

Information About *Dow Corning*[®] 112 High Consistency Valve Sealant

Type

Silicone compound

Physical Form

Stiff grease

Color

White-translucent

Special Properties

Nonmelting; low volatility;
chemical resistance;
thermally stable

Primary Uses

Lubricant and sealing material
for plastic and rubber valves
and bearings

DESCRIPTION

Dow Corning[®] 112 High Consistency Valve Sealant is a grease-like compound containing an inert amorphous silica filler in combination with selected polydimethyl silicone fluids. This stiff, nonmelting silicone material is used primarily as a valve lubricant and sealer. Features include:

- Serviceability from -40 to 450°F (-40 to 232°C)
- Excellent water and oil resistance
- Good resistance to most chemicals
- Low volatility

In addition, *Dow Corning* 112 High Consistency Valve Sealant will not carbonize at serviceability temperatures; has a very low vapor pressure; and will resist melting or hardening during long exposure to elevated temperatures. It is insoluble in water, methanol, ethanol, glycol, and glycerine; resistant to most aqueous solutions of inorganic salts,

dilute acids, and alkalis; and unaffected by most vegetable and mineral oils, many organic compounds, and most common gases. *Dow Corning* 112 High Consistency Valve Sealant should be thoroughly tested in the specific application prior to use.

USES

This product is similar to *Dow Corning*[®] 111 Valve Lubricant and Sealant, and is used in applications where a higher degree of mechanical stability is desired.

Chemical Processing

Because of chemical resistance, long service life, and temperature stability, *Dow Corning* 112 High Consistency Valve Sealant is used as a valve, O-ring, and plug-valve lubricant. It is also an effective lubricant for control valves and pressure plug valves; a sealant for vacuum and pressure systems; and a chemical barrier coating.

TYPICAL PROPERTIES

These values are not intended for use in preparing specifications.

Physical

CTM ¹ 0176	Color	White-translucent
	Penetration	
	unworked	215
	worked 60 strokes, maximum	230
	worked 100,000 strokes	240
CTM 0033A	Bleed, 24 hours/392°F (200°C), percent	0.03
CTM 0033A	Evaporation, 24 hours/392°F (200°C), percent	0.8
	Service Temperature Range, °F (°C)	-40 to 450 (-40 to 232)
ASTM D 4049	Water Spray Off, percent	3.0
	Melting Point	None
CTM 0022	Specific Gravity at 77°F (25°C)	1.1

Electrical

CTM 0112	Dielectric Constant at	
	100 Hz	2.93
	100 kHz	2.92
CTM 0112	Dissipation Factor at	
	100 Hz	< 0.0001
	100 kHz	< 0.004
CTM 0114	Dielectric Strength, volts/mil, 50 mil gap	490
	Volume Resistivity at 73°F (23°C), ohm-cm	2.9 x 10 ¹⁵
CTM 0171	Arc Resistance, seconds	122

¹CTMs (Corporate Test Methods) correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.

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.

Mechanical Device Manufacturing

An excellent plastic and rubber lubricant, *Dow Corning* 112 High Consistency Valve Sealant may be used on devices that require temperature and mechanical stability, such as flow-meters, fire extinguisher valves, and lock mechanisms. It has also been used as an O-ring lubricant on binoculars and telescopes; a damping medium in hydraulic pivots; a direct-contact transducer medium in extruders; and a miniature bearing seal.

Equipment Manufacturing

Dow Corning 112 High Consistency Valve Sealant helps prevent sticking of valves and O-rings at high temperatures or in freezing conditions. It also acts as an excellent sealer between synthetic rubber or plastic parts in contact with metal in vacuum or pressure systems.

Harsh Operating Conditions

Special properties such as low volatility and excellent chemical resistance permit use of *Dow Corning* 112 High Consistency Valve Sealant in high vacuum or pressure systems, and in high temperature atmospheres.

HOW TO USE

Surfaces should be thoroughly cleaned before applying *Dow Corning* 112 High Consistency Valve Sealant.

Even though *Dow Corning* 112 High Consistency Valve Sealant is very tacky and a large pressure drop occurs when pumping this material, normal grease equipment can be used. However, pumping over a long distance is not recommended.

If *Dow Corning* 112 High Consistency Valve Sealant must penetrate surfaces to give adequate protection, it can be dispersed in typical penetrating solvents. It is insoluble in water, methanol, ethanol, acetone, glycol, and glycerine.

NOTE: When using any solvent, always provide adequate ventilation. Follow precautions on solvent container label.

LIMITATIONS

Not intended for medical use.

SHIPPING LIMITATIONS

None.

STORAGE AND SHELF LIFE

Dow Corning 112 High Consistency Valve Sealant has a shelf life of 60 months from date of manufacture.

PACKAGING

Dow Corning 112 High Consistency Valve Sealant is available in 5.3-oz (150-g) tubes, 40-lb (18.1-kg) pails, and 440-lb (200-kg) drums, all weights net.

SAFE HANDLING INFORMATION

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.

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