

Information About *Dow Corning*[®] 3-6891 One-Part Silicone Rubber Abradable Sealant Compound

Type

One-part silicone rubber

Physical Form

– As Supplied

Flowable black liquid

– As Cured

Flexible rubber

Cure

Approximately two hours
at 300°F

Special Features

Low density; high temperature
stability; high abrasibility and
machinability

Primary Uses

Abradable seals, high-
temperature thermal insulation

DESCRIPTION

Dow Corning[®] 3-6891 One-Part Silicone Rubber Abradable Sealant Compound 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 abrasibility/machinability

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. The product meets United Technologies Pratt & Whitney specification PWA 36447.

HOW TO USE

Surface Preparation

Surfaces should be clean, dry and free of contaminants, oils, finger prints 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 *Dow Corning*[®] OS-10, OS-20 or 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 Material Safety Data Sheet provided by the solvent supplier and the container label.

To obtain good adhesion, surfaces should be primed with *Dow Corning*[®] 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 humidities may require longer primer cure times.

Application

Dow Corning 3-6891 One-Part Silicone Rubber Abradable Sealant Compound 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 *Dow Corning* 3-6891 One-Part Silicone Rubber Abradable Sealant Compound to the clean surface, and heat curing as indicated above. New material forms a homogenous bond with the underlying rubber.

TYPICAL PROPERTIES

These values are not intended for use in preparing specifications.

As Supplied

Appearance Black
Viscosity (Brookfield HAF #7 at 10 rpm), poise 2300

As Cured (2 hours at 300°F)

Specific Gravity 0.95
Durometer Hardness, Shore A, points 75
Tensile Strength, psi 600
Elongation, percent 70
Lap Shear Adhesion, on aluminum, 100 percent cohesive, psi 350
Thermal Conductivity, watts/m²°K 0.24
Coefficient of Thermal Expansion, m/m°C 1.75x10⁻⁴

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.

DOW CORNING

NOTE: *Dow Corning* 3-6891 One-Part Silicone Rubber Abradable Sealant Compound 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.

LIMITATIONS

Not intended for medical use.

STORAGE AND SHELF LIFE

For best results, *Dow Corning* 3-6891 One-Part Silicone Rubber Abradable Sealant Compound should be used within 12 months from date of manufacture when stored in its original, unopened container at temperatures below 90°F.

PACKAGING

The product is supplied in one gallon (8.0 lb.) containers.

SHIPPING LIMITATIONS

This product cannot be air freighted.

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.

**LIMITED WARRANTY —
PLEASE READ CAREFULLY**

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Dow Corning Corporation
Midland, Michigan 48686-0994