

Information About 200® Fluid, 10 cs 200® Fluid, 20 cs

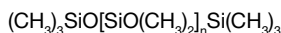
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Polysi Technologies
(T) 1-866-4-POLYSI
(4-765974)
(F) 1-919-775-2460

DESCRIPTION

200® Fluids, 10-20 centistokes (cs), are low viscosity polydimethylsiloxane polymers manufactured to yield essentially linear polymers with average kinematic viscosities of 10 and 20 cs.

COMPOSITION

Linear polydimethylsiloxane polymers characteristically have the following typical chemical composition:



Commercial bulk-polymerized dimethyl silicone fluids, such as 200 Fluids, 10-20 cs, typically contain trace amounts of process impurities.

BENEFITS

200 Fluids, 10-20 cs, have the following product characteristics:

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

200 Fluids, 10-20 cs, when compared with other materials that may be substituted in a given application, may offer one or more of these comparative characteristics:

- High compressibility
- High damping action
- High dielectric strength
- High oxidation resistance¹
- High shearability without breakdown
- High spreadability
- High temperature serviceability¹
- High water repellency
- Low environmental hazard
- Low fire hazard¹
- Low odor
- Low reactivity¹
- Low surface energy

- Low temperature serviceability
- Low toxicity
- Low vapor pressure
- Good heat stability¹
- Good leveling and easy rubout
- Soft feel and subtle skin lubricity

USES

200 Fluids, 10-20 cs, are intended for use by industrial manufacturers.

Typical end uses include:

- Coatings ingredient
- Elastomer and plastics lubricant
- Electrical insulating fluid
- Foam preventative or breaker
- Household products ingredient
- Mechanical fluid
- Mold release agent
- Personal care product ingredient
- Polish ingredient
- Specialty chemical product ingredient
- Specialty cleaner ingredient
- Surface active agent

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.

HOW TO USE

Since the applications for 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.

SHIPPING LIMITATIONS

None.

STORAGE AND SHELF LIFE

When stored at ambient temperatures, 200 Fluids, 10-20 cs, have a shelf life of 36 months from date of manufacture from Dow Corning.

PACKAGING

200 Fluid, 10 cs, is supplied in 37.5- and 420-lb (17- and 190.5-kg) containers, net weight. 200 Fluid, 20 cs, is available in 40- and 440-lb (18.1- and 199.6-kg)

¹See "Contamination and Fire Prevention."

TYPICAL PROPERTIES¹

These values are not intended for use in preparing specifications.

As Supplied	200 Fluid, 10 cs	200 Fluid, 20 cs
Appearance	Crystal clear liquid free from suspended matter and sediment	
Specific Gravity at 25°C (77°F)	0.935	0.949
Refractive Index at 25°C (77°F)	1.3989	1.4009
Color, APHA	5	5
Flash Point, closed cup, °C (°F)	211 (411)	246 (474)
Acid Number, BCP	trace	trace
Melt Point, °C (°F) ^{2,3}	-60 (-76)	-52(-62)
Pour Point, °C (°F)	-100 (-148)	-84(-119)
Surface Tension at 25°C (77°F), dynes/cm	20.1	20.6
Volatile Content, at 150°C (302°F), percent	–	4.5
Volatile Content, at 70°C (158°F), percent	0.68	–
Viscosity Temperature Coefficient	0.56	0.59
Coefficient of Expansion, cc/cc/°C	0.00108	0.00107
Thermal Conductivity at 50°C (122°F), g cal/cm • sec • °C	0.00032	0.00034
Specific Heat at 25°C (77°F), cal/g/°C	0.360	–
Solubility Parameter ⁴	7.2	7.3
Solubility in Typical Solvents		
Chlorinated solvents	High	High
Aromatic solvents	High	High
Aliphatic solvents	High	High
Dry alcohols	Poor	Poor
Water	Poor	Poor
Fluorinated propellants	High	High
Dielectric Strength at 25°C (77°F), volts/mil	375	375
Volume Resistivity at 25°C (77°F), ohm-cm	1.0 x 10 ¹⁵	1.0 x 10 ¹⁵

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

²The 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.

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

⁴Fedors Method: R.F. Fedors, Polymer Engineering and Science, Feb. 1974.

Specification Writers: Please obtain a copy of the Dow Corning Sales Specification for this product, and use it as a basis for your specifications. It may be obtained from any Dow Corning Sales Office, or from Dow Corning Customer Service in Midland, MI. Call (517) 496-6000.

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.

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, 10-20 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 specifications information without prior notice, users should periodically request this information.

CONTAMINATION AND FIRE PREVENTION

At elevated temperatures, *200* Fluids, 10-20 cs, are sensitive to contamination by strong acids, bases, some metallic

compounds and oxidizing agents. These contaminants may cause an accelerated rate of volatile by-product 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.

SAFE HANDLING INFORMATION

200 Fluids, 10-20 cs, may cause temporary eye discomfort.

Note: For answers to any questions regarding the efficacy, safety, health or environmental aspects of using *200* Fluids, 10-20 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.

LIMITED WARRANTY – PLEASE READ CAREFULLY

Dow Corning believes that the information in this publication is an accurate description of the typical characteristics and/or uses of the product or products, but it is your responsibility to thoroughly test the product in your specific application to determine its performance, efficacy and safety. Suggestions of uses should not be taken as inducements to infringe any particular patent.

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Dow Corning Corporation
Midland, Michigan 48686-0994

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