



Technical Data Sheet

DOWSIL™ 3-6891 Abradable Sealant

Black, one-part abradable material that cures with heat to become a low density, flexible rubber with high temperature stability and abradability

Features & Benefits

- Low density
- High temperature stability
- High abradability and machinability

Applications

- Abradable seals
- High-temperature thermal insulation

Typical Properties

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

Property	Unit	Result
As Supplied		
Physical Form		Flowable liquid
Appearance		Black
Viscosity (Brookfield HAF #7 at 10 rpm)	poise	2300
As Cured (two hours at 300°F)		
Physical Form		Flexible rubber
Specific Gravity		0.95
Durometer Hardness	Shore A	71
Tensile Strength	psi	580
Elongation	%	70
Lap Shear Adhesion, on Aluminum, 100% Cohesive	psi	320
Thermal Conductivity	watts/m°K	0.24
Coefficient of Thermal Expansion	m/m°C	1.75x10 ⁻⁴

Description

DOWSIL™ 3-6891 Abradable Sealant is a black, one-part abradable material that cures with heat to become a flexible rubber. Compared to other silicone products, it has the following unique combination of features:

- Low density
- High temperature stability
- High abradability and machinability

Description (Cont.)

These features are particularly suited for the product's use as an abradable seal and rubstrip for the compressor blades of jet engines, as well as for high-temperature thermal insulation.

How to Use

Surface Preparation

Surfaces should be clean, dry, and free of contaminants, oils, fingerprints, and release agents. A two-step cleaning procedure is generally recommended. First, clean off any oil/grease type contaminants with a good grease cutting solvent such as DOWSIL™ OS-10 Fluid, DOWSIL™ OS-20 Fluid, or DOWSIL™ OS-30 Fluid, naphtha, mineral spirits, or toluene. Second, wipe the surface with methanol, isopropyl alcohol or acetone and allow to dry.

When using any solvent, always provide adequate ventilation and follow all handling precautions on the safety data sheet provided by the solvent supplier and the container label.

To obtain good adhesion, surfaces should be primed with DOWSIL™ P5200 Adhesion Promoter. Refer to the product information sheet for detailed use and handling instructions. Apply a very thin coating of the primer (wiping on with a clean cloth and then immediately wiping off any excess primer with another clean cloth works well). The primer should be allowed to cure for one to two hours at about 72°F and a minimum 20 percent relative humidity. Lower temperatures or humidity may require longer primer cure times.

Application

DOWSIL™ 3-6891 Abradable Sealant can be cast, troweled or injected into place using standard one-component processing equipment. A typical schedule for jet engine use cures the material for two hours at 300°F. Lower temperatures may require additional time to reach full cure.

Imperfections in moldings may be repaired by cutting away the defective areas, applying fresh DOWSIL™ 3-6891 Abradable Sealant to the clean surface, and heat curing as indicated above. New material forms a homogenous bond with the underlying rubber.

NOTE: DOWSIL™ 3-6891 Abradable Sealant is an organo-platinum catalyzed silicone product. As such, its cure can be inhibited or poisoned if it comes into contact with any material containing amines, sulfur, tin compounds and some other silicone rubbers.

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 DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Usable Life and Storage

For best results, DOWSIL™ 3-6891 Abradable Sealant should be used within 12 months from date of manufacture when stored in its original, unopened container at temperatures between 15°F and 40°F.

Packaging Information

The product is supplied in 3.6 kg pails.

Limitations

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

Shipping Limitations

This product cannot be air freighted.

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, dow.com or consult your local Dow representative.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

dow.com

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