

Description

Polygrip PU-4000 is solvent based premium polyurethane adhesive, which is used in combination with hardener Polygrip HR in the specified ratio. The system is specially designed for the manufacture of safety and industrial shoes where high strength is required. It is also recommended for bonding sole to upper component in footwear segment. This adhesive system provides strong durable bond with synthetic substrates like PVC, PU, EVA, Phylon, TPR and leather.

Advantages

Colourless
Good area coverage
Long lasting durable bonds and water resistant properties
Low viscosity and ease of application
Mild smell
No harmful benzene

Applications

Footwear (safety and industrial shoes, heavy duty sandals)

Typical specifications

| Properties | Unit | Test method | Values | |
|-------------------|-----------------|-------------|----------------------------|-------------------|
| | | | Resin PU 4000 | Hardener HR |
| Appearance | - | Visual | Colourless, viscous liquid | Dark-brown liquid |
| Density at 30°C | g/ml | - | 0.82 - 0.87 | 1.18 - 1.30 |
| Viscosity at 30°C | c Ps | ASTM D2196 | 1,050 - 1,800 | - |
| Mixing ratio | Parts by weight | - | 100 | 5 |

Process of application

Surface preparation: Clean the soles with Polygrip PG-60 to remove oil, grease, dust and dirt etc. Allow to dry for 5 minutes at ambient conditions. Apply relevant primers to substrate, depending upon type of substrates like EVA, TPR and PU. Allow to dry for at least 20 minutes to 30 minutes at ambient temperature. Thoroughly roughen and clean the upper component by using suitable tools.

Application: Take 100 g of Polygrip PU-4000 in a clean container and add 5 parts by weight of hardener Polygrip HR. Mix thoroughly to get homogeneous mixture. The mixture thus prepared is suitable to use up to 4 hours at ambient conditions. Apply adhesive uniformly on both the components to be bonded by using brush or suitable tools. Allow adhesive to dry for 20 minutes to 30 minutes at ambient conditions. In case of porous (absorbing) substrate, apply second coat of adhesive and allow drying for 20 minutes to 30 minutes at ambient temperature. Allow substrates to heat at 70°C to 75°C for 3 minutes to 5 minutes in appropriate equipment. Bond both the components immediately in hot condition with firm and uniform pressure in appropriate device. Allow components to cool at room temperature under full pressure before release to achieve faster production components can be cooled with the help for chilling unit under pressure. After cooling, remove the excess adhesive from the components carefully with the help of a crepe rubber roll. To achieve optimum strength, allow components to cure for 24 hours at ambient conditions.

Packaging

Polygrip PU-4000 is available in 5 L and 30 L MS drums. Other packing may be considered on request.

POLYGRIP® PU-4000

Technical Data Sheet | Polymers Business



Storage and handling

Polygrip PU-4000 should be stored in a cool and dry place, preferably in a sealed container and should not be exposed to direct sunlight. This product has a shelf-life of 1 year, if stored in its original container between 18°C and 25°C away from humidity and excessive heat. Please refer to the Safety Data Sheet (SDS) for detailed instructions on storage and handling.

Safety

Wear personal protective equipment (PPE). Avoid contact with the eyes and skin. In case of direct contact and irritation, the resin should be washed off immediately with soap and warm water. Avoid breathing vapours, mist or gas. Please refer to the SDS for detailed safety instructions.

Spills and disposal

In case of spills, sweep up and shovel the spilled material. Keep spilled material in suitable, closed containers for disposal. Soak up with an absorbent such as clay, sand or other suitable material. Flush area with water to remove trace residue. Do not allow the product to reach the sewage system. Waste must be disposed of in accordance with federal, state or local regulations, as applicable.

Contact

E-mail: support_polymers@atul.co.in
Website: www.atul.co.in

Note

Polygrip® is a registered trademark of Atul Ltd.

Manufacturing site

Atul 396 020, Gujarat, India
Telephone: (+91 2632) 230000 | 233261
E-mail: contact@atul.co.in

Disclaimer: The information contained herein is for information purposes only. While enough care is taken in disclosing the information, users of this information are advised to cross-check the same depending upon use | application. Atul Ltd does not give any assurance or warranty or guarantee in regard to the accuracy or completeness of the information and no claim or liability will be accepted or entertained in regard thereto. Atul Ltd makes no warranty of any kind, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose or performance or usage of trade.