Technical Data Sheet

DOWSIL™ 736 Heat Resistant Sealant

FEATURES

- Will not sag or run
- May be applied overhead or on side walls
- May be used in applications with continuous exposure to 260°C (500°F) and intermittent exposure to 315°C (600°F)

COMPOSITION

- One-part silicone

Non-slumping sealant designed for sealing and bonding applications exposed to temperatures as high as 315°C (600°F)

APPLICATIONS

The high temperature properties of this sealant make it ideally suited for:

- Sealing and encapsulating heating elements in appliances
- Aerospace gasketing
- Moving oven belts
- Industrial ovens
- Bag filters on smoke stacks
- Other critical bonding, sealing, potting, encapsulating and protective coatings where parts must perform at high temperatures

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
As Supplied		
Color		Red
Flow/Slump		Nil
Extrusion Rate (1/8 inch orifice, 90 psi)	g/min	90
Specific Gravity		1.04
Cure Characteristics – Exposed to air, 25°C (77°F) and 50 percent RH		
Skin-Over Time	minutes	10
Tack-Free Time	minutes	17
Cure Time (3 mm [l/8 inch] thickness)	hours	24
As Cured - After 72 hours at 25°C (77°F) and 50 percent RH		
Durometer Hardness, Shore A	points	26
Tensile Strength	psi	350
Elongation	percent	600

DESCRIPTION

DOWSIL™ 736 Heat Resistant Sealant is a one-part, nonslumping paste that cures to a rubbery solid at room temperature on exposure to water vapor in the air. This silicone product is formulated to perform at temperatures ranging from -65 to 260°C (-85 to 500°F) for continuous operation and to 315°C (600°F) for intermittent exposure. It can be used for numerous sealing and bonding applications.

LISTINGS/ SPECIFICATIONS

- Complies with FDA Regulation 21 CFR 177.2600, subject to end-use compliance with any applicable total extractives limitations, and for incidental food contact use in official establishments operating under the Federal Meat and Poultry Products Inspection Program

Listed by the National Sanitation Foundation under Standard 51 for direct contact with food

- Listed by Underwriters Laboratories
- Designed to meet the requirements of MIL-A-46106A

HOW TO USE

Application

DOWSIL 736 Heat Resistant Sealant is supplied ready to use. Under pressure, it flows readily from its container. The paste-like consistency makes it easy to work; a spatula or wooden paddle can be used for tooling the surface.

Tack-Free Time

The cure progresses inward from the surface when exposed to humidified air. At 77°F (25°C) and 50 percent relative humidity, the sealant forms a tack-free skin within 17 minutes. Tooling is not practical after the skin begins forming and should be completed within five minutes after application even though this may require alternate periods of applying and tooling. If masking tape is used to mark off an area, it should be removed immediately after tooling.

Cure Time

Cure time is affected by relative humidity, degree of confinement and cross-sectional thickness of the sealant. Sections up to 3 mm [1/8 inch] thick become rubbery solids in about 24 hours at 25°C (77°F) and 50 percent relative humidity. Less moisture content reduces the time required slightly. In 24 hours, sections up to 3 mm [1/8 inch] thick cure to a rubber.

Confined Cure

In applications where DOWSIL 736 Heat Resistant Sealant may be partially or totally confined during cure, the time required for proper cure is generally lengthened by the degree of confinement. It is possible, with absolute confinement, that cure will not be completed. Metal-to-metal bonds should not overlap more than one inch. Every application involving confinement during cure should be thoroughly tested before use. Curing time increases with the thickness of the sealant.

Note: The odor given off during cure is due to the liberation of acetic acid. This odor disappears as the cure progresses and is not detectable after the cure is complete.

Bonding

1. Thoroughly clean and degrease metal and plastic surfaces using DOWSIL™ OS (Ozone Safe) Fluids or another suitable solvent. Rubber surfaces should be roughened with sandpaper, then wiped with DOWSIL OS fluids or another suitable solvent. Follow all precautions given on the solvent container label.

2. For stronger, more uniform bonds, apply a thin film of DOWSIL™ 1200 Prime Coat or DOWSIL™ P5200 Adhesion Promoter to all surfaces except rubber and silicone rubber. Allow to air-dry for 30 to 45 minutes at room temperature. (Full instructions are provided with the prime coat.)

   Note: DOWSIL 1200 Prime Coat or DOWSIL P5200 Adhesion Promoter are flammable and are not suitable for use in food contact applications. Keep away from heat, sparks and open flames. Use only with adequate ventilation.

3. Apply DOWSIL 736 Heat Resistant Sealant to the prepared surface in a uniform thickness. In those cases where the sealant is to be used between two surfaces, put the second surface in place, using enough pressure to displace the air but not the sealant.

4. Let the unit stand undisturbed at room temperature until cured.

Sealing

Using DOWSIL 736 Heat Resistant Sealant in sealing applications follows approximately the same step-by-step procedures as outlined for bonding applications. After preparing the surfaces and priming where required, the sealant is applied by forcing it into the joint or seam to obtain full contact between the sealant and the surface.

HANDLING PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

STORAGE

Product should be stored at or below 32°C (90°F) in original, unopened containers.

UNRESTRICTED – May be shared with anyone
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LIMITATIONS

DOWSIL 736 Heat Resistant Sealant is not recommended:

- For continuous underwater immersion where adhesion or structural bonding is required
- On concrete, brick, mortar or other masonry surfaces
- On surfaces to be painted; paints do not adhere well to sealant (paint before applying sealant)
- On materials such as impregnated woods or oil-based caulks that bleed oils
- In totally confined areas; atmospheric moisture is required for cure
- On *Teflon*® coated materials, polyethylene, polypropylene or methylmethacrylate (*Plexiglas*®); sealant will not adhere well
- On or near sensitive metals such as copper, brass, zinc, carbon steel, galvanized iron or magnesium; these metals may be corroded, especially in confined cure conditions, due to the acetic acid released during the cure
- On some plastics; may cause stress cracks; test before use

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

SHIPPING LIMITATIONS

None.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, www.consumer.dow.com or consult your local Dow representative.

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