



ASSYST sprl / A.S.O.W. sprl
 Hellegatstraat 13a - 2590 Berlaar - Belgium
 Tel: +32 495 50 61 14 / +32 496 83 70 27
 Website: www.assyst.org / www.artsuppliesonweb.com
 Email: ao@assyst.org / vera.opsommer@assyst.org

POLYURETHANE RESIN PC39 + G226

DESCRIPTION:

Two component odourless system. The filler can be added in the proposed proportion or in any other proportion depending on the application and the required thickness. Very high quality of reproduction. Low exothermic peak. Low shrinkage. By using a filler (mixing ratio 100:100:150) components with a lower specific gravity can be produced.

APPLICATION:

Large models, matrices and negatives.

PROCESSING:

Surface and solid casting, even at high thickness with the filled product. The more filler used, the lower the shrinkage. Note: homogenise the resin before use (follow instructions).

SYSTEM SPECIFICATIONS:

Resin PC 39	
✓ Viscosity at 25°C	90-140 mPas
✓ Color	natural white
✓ Density at 25°C	1.00-1.04 g/ml
Harder G 226	
✓ Viscosity at 25°C	55-95 mPas
✓ Color	pale yellow
✓ Density at 25°C	1.10-1.12 g/ml

CHARACTERISTICS OF THE TYPICAL SYSTEM:

Processing data:	PC39+G226	PC39+G226+filler
✓ Mixture ratio by weight	100:100	100:100:300
✓ Processing time at 25°C (3,000 mPas)	13-20 min	-
✓ Processing time at 25°C (15,000 mPas)	-	8-12 min
✓ Exothermic peak at 25°C (40 mm, 100ml)	65-75°C	40-45°C
✓ Initial viscosity of the mixture at 25°C	40-70 mPas	2,000-2,800 mPas
✓ Deformation time at 25°C (15ml; 6mm)	10-12 h	10-12 h
✓ Maximum recommended thickness	3-7 mm	30-70 mm

TYPICALLY CURED SYSTEM PROPERTIES:

Properties determined on cured samples: 24 h KT (room temperature) + 15 h 60°C

	PC39+G226	PC39+G226+filler
✓ Color	white	white
✓ Machinability	Excellent	Excellent
✓ Density at 25°C	1.04-1.08 g/ml	1.59-1.63 g/ml
✓ Hardness at 25°C	73-77 shore D/15	77-81 shore D/15
✓ Glass Transition(Tg)	75-80°C	75-80°C
✓ Linear shrinkage	2.70-2.85 %	1.25-1.30 %
✓ Bending strength	38-45 MN/m ²	33-40 MN/m ²
✓ Maximum stress	5.0-7.5 %	1.0-2.0 %
✓ Tension to rupture	5.5-10.0 %	1.0-2.0 %
✓ Bending elastic mode	1,000-1,300 MN/m ²	3,600-4,000 MN/m ²
✓ Tensile strength	23-28 MN/m ²	15-22 MN/m ²
✓ Elongation until break	3-4 %	0.6-1.0 %
✓ Compressive strength	not determined	38-47 MN/m ²



ASSYST sprl / A.S.O.W. sprl
Hellegatstraat 13a - 2590 Berlaar - Belgium
Tel: +32 495 50 61 14 / +32 496 83 70 27
Website: www.assyst.org / www.artsuppliesonweb.com
Email: ao@assyst.org / vera.opsommer@assyst.org

INSTRUCTIONS:

With pre-filled products, it is good practice to check the material and carefully re-homogenize if any settling is present. Dose the individual components and add the filler to both in the correct proportion, and mix. It is advisable to apply more filler on the hardener side. Mix carefully and apply quickly. For surface preparation (mould or model) see the release agent data sheet.

CURING / POST TREATMENT:

Post-treatment is always recommended in KT curing systems to stabilize the component and achieve the best properties. It is necessary when the part is operating at high temperature. Cure the tool as indicated in the table, gradually increasing by 10°C / hour. Allow it to cool down slowly. The heating rate and post-curing time indicated refer to the standard sample size. Users should evaluate the best conditions for curing or post-curing depending on the size and shape of the part. For large components, reduce the thermal gradient and increase the post-cure time. In the case of thin-layer applications and composites, post-cure on the mold.

BEWARE:

Polyol resins and isocyanate based hardeners have a shelf life of one year in the original sealed package in a cool and dry place. The hardeners may show an increase in viscosity which does not change the properties of the cured system. Both components are moisture sensitive, therefore it is good practice to close the containers immediately after each use. Moisture absorption may cause the product to expand during application and/or the hardener to crystallize during storage. The isocyanates may crystallize at low temperatures. Heat the material to 70-80°C to avoid local overheating and restore original conditions. Before use, re-homogenize and cool to room temperature.

TREATMENT PRECAUTIONS:

Consult the data sheet and observe the regulations on industrial health and waste disposal.