

PRA 794

References

Polyol : PR 794 P - SH 194 000
Isocyanate : PR 751 - PRA 794 I - SH 000 401

Definition

Self-extinguishing, 5V according to UL94, halogen free polyurethane resin for vacuum casting.

High thermal resistance (HdT : 130°C) and good chemical resistance.

Low aggressivity on silicon moulds.

Product suitable with European directive: 2002/96/EC, 2000/53/EC, 2000/11/EC, 2011/65/EC and 2017/2102/EC (RoHS)

Average physical properties of the components

| | PRA 794 Polyol SH 194 000 | PR 751 / PRA 794 I SH 000 401 | PR A 794 (SH 194 401) |
|---|------------------------------|----------------------------------|--------------------------|
| Aspect – Color | Dark brown | Transparent liquid colorless | Dark brown |
| Viscosity Brookfield LVT (mPa.s) According to MO-051 | 1000 | 1200 | |
| Density at 25°C According to MO-032 | 1.16 | 1.15 | 1.16 |

Process data

Please stir well the polyol part before use

| | PR 794 Polyol SH 194 000 | PR 751 / 794 I SH 000 401 | Mixing SH 194 401 |
|---|-----------------------------|------------------------------|----------------------|
| Mixing ratio by weight | 80 | 100 | |
| Mixing ratio by volume | 79 | 100 | |
| Pot life 200g at 25°C (min.) According to MO-062 | | | 7 - 8 |
| Demoulding time at 70°C (min.) According to MO-116 | | | Approx. 45 |

Average mechanical and thermal properties of the solid piece

- All results are obtained after curing 1 h at 70°C + 1 h at 100°C + 2 h at 120°C + 24 h at RT

| | | Test methode | |
|--|-----------------------|---------------------------------|-------------|
| Hardness Shore D1 (1) | | ISO 868-2003 | 80 |
| Heat deflection temperature (HdT) (1) | (°C) | ISO 75 Ae:2001 | 130 |
| Flexural modulus (1) | (MPa) | ISO 178 : 2011 | 1500 |
| Maximal flexural strength (1) | (MPa) | ISO 178 : 2011 | 65 |
| Elongation at break (1) | (%) | ISO 527-1 : 2012 | 5 |
| Tensile strength (1) | (MPa) | ISO 527-1 : 2012 | 60 |
| Charpy impact (without slight cut) (1) | (kJ.m ⁻²) | ISO 179/1eU ^b : 2010 | 20 |
| Linear shrinkage (3 mm thickness) (1) | (mm/m) | - | 2 |
| Self extinguish (4 mm thickness) (1) | | According to UL94 | 5 V |

This document can not be, in any case, used as specification data sheet. The values mentioned on this document are based on tests and researches carried on in our laboratories in precise conditions. It's the responsibility of the user to check the convenience of the product in his own conditions defined and tried by himself. The Synthene Company disclaims all responsibility for any consequence occurred by the use of this product.

Safety for using

Better wear safety clothes and accessories (gloves and glasses).
For more information, read the medical and safety data sheet of the product.

Process with vacuum casting machine :

Pre-heat polyaddition silicone moulds at 70°C.
Weigh isocyanate part in the upper cup (don't forget the residual product).
Weigh polyol part in the mixing cup (stir well the polyol part before use).
After 10 min of vacuum, pour the isocyanate part in the polyol part and mix to reach total and perfect homogeneity (approx 50 to 60 sec.)
Pour in the silicone mould.
Put the mould in an oven at 70°C.
Demoulding is possible after 50 min according to thickness, then post curing is necessary to reach maximal characteristics.

Packaging :

Parcel of 2 kits of (4,0 + 5,0) kg

Storage : 18 months in original and unopened cans stored between 15 and 25 °C.