



CARBOWAX™ and CARBOWAX SENTRY™ Polyethylene Glycol 4000

**Product
Description**

CAS # 25322-68-3
CHEMICAL FAMILY—Oxyalkylene Polymer
CTFA NOMENCLATURE — PEG-90

**Typical Physical
Properties**

Average Molecular Weight Range	3600 to 4400
Average Hydroxyl Number Range	31 to 26
Average Number of Repeating Oxyethylene Units	90.5
Density (g/cm ³ @ 60°C)	1.0926
Melting or Freezing Range	57 to 59°C (135 to 138°F)
Solubility in Water (Wt% @ 20°C)	66
Viscosity (cSt @ 99°C)	140.4
Avg. Liquid Specific Heat (cal/g/°C)	0.51
Heat of Fusion (cal/g)	45
pH at 25°C (5% Aqueous Solution)	4.5 to 7.5

**Shipping
Information**

Physical Form	Flake or Powder
Bulk Density Flake	30 lbs/ft ³
Bulk Density Powder	40 lbs/ft ³
Flash Point	
Pensky-Martens closed cup (ASTM D93)	>220°C (430°F)
Cleveland open cup (ASTM D92)	>270°C (515°F)

**Typical Known
Applications for
Polyethylene
Glycol**

- Adhesives
- Agriculture
- Ceramics
- Chemical Intermediates
- Cosmetics
- Toiletries
- Electroplating / Electropolishing
- Food Processing
- Household Products
- Lubricants
- Metal / Metal Fabrication
- Paints & Coatings
- Paper Industry
- Pharmaceuticals
- Printing
- Rubber & Elastomers
- Textiles
- Wood Processing

FDA Status

CARBOWAX SENTRY™ Polyethylene Glycols are produced to meet the requirements of the National Formulary (NF) monograph for drug applications and the Food Chemicals Codex (FCC) monograph for certain food and feed applications.

Handling and Storage

CARBOWAX™ Polyethylene Glycol 4000 is sold as a solid in bags or fiber drums. The containers should be kept sealed and should not be stored next to steam lines or other heat sources that could cause the product to soften or melt. Recommended storage temperature is below 40°C (105°F).

Product Stewardship

Dow encourages its customers and potential users to review their applications from the standpoint of human health and environmental aspects. To help ensure that Dow products are not used in ways for which they are not intended or tested, Dow personnel will assist customers in dealing with environmental and product safety considerations. Dow literature, including Material Safety Data Sheets, should be consulted prior to use.

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