

APPLICATIONS

Casting in silicone moulds : transparent prototype parts up to 50 mm in thickness : crystal glass like parts, fashion, jewellery stained glass repair, art and decoration parts.

PROPERTIES

- High transparency (water clear)
- Easy polishing
- High reproduction accuracy
- Good UV resistance
- Easy processing
- Low shrinkage

| PHYSICAL PROPERTIES | | | | | |
|--|-------------------|------------------------|------------------------|------------------------|-------------|
| Composition | | UPX 5210 ISOCYANATE | UPX 5210 POLYOL | UPX 5210-S POLYOL | MIXED |
| Mix ratio by weight | | 150 | 100 | 100 | |
| Aspect | | liquid | liquid | liquid | liquid |
| Colour | | transparent | Light blue - purple | Light blue - purple | Transparent |
| Viscosity at 23°C (mPa.s) | BROOKFIELD LVT | 100 - 150 | 600 - 800 | 600 - 800 | 500 - 650 |
| Specific gravity at 23°C Specific gravity of cured product at 23°C | | 1.06 - | 1.01 - | 1.01 - | - 1.10 |
| Pot life at 20 - 25°C on 100 g (min) | | | 10 | 20 | |

PROCESSING CONDITIONS

The UPX 5210 can be use either manually (UPX 5210-S) or with a vacuum casting machine (UPX 5210).

- **For manual casting :**
- Heat the mould at 70°C.
- Heat ISOCYANATE and POLYOL at 20°C in case of storage at a lower temperature.
- Mix manually for 1 - 2 minutes.
- Degas under vacuum for 5 to 10 minutes.
- Pour in the mould.
- After casting, avoid to degas.
- Place in an oven at 70°C, demould after:
 - 1 hour for 16 - 50 mm thickness
 - 2 hours for <10 mm thickness
 - 3 hours for 2 mm thickness
- **Application with vacuum casting machine:**
- Heat the mould at 70°C.
- Heat ISOCYANATE and POLYOL at 20°C in case of storage at a lower temperature.
- Weigh ISOCYANATE in the upper cup (do not forget to allow for residual cup waste).
- Weigh POLYOL in the lower cup (mixing cup).
- After separate degasing for 10 minutes, our ISOCYANATE in POLYOL and mix for **2 minutes**.
- Cast in the silicone mould, previously heated at 70°C.

- Put in an oven at 70°C and wait for demoulding.

| MECHANICAL PROPERTIES at 23°C | | | |
|-------------------------------|---------|-------------|------------|
| | | UPX 5210 | UPX 5210-S |
| Hardness | Shore D | 83 | |
| Tensile strength | MPa | 65 - 70 | |
| Flexural strength | MPa | 90 - 95 | |
| Flexural modulus | MPa | 2000 - 2200 | |
| Elongation at break | % | 15 - 20 | |
| Impact strength (IZOT) | J/m | 60 - 70 | |

| THERMAL AND SPECIFIC PROPERTIES | | | | | |
|-----------------------------------|--------------|------------------|--------------------------|-------------|------------|
| | | Curing condition | | UPX 5210 | UPX 5210-S |
| Heat resistance 1 (heat sag) | | 1.5 hour at 70°C | Temperature/hour/changes | 70°C/1H/0mm | |
| Heat resistance 2 (heat sag) | | 2 hours at 100°C | Temperature/hour/changes | 90°C/1H/0mm | |
| Glass transition temperature (Tg) | | - | °C | 80 | |
| Linear shrinkage | | - | % | 0.4 - 0.45 | |
| Demoulding time (2 - 3mm) | at 65 - 70°C | - | min | 60 - 90 | 90 - 120 |

Typical Cure schedules

UPX 5210: 60-90 minutes at 65-70°C, 2-3mmt

UPX 5210-S: 90-120 minutes at 65-70°C, 2-3mmt

(1 hour at 80 °C + 1 hour at 100 °C)

*We recommend you to use support like jig, since it may be deformed at post-cure.

HANDLING PRECAUTIONS

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

Ensure good ventilation

Wear gloves, safety glasses and protective clothes.

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

STORAGE CONDITIONS

Shelf life is 12 months in a dry place and in original unopened containers at a temperature between 15 and 25° C. Any open can must be tightly closed under dry nitrogen blanket.

PACKAGING

UPX 5210 ISOCYANATE

10 x 1 kg

UPX 5210 POLYOL

10 x 1 kg

GUARANTEE

The information of our technical data sheet are based on our present knowledge and the result of tests conducted 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 refuse any guarantee about the compatibility of a product with any particular application. AXSON disclaim all responsibility for damage from any incident which results from the use of these products. The guarantee conditions are regulated by our general sale conditions.