Product information

Fast-cast

PU 8095

FEATURES

- Optically transparent
- UV stable

COMPOSITION

- Poliol PU8095A / PU8095-05A / PU8095-2A / PU8095-8A
- Isocyanate PU8095 B

PU 8095 is a two-component aliphatic rigid casting polyurethane system, optically transparent, UV resistant. Low viscosity, easy mixing and degassing, processable by vacuum or pressure casting. Available in four versions with potlife from 6 minutes to 6 hours.

APPLICATIONS

- Optically transparent objects.

TYPICAL PROPERTIES

This data does not constitute the Product Sales Specifications. The values indicated refer to typical properties and are not to be understood as extreme minimum or maximum values. They do not constitute a guarantee of product conformity and do not relieve the buyer from the need to test the suitability of the products before use or placing them in his production cycle. Please contact your local sales representative to obtain the product specifications.

Property	Unit	Value
Color (Part A/Part B)	Visual	Colorless/Colorless
Density at 23°C (Part A/Part B)	g/cm^3	1.22 / 1.05
Viscosity at 23°C (Parte A/Parte B)	mPa.s	550 / 40
Mix ratio A : B	pbw	100 : 110
Mix ratio A : B	pbv	100 : 130
Pot Life [150g at 23°C]		
PU8095	min	6
PU8095-05	min	20
PU8095-2	min	90
PU8095-8	min	360
Gel time [150g at 23°C]		
PU8095	min	12
PU8095-05	min	30
PU8095-2	min	120
PU8095-8	min	480
Hardness	Shore D	85
Tensile strength	MPa	70
Elongation at break	%	11
Flexural modulus	MPa	2300
Flexural strength	MPa	110
Compressive strength	MPa	26
Linear shrincage [500x50x10mm]	%	0.36
Tg [7 days at 23°C]	°C	53
Tg [post-cured 6hrs at 70°C]	°C	64

MOLD SETTING

Before use, make sure that the master used for the mold has the exact surface finish required for the reproductions to be made, eg. for excellent transparency, polish the master until a high gloss is obtained. Make sure the mold is clean and dry. If the mold is made of metal, use an appropriate release agent, wait a few minutes and polish the surface, removing the excess release agent. This product can be used in polyaddition and polycondensation RTV-2 silicone molds. Post-cure new molds for 12 hours at 70°C and allow to cool before casting. RTV-2 silicone rubber molds allow a limited number of reproductions.

RESIN SETTING

Mechanically mix Part A (Polyol) at low speed before each withdrawal from the container. The two components must be processed at a temperature between +20°C and +30°C. High temperatures increase the reaction rate, reducing the workability time.

MIXING & CASTING

Mix the two components in the correct ratio, at low speed, avoiding the inclusion of air and make sure that the material on the sides and bottom of the container is well mixed. To obtain items free from air bubbles, degass in vacuum after mixing or, in the case of complex shapes, after casting in the mold. Carefully pour into a point of the mold in order to avoid air inclusion. The greater the quantity of material, the shorter the workability time. The higher the temperature of the environment, of the components, of the mold, the shorter the workability time. For coloring we recommend the use of specific coloring pastes for polyurethanes to be added in Part A (polyol) in quantities not exceeding 5%.

CURING

Demoulding time

PU8095: 180 mins (thickness 3mm) and 120 mins (thickness 10 mm).

PU8095-0.5: 4 hours (thickness 20mm) and 3 hours (thickness 40 mm).

PU8095-2: 2 hours (thickness 60mm).

PU8095-8: 24 hours.

The product can generally be processed within the times indicated above. The curing time depends on the mass: thinner thicknesses require longer curing times. High product and environmental temperatures lead to reductions in workability and curing times. Contrariwise, low temperatures mean longer times. A post-curing treatment in oven is recommended to stabilize the polymer at high temperatures and accelerate crosslinking.

HANDLING PRECAUTIONS

The information for a correct and safe handling of the products is contained in the safety data sheet. Consult the safety data sheets before use for complete information on the risks to health and the environment and for the suitable protective devices to be adopted. Share the safety data sheets with all staff involved in the use of the products.

USABLE LIFE - STORAGE

Polyol and isocyanate must be stored in the original unopened containers at a temperature between +10°C and +35°C. Isocyanates can crystallize at low temperatures. Bring the components to 20-25°C before use. The two components are sensitive to humidity: the absorption of water creates expansion during the reaction phase. The addition of zeolites in the polyol restores the functionality of the product. Be sure to close containers tightly after use. Polyol and isocyanate, if stored under the specified conditions, have a shelf life of 6 months from the date of manufacture.

PACKAGING

The components are supplied in 5 and 25 liter cans. For other packaging please contact our sales department.

LIMITATIONS

This product is neither tested nor represented as suitable for food contact, skin contact or medical uses.

LIMITED WARRANTY

The information contained in this document is offered in good faith based on Chemix research and is believed to be accurate. However, as the conditions and methods of use of our products are beyond our control, this information should not be used as a substitute for the tests that customers must first perform to ensure that Chemix products are fully satisfactory for their specific applications. The warranty is only applicable to the values indicated in the Product Sales Specifications. The sole and exclusive compensation for products with values that are out of specification is limited to the replacement of the product or the refund of the purchase price.

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