

1K MS Polymer – Power Bond S – Windscreen – greenTech



MS-POLYMER

1. Characteristics:

Permanent flexible, moisture cured 1-component Sealant & Adhesive for constructive bonding with a high degree of strength. The new MS-Polymer Technology (modified Silane Polymers) combining the properties of conventional bonding systems like polyurethanes, silicones and acrylates, without the necessity of keeping their weak points. Without silicones, halogens. environmentally friendly, not containing isocyanates or solvents. The 1K-MS-Windscreen does not need hazchem marking and qualifies for even the strictest Health & Safety rules as well as laws and EU-guidelines for the environment. A truly green choice...!

2. „Pro“-facts at a glance:

- ➔ Outstanding adhesive performance
- ➔ Primerless on metal, glass, plastics, coatings, primers, wood and mineral surfaces
- ➔ Homogene through cure – throughcure is less dependent on surrounding temperature and humidity
- ➔ Overpaintability (wet-on-wet)
- ➔ No pinholing
- ➔ No hazchem declaration– no solvents, no isocyanates, no silicones, no volatile organic compounds (VOC)
- ➔ PIF-free (Paint Irritation Free)
- ➔ High chemical resistance
- ➔ Usability is non dependent on surrounding temperature or humidity.
- ➔ UV- stable & weathering resistant & non ageing
- ➔ Odour neutral



FMVSS 212 measures the stability of a windscreen at a head on crash at 50km/h.

3. Applications:

- ➔ Bonding of car front windcreens
- ➔ Bonding and sealing of sunroof systems
- ➔ Constructive bonding in coach-building, container, rail carriage and truck & transport building
- ➔ Sealing of weld seams, floor and bonding joints if necessary also on wet surfaces
- ➔ Bonding of von edge-profiles (windows & doors) and floor construction elements
- ➔ Aircon and cooling, machine building, plastics technology
- ➔ Structural & civil engineering

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4. Technical Properties:

Chemical Base	1-K Modified Silane Polymers (MS Polymer)
Product Name	Power Bond S
Colour	Black
Packaging Sizes	290ml, 400ml (foil-bag), 600ml (foil-bag)* * for further information please refer to our updated pricelists and/or our website: www.vip-gmbh.com
Consistency	Pasteus, very good steadfastness
Shore Hardness (A) – DIN 53505 @ +23°C / 50% rH	~ Shore A57 (Thickness 6mm after 4 weeks)
Working temperature	from +5°C to +35°C
Temperature resistance	from -40°C to +90°C
Potlife @ +23°C / 50% rH	< 15 Min.
Tack free time @ +23°C / 50% rH	~ 15 Min.
Full through cure – DIN 50014 @ +23°C / 50% rH	~ 3mm/24 hrs.
„Drive Away Time“	2 hrs.
Change of weight – DIN 50014	1% 14 days
Green strength	~ 600 Pa, electrical current measure MC100
Brake elongation – DIN 53504	~ 2,7 MPa
Pull strength – DIN 53504	~ 1,7 MPa
Lap shear strength – DIN 53283	~ 2,5 MPa
Tear propagation strenght– DIN 53515	~ 16 N/mm ²
Torsion stiffness	~ 1,92 MPa (using a Poission ratio of 0,43)
Elongation DIN 53283	~ 180%
Module at 100% Elongation – DIN 53504 S2 @ 7 days / +23°C / 50% rH	~ 2,3 MPa
Electrical volume resistivity	> 10 ¹¹ Ohm·cm

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Chemical resistance

- *A = no effect
- *B = minimal effect
- *C = failure not recommended

Water	A
Saltwater	A
Aliphatic Solvents	A
Oil & Grease	A
Diluted anorganic acids and alkalines	A
Ester	B
Ketones	B
Aromatics	B
Concentrated Acids	C
Chlorinated Hydrocarbons	C

Shelf life 12 Months
@ +4-22°C / 50%rH

Sheld conditions Cool and Dry
Keep away from direct sunlight

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability from his use of the product (e. g. usage parameters, conditions of the substrate, system build, etc.). We recommend in general testing the suitability on a small sample prior to use. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Changes in the material due to product improvements can occur and do not always warrant a change in the technical info.

The rights of the buyer regarding the quality of our materials are as per our terms of sale in the latest valid version. For special requests that are outside the scale of this technical info, please get in touch with our technical service team under +49-(0)89-89 55809 30 who will be happy to help.

Valid is only the latest updated version of this technical product information.
Dated: Mai 2010

5. Directions for use:

Remove wipers and all existing sealants according to manufacturers' instructions. Open side windows to avoid increased pressure when closing doors.



Use cutting wire or special knife to remove windshield sealants to lay open windshield. We recommend wearing goggles and gloves throughout this process.



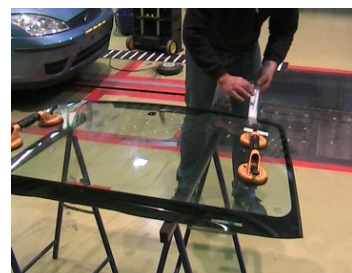
Clear groove of remaining sealant with scrap knife and leave a flat bead of approximately 1mm. The residues of previous PU sealant is an ideal surface that bonds perfectly to Power Bond MS-Polymer. Clean surface area and free of grease and loose particles. No Primer needed to prepare for bonding. Only touch up areas showing paint need primer.



For proper bonding of MS Polymer to newly painted areas dry and cure overnight. After full cure of paint prime these areas with Power Bond Ceramic Black Primer (PBO5507). Allow Primer to air for about 20 min.



Attach vacuum lifting pad to the outside of the windshield. Before glass cleaning please check the accurate fit. Tag a bonding tape to the glass for later adjustments and to lock windshield into proper position. Place windshield on rack and inspect glass for possible defects.



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Use Power Bond Cleaner (PBO5505) to clean and degrease glass. Wipe dust with clean cotton or microfiber cloth.

For UV-protection apply Power Bond Black Primer (PBO5507) with brush in thin coats where needed and allow to dry for about 15 min.(23 °C, 50% RH)



Using a VIP hand caulking gun (ZUB5001) or a VIP air gun (ZUB5010) apply Power Bond S to the pinch weld on top of the existing sealant in a triangular bead approx. 9-11mm height. This will assure best wetting of the surface area with the Direct Glazing Adhesive to guarantee a perfect seal. The cut-out of the mixer tip should be about same high than the pinch weld.



Make sure both ends of the bead are precisely merged. Cars with a left-hand drive, always begin with the bead on the right top of the windshield to assure best adhesion where the airbag develops most pressure (right top). Don't interrupt application of the bead when using spacer to avoid leaks.



Use vacuum lifting pad to place windshield into position utilizing the bonding tape as a guideline. Place the windscreen within the recommended work time of the adhesive, as it will not have a proper bond on the surface, once the curing has started and the material forms a skin.



Please fixate the windscreen from the roof side with tape and re-fix in any mounted parts. After adjusting the windscreen please refrain from re-adjusting as the adhesive cures rapidly. Please stick to the advised drive away time of 2 hours without fail.

