



Technical Data Sheet

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Issued: Feb. 2022
Number of pages: 3

Elch Pro P1

CHARACTERISTICS

- 1 K Polyurethane
- Moisture-reactive curing
- Fast curing
- Flexible bonding
- No stringing or dripping
- Sound and vibration damping
- Sealing properties
- Porous- and non-porous surfaces
- Easy application at low temperature
- Gap-bridging
- Weather and aging resistant
- Correctable for a few minutes
- Multipurpose adhesive
- High mechanical properties
- Primerless adhesion to numerous substrates
- High modulus
- thixotropic
- Quick room temperature cure rate

APPLICATION FIELD

P1 is a thixotropic one component poly-urethane elastomer which vulcanises at room temperature. It has been specially designed for industrial uses.

It can be used for sealing and/or flexible bonding between different kinds of materials. It is particularly recommended for flexible bonds under hot and wet conditions.

- bonding plastics parts in automotive industry (spoilers, ...)
- sealing in automotive engine (oil filters,)
- sealing / bonding in domestic appliances (washing machines, ...)

- sealing / bonding in electronics and electrical appliances

INSTRUCTIONS FOR USE

Pretreatment

Primerless adhesion on:

- glass, enamel, ceramics
- metals
- polar plastics (polyester, polyamide, ABS, polycarbonate, PVC, PMMA ...)

For all these substrates, a very strong adhesion on extremely hard environmental conditions (heat, moisture, chemical ageing ...) will be obtained by using the following primers:

- Primer 324 for glass (UV protection) and ABS
- Primer 146 for Polyester, polyamide, PVC

A Corona treatment is often needed for non-polar plastics

Application

Unscrew the cap of the P1-Polyurethane adhesive tube. Pierce the tube/cartridge membrane with a suitable tool.

Screw the nozzle onto the tube/cartridge and cut off the tip of the nozzle.

Fix the key to the crimped base of the tube and slowly turn the key. Or place cartridge into gun.

Apply the adhesive to the part to be sealed.

Place the part in the correct position and press firmly. If necessary, fix into position with adhesive tape or similar material until the adhesive has set completely. All substrate has to be clean and dry. Pretest on laquers and unknown substrates are recommended.



Remove the adhesive residues immediately using a spatula and cleaner

Advice:

The vehicle can be driven after a minimum of **24 hours**.

During the second 24-hour period max-speed **100-120 km/h (60-75 m.p.h.)**.

Do not wash the car before **48 hours**.

TECHNICAL DATA

Composition	1 K Polyurethane
Density at 23 °C (Standards ISO R 1183, DIN 53479, NMRPS 703)	Approx. 1,25 g/cm ³
Flowability (standards BOEING S 7502, NMRPS 459)	~ 1 mm
colour	Black, white
Skin over time (23°C/50% rel H.)	~ 30 min.
Time to cure a 2 mm thick film	~ 6 h
Cured thickness after 24 h	~. 4 mm
Shore A hardness (Standards ISO R 868, DIN 53505, ASTM D 2240, BS 903 part A2, NFT 46003, NMRPS 471)	~ 47
100% elastic modulus (Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 part A2, NFT 46002 (H2), NMRPS 470)	~1 MPa
Tensile strength (Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 part A2, NFT 46002 (H2), NMRPS 470)	~ 1,80 MPa
Elongation at break (Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 part A2, NFT 46002 (H2), NMRPS 470)	~600 %
Tear strength (Standards ASTM D 624 Sample A, NMRPS 492)	~ 6,0 KN/m
Tensile strength on aluminium AG 3 (1mm thick, 14 days cured, standards NMRPS 478)	~1,5 MPa 100% CF
Tensile strength on aluminium AG 3 at 70°C 50% rel. H (1mm thick, 14 days cured, standards NMRPS 478)	~1,4 MPa 100% CF

Heat resistance	-40°C up to 100°C 120 °C for short periods
Shelf Life	12 months at cool places
Dielectric rigidity (standards NFC 26225, ASTM D 419, CEI 243)	19 KV/mm
Dielectric constant at 10³ Hz (standards NFC 26230, ASTM D 150, CEI 250)	9
Dielectric factor at 10³ Hz (standards NFC 26230, ASTM D 150, CEI 250)	0,1
Volume resistivity (standards NFC 26230, ASTM D 150, CEI 250)	1 x 10 ⁴ ohm. Cm

LIMITATIONS

Cleaning tools

Clean tools immediately after use with thinner or washing benzene.

Storage

When stored in its original non opened packaging, at a temperature between + 2°C and +30°C, P1 must be used before the expiry date shown on the packaging. The total shelf life of P1 is of 12 months from production date. Once the expiry date is past, Henkel AG & Co. KGaA no longer guarantees the conformity of the product with the sales specifications.

Furthermore, we recommend that P1 to be stored in a cool, dry place.

HEALTH AND SAFETY

Before using the product please see related Material Safety Data Sheet that is available on request.



“The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. f.

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