

Applications

Thermoplastic-like parts (prototypes and mock-ups) with a flexural modulus close to 174,000 psi (1,200 MPa) (example: polypropylene, HDPE).

Properties

- Low viscosity for easy casting
- Excellent impact resistance
- Fast demolding
- Easily tintable

| Physical Properties | | | | |
|--|-----------------|---------------|---------------|-------------|
| | | PX 212 Part A | PX 212 Part B | Mixed |
| Composition | | Isocyanate | Polyol | |
| Mixing ratio by weight | | 100 | 100 | |
| Aspect | | liquid | liquid | liquid |
| Color | | light yellow | transparent | translucent |
| Viscosity at 77°F (25°C) (mPa.s) | Brookfield LVT | 150 | 1,000 | 800 |
| Density at 77°F (25°C) lbs/gal (g/cc) | ISO 1675 : 1985 | 10.2 (1.22) | 8.6 (1.03) | - |
| Cured density at 74°F (23°C) g/cc | ISO 2781 : 1988 | - | - | 1.15 |
| Pot life at 77°F (25°C) on 100 g (min) | | | | 4 – 6 |

Processing Conditions

- Vacuum casting into silicone molds.
- Heat both parts to 64°F (18°C) when stored at lower temperature.
- **Important: vigorously shake Part B Polyol before each and every weighing.**
- Degas each part before use.
- Mix for a minimum of 30 seconds.
- Pour into mold preheated to 149 – 158°F (65 – 70°F).
- Cure for 60 – 75 minutes at 158°F (70°C) before demolding

Mechanical Properties at 74°F (23°C)

| | | | |
|--------------------------------|--------------------|--|-----------------|
| Flexural modulus of elasticity | ISO 178 : 2001 | psi (MPa) | 174,000 (1,200) |
| Flexural strength | ISO 178 : 2001 | psi (MPa) | 11,600 (80) |
| Tensile strength | ISO 527 : 1993 | psi (MPa) | 10,900 (75) |
| Elongation at break in tension | ISO 527 : 1993 | % | 25 |
| Charpy impact strength | ISO 179/1eU : 1994 | ft-lb/in ² (kJ/m ²) | >23.8 (50) |
| Hardness | ISO 868 : 1985 | Shore D1 | 76 |
| | | | 68 |

Thermal and Specific Properties¹

| | | | |
|--|------------------|---------|----------|
| Glass transition temperature (T _g) | TMA METTLER | °F (°C) | 194 (90) |
| Heat deflection temperature at 264 psi (1.8 MPa) | ISO 75 Ae : 1993 | °F (°C) | 172 (78) |
| Linear shrinkage | | % | 0.3% |
| Time before demolding at 158°F (70°C) | | minutes | 60 – 75 |
| Complete hardening time at 158°F (70°C) | | hours | 4 |
| Maximal casting thickness | | in (mm) | 0.2 (5) |

¹Average values obtained on standardized specimens/postcured 4 hours at 158°F (70°C)

Storage Conditions

Product shelf life is 6 months when stored in original unopened containers between 59 – 77°F (15 – 25°C). Any opened can must be tightly closed under protective gas blanket, such as Bloxygen (available from Axson).

Part A (Isocyanate) may crystallize at temperatures below 59°F (15°C) as indicated by a non-homogeneous appearance, heat product to 158°F (70°C) until uniform.

Part B (Polyol) separates rapidly in storage. Please shake vigorously before each use to ensure best results.

Handling Precautions

Normal health and safety precautions should be observed when handling these products:

- Ensure good ventilation
- Wear gloves and safety glasses

For further information, please consult the material safety data sheet.

Guarantee

The information contained in this technical data sheet results from research and tests conducted in our Laboratories under precise conditions. It is the responsibility of the user to determine the suitability of AXSON products, under their own conditions before commencing with the proposed application. AXSON guarantees the conformity of their products with their specifications but cannot guarantee the compatibility of a product with any particular application. AXSON disclaims all responsibility for damage from any incident which results from the use of these products. The responsibility of AXSON is strictly limited to reimbursement or replacement of products which do not comply with the published specifications.