ADHESIVES & SEALANTS

Weicon Flex 310 M HT 200

Weicon Flex 310 M HT 200 is a specialised grade of elastic MS Polymer adhesive that has been designed for high temperature applications. HT 200 withstands 45 minutes of exposure up to 180ºC and 30 minutes of up to 200ºC. This capability has led to HT 200 being widely used for bonding and sealing parts that will need to be thermal or powder coated. It is free of silicones, halogens and solvents.

Features

- Outstanding temperature resistance
- Excellent aging stability and UV resistance
- Sandable (after curing)
- Resistant to fresh and salt water
- Can be painted over immediately (wet in wet)
- Free of silicone and solvents (neutral curing)
- Grey in colour to matches metal components

Applications

- Bonding and sealing metal components that are to be powder or thermal coated
- Ventilation and air conditioning systems
- Container and tank construction
- Wagon and vehicle construction and repairs
- Applications where silicones or adhesives containing silicones are not permitted.

Properties

Basis	1 K – MS Polymer
Density	1.41 g/cm³
Viscosity	Pasty
Stability/Run-Off ASTM D 2202	<1mm
Processing Temperature	+5ºC to 35ºC
Curing Conditions	+5ºC to 40ºC and 30% to 95% Relative Humidity
Skin-Over Time	10 min.
Cure Speed (first 24 Hours)	3-4mm
Shelf Life (+5ºC to 25ºC)	12 Months
Shore Hardness A (DIN 53505 / ASTM D 2240) ± 5	55
Elongation at Break (DIN 53504 / ASTM D 412)	400%
Tensile Strength of the Pure Adhesive/Sealant	3.2 N/mm²
Average Tensile Shear Strength (DIN 53283)	2.1 N/mm²
Tear Strength (DIN 53515 / ASTM D 624)	21 N/mm²
Temperature Resistance	-40ºC to +90ºC (Continuous) Up to 180ºC for 45 Minutes Up to 200ºC for 30 Minutes
Overpaintable (liquid paint)	Only using “wet in wet” within 3 hours (max.) after material application.
Thermal Coating / Powder Coating	After Complete Cure
Building Material Category (DIN 4102)	B 2

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Quality Endorsed Company

Flex 310 M HT 200 Chemical Resistance After Curing

Acetic Acid (<5%)	+	Ketones	-
Acetone	-	Lyes (diluted)	+
Alcohol	O	Methanol	-
Ammonia (10%)	+	Methyl Ethyl Ketone	-
Antifreeze	+	Motor Oil (Mineral and Synthetic) +140ºC	-
Caustic potash solution (20%)	O		
Citric Acid (10%)	-	Motor Oil (Mineral and Synthetic)	-
Concentrated Formic Acid	-	Naphtha	-
Concentrated Phosphoric Acid	-	Nitric Acid (5%)	-
Concentrated Silicon Oil	+	Paint Thinner	-
Cooling Lubricant (Water Dilutable)	+	Paraffin Oil	-
Diesel / Heating oil	-	Petrol (92 to 100 octane)	-
Edible Oil / Vegetable Oil	O	Phosphoric Acid (5%)	-
Ethanol	-	Salt Water / Sea Water	+
Freon	-	Sodium Hydroxide Solution (20%)	-
Gear Oil	-	Sulphuric Acid (5%)	-
Glycerine (glycol)	+	Toluene	-
Glycol Ether	-	Water	+
Hydraulic Oil	O	Water (90ºC)	+
Hydrochloric Acid (5%)	-	Xylem	-
Hydrogen Peroxide (3%)	+		

+ = Resistant O = Resistant for a Limited Time - = Not Resistant

Preparation of the Surface

The surface to which Flex 310 M HT 200 will be applied must be clean and grease-free. Many surface contaminants (e.g. oil, dust and dirt) can be removed with Weicon Surface Cleaner. For heavily soiled surfaces we suggest Weicon Cleaner S Spray. Weicon Sealant and Adhesive Remover is suitable for removing old paint or adhesive residues.

Most materials can be bonded well to themselves and among each other. For certain materials or extreme requirements, we suggest the use of an adhesion agent or primer. More information on these are available from Associated Gaskets. Alternatively, a mechanical surface pre-treatment (e.g. sanding or sand-blasting) can considerably improve adhesion.

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Processing

Flex 310 M HT 200 is supplied in cartridge form and should be applied using a cartridge gun or automatic dosing system.

Joining the parts being bonded
To ensure optimum wetting, the parts must be joined before the first skin has formed on the adhesive (skin-over time).

Curing
All Weicon elastic one part adhesives and sealants cure by reacting with humidity in the surrounding environment. The curing process starts at the surface of the adhesive and proceeds inwards from there. At 50% relative humidity and 23ºC, the cure speed is approximately 3mm in the first 24 hours.

Adhesive bonds of large surfaces and high layer thicknesses cure more slowly as the humidity cannot penetrate as quickly towards the inside of the adhesive if the outer layers have already cured. Higher temperature and/or higher humidity accelerates curing while lower temperatures and/or lower humidity slows it down.

Storage

When stored unopened and in normal climatic conditions (23ºC and 50% relative humidity) Weicon Flex 310 M HT 200 has a minimum shelf-life of 12 months.

Availability

Weicon Flex 310 M HT 200 is available in 310ml cartridges.

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