

Work Zone 100% Silicone Sealant

TECHNICAL DATA SHEET

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1. PRODUCT NAME

Work Zone 100% Silicone Sealant

2. MANUFACTURER

ICB Products,
75 Chambers Drive, Unit 9,
Ajax, Ontario, L1Z 1E1.
Phone: (905) 619-0115
FAX: (905) 619-6583

3. PRODUCT DESCRIPTION

Work Zone 100% Silicone Sealant is a multi purpose single component, RTV silicone rubber sealant designed to seal nonporous surfaces on interior and exterior applications. It is long lasting, and forms a weatherproof & watertight seal which remains permanently flexible, and will not shrink, crack, crumble or dry out. The sealant has good resistance to weathering, vibration, moisture, ozone and extreme temperatures. It may be applied in subzero weather without loss of extrusion or physical

property characteristics and is effective from -62°C to 204°C. It is easy to apply, finger smoothable, and non-flammable.

Basic Use: Recommended to seal nonporous surfaces around windows, doors, siding, gutters, vents, and more. Also use it for boats, cars, and more on windshields, fittings, and more. Great for use as an adhesive for fastening small accessories, fittings, repairing loose tiles, and more. Adheres to most nonporous surfaces, including clean metal, glass, most types of wood, silicone resin, vulcanized silicone rubber, ceramic, natural and synthetic fiber, painted surfaces, many plastic surfaces, and more.

Composition and Materials: Work Zone 100% Silicone Sealant is a 100% silicone polymer with no organic fillers.

Colours available: clear, white, bone, almond, brown, dark brown/bronze, gray, pewter, aluminum, black. Custom colors also available.

Sizes: 300 ml cartridges, 18.9 litre pails, and 200 litre drums.

Grade: gun grade, nonsagging.

Limitations: Not recommended for continuous water immersion, or where abrasion and physical abuse are encountered. Do not apply to porous surfaces, such as masonry, or on building materials that bleed oils or solvents, such as certain impregnated woods and certain partially vulcanized rubber gaskets, tapes or adhesives. Do not use in totally confined spaces, because the sealant needs atmospheric moisture to cure. Do not use in aquariums as the bio agents in the sealant may be toxic in solution. Paint does not adhere well to silicone. Before product application, user should

determine suitability of 100% Silicone for intended use.

4. TECHNICAL DATA

Applicable Standards: Work Zone 100% Silicone Sealant passes the performance requirements of the following specifications:

- CGSB CAN2-19.13-M87. Canadian standard for silicone sealants.
- TT-S-00230c (Class A), Type II. US federal spec for sealants.
- ASTM C 920 with the exception of glass adhesion through UV exposure.
- TT-S-1543A. US Federal specification for silicone sealing compounds.
- FDA Regulation No.21 CFR177.2600.

Weight - 1.03 Kg/litre (8.32 Lb./gal.)

Shelf life - 2+ years

Skin Time - 10-20 minutes under normal conditions

Cure Time - 24 hours

Paintability - not recommended

Resistance to dirt pickup - Very good

Flash point - N/A

pH - not determined

Odour - moderate acetic acid (vinegar smell)

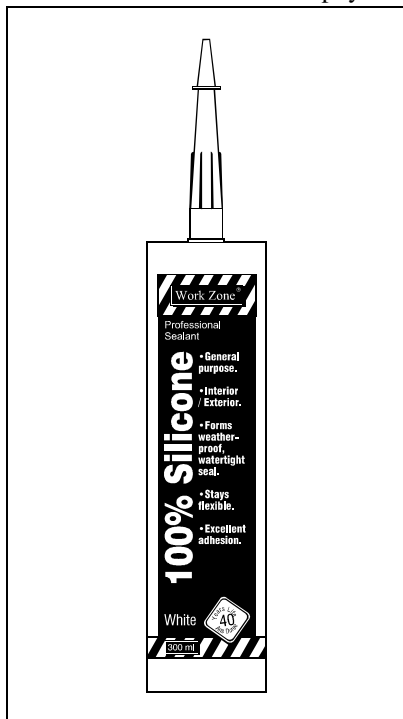
Freeze-thaw stability - stable

Storage temperature - unaffected by temperature, but +5°C to 37°C (40°F to 100°F) is recommended

5. INSTALLATION

Joints: Maximum joint size recommended is 13mm (1/2").

Surface Preparation: Thoroughly clean and degrease all surfaces. Then rinse all surfaces, except plastic, with acetone. Rubber surfaces should be roughened with sandpaper, then wiped with acetone.



Typical Properties - These values are not intended for use in preparing specifications

Uncured

Specific Gravity	1.03
Extrusion Rate (1/8-inch orifice, 90 psi air pressure), g/min	400
Flow Rate (sag or slump on 1/8-inch x 4-inch bead)	Nil
Tack-Free Time at 25 C (77 F) and 50% RH, hours	1
Cure Time at 25 C (77 F) and 50% RH (1/8-inch thickness), hours	24

As Cured¹ - Physical

ASTM D 2240	Durometer Hardness, Shore A, points	27
ASTM D 412 Die C	Tensile Strength, Mpa (psi)	2.4 (350)
ASTM D 412 Die C	Elongation, percent	600
ASTM D 746	Brittle Point, °C (°F)	-62 (-80)
ASTM D 2137A	Volume Coefficient of Thermal Expansion, 0 to 100 C (32 to 212 F)	9.3×10^{-4}
	Thermal Conductivity, cal/(cm) (°C) (sec)	0.45×10^{-3}
	BTU per (ft) (°F) (hr)	0.11
	Lap Shear Adhesion ² , strength, psi	192
	1/16-inch lap joint thickness	192
	1/8-inch lap joint thickness	113
	1/4-inch lap joint thickness	67
	3/8-inch lap joint thickness	44
	1/2-inch lap joint thickness	37

Staining

Weathering (6,000 hours in Atlas Weatherometer)

None

No change in hardness

As Cured³ - Electrical

ASTM D 257	Volume Resistivity, ohm-cm	1.5×10^{15}
ASTM D 149	Dielectric Strength ⁴ , volts/mil	550
ASTM D 150	Dielectric Constant	at 60 Hz 2.8
		at 100 Hz 2.8
		at 100kHz 2.8
ASTM D 150	Dissipation Factor	at 60 Hz 0.0015
		at 100 Hz 0.0015
		at 100kHz 0.0015

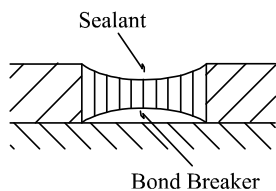
¹Measured on 1.91-mm-thick (0.075-inch) slabs after curing 72 hours at 25 C (77 F) and 50% RH.

²Measured with 1/4-inch overlap on test piece.

³Measured on 1.91-mm-thick (0.075-inch) cross section after vulcanizing 72 hours at 25 C and 50% RH.

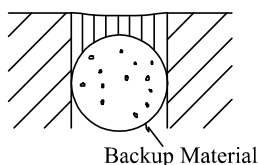
⁴Measured at 65-mil thickness, 1/4-inch ASTM electrodes in oil, rapid rise.

Recommended Methods of Application



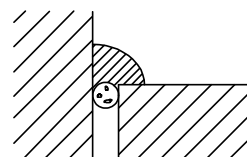
Bond Breaker

Joint Over 9 mm (3/8")



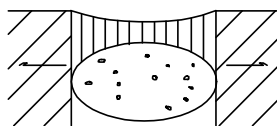
Backup Material

Joint Under 9 mm (3/8")

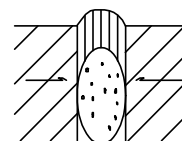


Corner Joint

Properly Applied
Sealant Under Stress



Maximum Extension



Maximum Compression

5. INSTALLATION (continued)

Joint Backing: Backer rods should be used in joints over 9mm (3/8"). Bond breaker tape should be used in shallower joints to prevent three sided adhesion.

Weather Considerations: Do not apply to exterior surfaces if rain is expected within 24 hours.

Service Time: Let dry 24 hours before exposing to water.

Cleanup: There is no commercial solvent which will dilute uncured silicone, so care must be taken when applying. Wipe excess uncured silicone away carefully with a soft cloth.

6. AVAILABILITY AND COST

Marketed throughout Canada and some foreign countries. Work Zone 100% Silicone Sealant is sold through building supply, hardware, paint, and specialty distributors. Costs are available from local Work

Zone distributors and representatives, or from company corporate offices.

7. WARRANTY

ICB Products warrants that Work Zone 100% Silicone Sealant is manufactured according to our published standards, and that it is free from defects. ICB Products will provide replacement for, or refund the purchase price of, that portion of material which proves defective. This constitutes the limit of ICB Products' liability and obligation. The company will not be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, user must determine suitability of the product for intended use, and user assumes all risk and liability whatsoever in connection therewith.

8. MAINTENANCE

No maintenance is required for properly applied, cured product.

9. TECHNICAL SERVICES

Technical assistance is available from ICB Products corporate offices only. Information and testing results are guidelines only and not intended for preparing specifications.

10. FILING SYSTEMS

- Technical Data Sheet
- Product catalogues, brochures.
- Additional product information is available upon request.

11. COPYRIGHT

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