

Technical data sheet



Product: 3-0115

Manufacturer: DOWSIL

Product group: KLEBSTOFF

Article group: 1-K SILIKON

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DOWSIL™ 3-0115 AUTOMOTIVE SEALANT

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Technical Data Sheet

DOWSIL™ 3-0115 Automotive Sealant

FEATURES

- Fluid resistance
- Blowout resistance
- Excellent unprimed adhesion
- Noncorrosive
- Low odor
- Low oil foaming

BENEFITS

- Provides an elastomeric seal that is resistant to most automotive powertrain fluids
- Withstands in-line pressure leak testing (blowout resistance) in assembly operations
- Exhibits excellent unprimed adhesion to properly prepared surfaces of metals and many plastics
- Provides low oil foaming properties when in contact with automatic transmission fluids and engine oils

COMPOSITION

- Alkoxy-cure, RTV silicone rubber

One-part, self-priming, noncorrosive, alkoxy-cure, RTV silicone rubber designed for automotive powertrain sealing applications.

APPLICATIONS

- Automotive flange sealing
- Where immediate pressure leak testing is required
- Engine and transmission oil pans and axle cover seals
- Coolant system seals
- Engine block main seals

TYPICAL PROPERTIES

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

Test ¹	Property	Unit	Result
CTM ² 0176	Consistency		High-viscosity, nonslumping paste
CTM 0063	Color		Gray
CTM 0364	Extrusion Rate, 3.2-mm (1/8-inch) nozzle at 0.63 MPa (90 psi)	g/minute	50
CTM 0098	Skin-Over Time	minutes	10
CTM 0095	Tack-Free Time	minutes	20-25
CTM 0084	Cure Rate, 3.2 mm (1/8 inch)	hours	24
CTM 0097	Specific Gravity		1.29
CTM 0087	Volatility	%	0.3

¹At 23°C (73°F) and 50% relative humidity.

²Properties were obtained using Corporate Test Methods (CTMs). CTMs correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.

DESCRIPTION

DOWSIL™ 3-0115 Automotive Sealant is a one-part, self-priming, noncorrosive, alkoxy-cure, RTV silicone rubber designed for automotive powertrain sealing applications. The sealant is specifically designed to provide an elastomeric seal that is resistant to most automotive powertrain fluids. Further, it is formulated to withstand in-line pressure leak testing (blowout resistance) in assembly operations.

This product exhibits excellent unprimed adhesion to properly prepared surfaces of metals and many plastics. It is specially designed to have low oil foaming properties when in contact with automatic transmission fluids and engine oils.

HOW TO USE

Substrate Preparation

Surfaces to be adhered or sealed should be free of dirt, oil, and other contaminants. A surface primer can be recommended for hard-to-bond surfaces, such as some plastics. Contact your local representative for specific recommendations.

How To Apply

Apply the sealant to the prepared surface in a continuous, uniform thickness. DOWSIL 3-0115 Automotive Sealant can be manually applied, but the use of automated dispensing equipment is highly recommended to obtain a uniform seal.

The sealant bead size to be specified is a function of the anticipated gap size for the part and the flange width. Consult your local representative for equipment supplier and design recommendations.

Tack-Free Time and Handling Time

One exposure to moisture in the air, the surface of DOWSIL 3-0115 Automotive Sealant will skin over in about 10 minutes at room temperature and 50 percent relative humidity. To ensure integrity of the seal between mating parts, assemble the parts before the sealant skins over. Higher relative humidities will accelerate this cure time.

Cure

Curing continues inward from the surface. In 24 hours at room temperature and 50 percent relative humidity, a fully exposed section of DOWSIL 3-0115 Automotive Sealant will cure to a depth of 3.2 mm. Lower relative humidities will extend this cure time. If both bonded members are impermeable to moisture, as in the case of two metal plates, cure time will depend on the thickness of DOWSIL 3-0115 Automotive Sealant and the

TYPICAL PROPERTIES *cont.*

Test – As Cured—Physical³

ASTM D 2240	Durometer, Shore A		50
ASTM D 412	Tensile Strength	MPa (psi)	2.80 (405)
ASTM D 412	Elongation	%	375
	Heat Resistance, 240 hours at 120°C (248°F), change in durometer	%	-9
ASTM D 816	Lap Shear Adhesion, 12.7 x 25.4 x 1 mm (0.5 x 1 x 0.040 inch), 2024 aluminum	minutes	20-25
	1010 steel	MPa (psi)	2.4 (350)
		MPa (psi)	2.3 (330)

Test – As Cured—Fluid Immersion Resistance³

Mobil [®] 4 5W30 SJ Oil, 7 days at 150°C (302°F),		
change in durometer	%	-54
change in tensile	%	-5
change in elongation	%	-10
volume swell	%	29
Reference Oil 1006, 7 days at 150°C (302°F),		
change in durometer	%	-60
change in tensile	%	29
change in elongation	%	-7
volume swell	%	38
Dexron [®] 5 III Automatic Transmission Fluid, 7 days at 150°C (302°F),		
change in durometer	%	-68
change in tensile	%	-17
change in elongation	%	16
volume swell	%	64

³After curing 7 days at 23°C (73°F) and 50% relative humidity.

⁴Mobil is a registered trademark of Mobil Oil Corporation.

⁵Dexron is a registered trademark of General Motors Corporation.

area under the joint. The larger the unexposed area, the longer the cure time. For shorter cure time and maximum bond strength, keep the area enclosed by the joint to a minimum. For best results, a metal-to-metal bond should not overlap more than one inch

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 WWW.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.

LIMITATIONS

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

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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DOWSIL™ 3-0115 Automotive Sealant

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