

# Product Information

## Fluid

To reorder call:  
 Polysi Technologies  
 (T) 1-866-4-POLYSI  
 (4-765974)  
 (F) 1-919-775-2460

## 200<sup>®</sup> Fluid 10,000cs, 12,500 cs, 30,000 cs

### FEATURES

- High compressibility
- High damping action
- High dielectric strength
- High oxidation resistance<sup>1</sup>
- High shearability without breakdown
- High temperature serviceability<sup>1</sup>
- High water repellency
- Low environmental hazard
- Low fire hazard
- Low odor
- Low reactivity<sup>1</sup>
- Low surface energy
- Low temperature serviceability
- Low toxicity
- Low vapor pressure
- Good heat stability<sup>1</sup>

### BENEFITS

- Clear
- Essentially nontoxic
- Nonbioaccumulating
- Nonbioactive
- Nongreasy
- Nonocclusive
- Nonrancidifying
- Nonstinging on skin
- Tasteless

### COMPOSITION

- Linear polydimethylsiloxane polymers
- $(\text{CH}_3)_3\text{SiO}[\text{SiO}(\text{CH}_3)_2]_n\text{Si}(\text{CH}_3)_3$
- Trace amounts of process impurities

<sup>1</sup> See "Contamination and Fire Prevention"

### Intended for use by industrial manufacturers

### APPLICATIONS

- Coatings additive
- Damping fluid
- Elastomer and plastics lubricant
- Electrical insulating fluid
- Foam preventative or breaker
- Household products ingredient
- Mechanical fluid
- Mold release agent
- Petroleum refinery defoamer
- Plastics additive
- Polish ingredient
- Specialty chemical products ingredient
- Surface active agent

### DESCRIPTION

200<sup>®</sup> Fluids from Dow Corning, 10,000-30,000 centistrokes (cs), are high viscosity polydimethylsiloxane polymers manufactured to yield essentially linear polymers with average kinematic viscosities ranging from 10,000-30,000 cs.

### HOW TO USE

Since the applications from these fluids are numerous and varied, application methods and recommended concentration levels must be considered on an individual basis. Contact Dow Corning Customer Service for specifics.

### Incoming Inspection

Dow Corning recommends that incoming inspection tests be performed to confirm product

identity and condition on arrival. Suggested tests include viscosity and infrared identification, and any other tests deemed necessary for the application. Such tests may or may not be run routinely by Dow Corning as lot acceptance tests. Obtain the sales specifications for lot acceptance tests and test limits conducted on 200 Fluids, 10,000-30,000 cs.

### Sales Specifications

Sales specifications information, including detailed test methods and analysis procedures used by Dow Corning, is available upon request. Since Dow Corning reserves the right to update sales specification information without prior notice, users should periodically request this information.

## TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

<u>As Supplied</u>	<u>200 Fluid, 10,000 cs</u>	<u>200 Fluid, 12,500 cs</u>	<u>200 Fluid, 30,000 cs</u>
Appearance	Crystal clear liquid free from suspended matter and sediment		
Specific Gravity at 25°C (77°F)	–	–	0.971
Refractive Index at 25°C (77°F)	1.4036	1.4036	1.4037
Color, APHA	5	5	5
Flash Point, open cup, °C (°F)	>326 (>620)	>326 (>620)	>326 (>620)
Acid Number, BCP	trace	trace	trace
Melt Point, °C (°F) <sup>2,3</sup>	-24 (-11)	-24 (-11)	-23 (-9)
Pour Point, °C (°F)	–	-46 (-51)	-43 (45)
Surface Tension at 25°C (77°F), dynes/cm	–	21.5	21.5
Volatile Content, at 150°C (302°F), percent	0.27	0.23	0.29
Viscosity Stability, at 25°C (77°F), after 16 hr exposure at 150°C (302°F), percent change	-0.7	-1.6	-2.0
Viscosity Temperature Coefficient	–	0.61	0.61
Coefficient of Expansion, cc/cc/°C	–	0.00096	0.00096
Thermal Conductivity at 50°C (122°F), g cal/cm • sec•°C	–	0.00037	–
Specific Heat at 25°C (77°F), cal/g/°C	–	–	–
Solubility Parameter <sup>4</sup>	7.4	7.4	7.4
Solubility in Typical Solvents			
Chlorinated solvents	High	High	High
Aromatic solvents	High	High	High
Aliphatic solvents	High	High	High
Dry alcohols	Poor	Poor	Poor
Water	Poor	Poor	Poor
Fluorinated propellants	High	High	High
Dielectric Strength at 25°C (77°F), volts/mil	–	400	400
Volume Resistivity at 25°C (77°F), ohm-cm	–	1.0 x 10 <sup>15</sup>	1.0 x 10 <sup>15</sup>

<sup>1</sup> Dow Corning does not routinely test all these physical properties. Users should independently test these properties when they are critical in the application.

<sup>2</sup> The melt point temperature is a typical value and may vary somewhat due to molecular distribution (especially 50 cs or less). If the melting point is critical to your application, then several lots should be thoroughly evaluated.

<sup>3</sup> Due to different rates of cooling, this test method may yield pour points lower than the temperature at which these fluids would melt.

<sup>4</sup> Fedors Method: R.F. Fedors, Polymer Engineering and Science, Feb. 1974.

## **HANDLING PRECAUTIONS**

200 Fluids, 10,000-30,000 cs, may cause temporary eye discomfort.

Note: For answers to any questions regarding the efficiency, safety, health or environmental aspects of using 200 Fluids, 10,000-30,000 cs, in any application, contact your nearest Dow Corning sales office or call Dow Corning Customer Service at (517) 496-6000.

**PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY WRITING TO DOW CORNING CUSTOMER SERVICE, OR BY CALLING (517) 496-6000.**

## **Contamination and Fire Prevention**

At elevated temperatures, 200 Fluids, 10,000-30,000 cs, are sensitive to contamination by strong acids, bases, some metallic compounds and oxidizing agents. These contaminants may cause an accelerated rate of volatile byproduct formation. Oxidizing agents can also cause an increase in fluid viscosity. When these conditions may exist, it is recommended that the flash point of the fluids be checked periodically to monitor operational safety. Also, ignitable conditions may exist if the fluid is giving off smoke.

## **USABLE LIFE AND STORAGE**

200 Fluids from Dow Corning 10,000-30,000 cs have a shelf life of 36 months from date of production.

## **PACKAGING**

These products are supplied in 40- and 440-lb (18.1- and 199.6-kg) containers, net weight. Smaller containers are available from repackagers.

Caution: Containers will have product residues when emptied. Follow precautions recommended for handling these products when disposing of the container. Containers are not intended for reuse.

## **LIMITATIONS**

These products are neither tested nor represented as suitable for medical or pharmaceutical uses. Not for human injection. Not intended for food or medical use.

## **Shipping Limitations**

None.

## **HEALTH AND ENVIRONMENTAL INFORMATION**

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Health, Environment and Regulatory Affairs specialists available in each area.

For further information, please consult your local Dow Corning representative.

**LIMITED WARRANTY -  
PLEASE READ  
CAREFULLY**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use.

Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Dow Corning specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. Unless Dow Corning provides you with a specific, duly signed endorsement of fitness for use, Dow Corning disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.