Elastic adhesives and sealants
Silicones

Black-Seal Special Silicone



Extremely resistant against oil and grease

WEICON Black-Seal is black, high-temperature-resistant (+280 °C/+536 °F), free of solvents, strong, oil-resistant, grease-resistant, pressure-resistant, resistant to ageing and extremely elastic (breaking elongation of approx. 500%).

It is suitable for bonding and sealing in applications where particularly high oil and grease resistance is required.

The product can be used on gearbox, valve and casing covers, oil sumps, water pumps, gears and axles, flanges, tanks and containers, and in many other areas.

Characteristics		
Base		1-C. polysiloxane (acetate)
Texture		pasty
Colour		black
Cure type		moisture-curing
Solid content		96 %
Can be painted		no
Stability/run-off	ASTM D 2202	1.0 mm
Building material class	DIN 4102	B 2
Minimum shelf life	Presspack / Green Tube	12/18 mon.
Processing		
Curing condition		from +5°C to +40°C and 30% to 95% rel. air air humidity
Curing speed	in the first 24 h	2 -3 mm
Density		1,06 g/cm³
Max. sealing joint width		25 mm
Gap bridging up to max.		5 mm
Curing		
Skin-over time		7 min.

Mechanical properties after curing		
Tensile strength	ISO 37	2,2 N/mm²
Elongation at break (tensile)	ISO 37, S3A	500 %
Tear resistance	DIN 53515 / ASTM D 1002	4 kN/m
Elongation at 100 %	ISO 37 S3A	0,7 N/mm²
Movement absorption max.		15 %
Hardness (Shore A)	DIN ISO 7619	30±5
Shear strength according to DIN EN 1465		
Medium lap shear strength (DIN EN 1465/ ASTM D 1002)		0,7 N/mm²
Volume change	DIN 52451	-9 %
Thermal parameters		
Temperature resistance		-40 °C to briefly +280 °C (approx. 2 h) +300 °C
Thermal conductivity		0,2 W/m·K
Electrical parameters		
Resistance		2,5 x 10^15 Ω·m
Dielectric strength		21,0 kV/mm
Approvals / Guidelines		
ISSA Code		75.634.24/25/26
IMPA Code		815248/85/86
MIL-Spec	complies with	MIL-A-46106B Group III Typ 1

Surface Pre-Treatment

Surfaces must be clean and free of grease. Many surface soilings, such as oil, grease, dust and dirt can be removed with WEICON Surface Cleaner. For heavily soiled metal surfaces, we recommend Cleaner Spray S; for removing old colour residues or adhesive residues, WEICON Sealant and Adhesive Remover is ideal. Most materials can be bonded to and among each other. For certain materials or special requirements, we recommend the use of a bonding agent (primer). Mechanical surface pre-treatment e.g. by grinding or sanding can also improve the adhesion considerably.

Application

Application methods:

Cartridge gun for 310 ml cartridges, compressed air gun, we recommend a version with piston rod (WEICON Compressed Air Cartridge Gun), automatic dosing systems.

Squeeze out by hand, close tube again immediately after use, opened tubes should be used up as quickly as possible

Processing mini hose bag:

Hook the tube key centrally onto the clip of the mini hose bag. Remove the safety tab. Then screw the cap further in — this will cut open the mini hose bag. Open the closure and dispense the material by turning the tube key.

Processing Presspack

Remove tamper-evident seal. Regulate discharge by smooth turning of the cap from min. to max. Press the lever and

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process the medium. After having turned the cap into the “min.” position the valve closes automatically and the product flow is stopped.

Joining the components

In order to guarantee and ideal wetting, the bonding parts need to be joined, before the adhesive skins over (skin-over time).

Storage

Store in the unopened original container at room temperature. Avoid sources of heat and direct sunlight.

Instructions for use

When using WEICON products, the physical, safety-related, toxicological and ecological data and regulations in our EC safety data sheets (www.weicon.com) must be observed.

Accessories

10025241	V-Joint Nozzle, 1 PCE
10020751	Cartridge Gun Special, 1 PCE
10000441	Cartridge Gun, 1 PCE
10101992	Clip Nozzle Green Tube, 1 PCE, transparent
10059792	Pressure gun Airflow 3, 1 PCE

Available sizes

10000763	Black-Seal Special Silicone, 200 ml (Presspack), black
10022222	Black-Seal Special Silicone, 85 ml, black
10104022	Black-Seal Special Silicone, 280 ml (Green Tube), black
10104057	Black-Seal Special Silicone, 280 ml (Set), black
10104248	Black-Seal Special Silicone, 280 ml (plastic bag), black

Conversion table

(°C x 1.8) + 32 = °F	Nm x 8.851 = lb·in
mm/25.4 = inch	Nm x 0.738 = lb·ft
µm/25.4 = mil	Nm x 141.62 = oz·in
N x 0.225 = lb	mPa·s = cP
N/mm^2 x 145 = psi	N/cm x 0.571 = lb/in
MPa x 145 = psi	kV/mm x 25.4 = V/mil

To the product detail page:

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Chemical resistance after curing* (Excerpt)

Acetaldehyde	-	Methanol	o
Acetone	o	Methyl ethyl ketone (MEK)	o
Formic acid >10 % (methanoic acid)	o	Lactic acid 40 %	+
Ammonia 10 %	+	Engine oil min./synth.	o
Ammonia, anhydrous	-	Sodium carbonate (soda)	+
Aniline	-	Sodium hydroxide solution 10 %	o
Petrol (92-100 octane)	-	Heating oil, diesel	-
Acetic acid 10 %	+	Phosphoric acid 5 %	o
Acetic anhydride	-	Nitric acid <5%	o
Ethanol	+	Concentrated hydrochloric acid	-
Ethylene glycol	+	Hydrochloric acid <10 %	o
Antifreeze	+	Salt water / Sea water	+
Gear oil	-	Sulphuric acid 10 %	+
Glycerine / Glycol	+	Concentrated sulphuric acid	-
Hexane	-	Silver nitrate	+
Hydraulic oil	o	Cooking oil / vegetable oil	+
Isopropanol	+	Toluene	-
Potassium hydroxide 10 %	+	Water	+
Potassium hydroxide 20 %	-	Tartaric acid	+
Potassium salt dry	+	Xylene	-
Coolant, aq.	+	Citric acid 10 %	+

+ = resistant 0 = for a limited time (preliminary tests or resistance tests are recommended) - = not resistant *Storage was carried out at a chemical temperature of +20°C.

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