally, DMSO is among the safest solvents known today.

*Choose DMSO Industrial Grade for:*

- **General Solvent Cleaning Applications.** DMSO is an effective solvent for removing organic materials from equipment lines and manufacturing equipment. DMSO exhibits high solubility for many polymers, and may aid in polymer processing and clean-up.
- **Environmentally Friendly Formulated Products.** Some examples include paint stripping formulations and nontoxic antifreeze mixtures.
- **Chemical Processes.** Industrial grade DMSO enables manufacturing and processing of polymer products.

Additional literature is available on the properties of DMSO (Bulletin 101B), solubility overview (102B) chemical reactions (105B), health and safety (106B), engineering/recycling (107B), paint stripping (118B), aircraft coating removal (160B), and polyurethane clean-up (161B)

*Gaylord Chemical Company, L.L.C. (GCC) is the world's leading provider of Dimethyl Sulfoxide (DMSO) solutions. Beginning in the early 1960's, GCC has been dedicated to the development of new uses for DMSO. In order to meet customer-specific needs, GCC has pioneered the development of multiple grades of DMSO, including DMSO USP.*

*Gaylord Chemical's solutions-based approach has contributed to the development and growth of industries including pharmaceuticals, hydrocarbons, electronics, polymers, coatings, agricultural chemicals, and industrial cleaners.*

*Gaylord Chemical's headquarters are located in Slidell, Louisiana with manufacturing, research, and development facilities in nearby Bogalusa, Louisiana. GCC remains the only producer of DMSO in the Western Hemisphere.*

**Gaylord Chemical Company, L.L.C.**  
*Your Global Leader For DMSO Solutions!*



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## Representative Specification

Requirements	Specification
Assay, % by GLC	≥99.9
Water, % maximum by KF	0.1
Residue after evaporation, % maximum	0.01
Titration acid, (meq/g) maximum	0.001

\*This illustration does not constitute the specification. Specifications are available upon request.

## DMSO Industrial Grade at a Glance

### Physical Data

Specific Gravity $d^{20/4}$	1.104
Boiling Point (atmos. pressure)	189°C
Viscosity at 20°C	2.14 cP
Refractive Index $n^{20/D}$ (20°, 68°F)	1.4785
Surface Tension at (20°C, 68°F)	43 dynes / cm
Specific Heat at 25°C (77°F)	0.45 cal / g / °C
Heat of Vaporization (25°C)	162 cal / g
Electrical Conductivity at (20°C)	$3 \times 10^{-8}$ /ohm / cm
Dielectric Constant at 20°C	48
Dipole Moment	4.3D
Vapor Pressure at 25°C (77°F)	0.6 mm Hg

### Solubility

Soluble in water, light alcohols and diethyl ether.

### Regulatory

CAS:67-68-5, EINECS:200-664-3

HMIS and NFPA Hazard Ratings: Health -1, Flammability -1, Chemical Reactivity-0

### Packaging

Bottles- 1/2, 1, 4 liter

Drums- 500 lb HDPE

Bulk- ISO Containers and 45,000 lb Tank Truck

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