# Product Information

Electric/Electronic

# PU 8682

## FEATURES

- Thermal condictivity
- Thermal shock resistance
- Flame retardant
- Hardness 82 Shore A

## COMPOSITION

- Polyol PU8682 A
- Isocyanate PU8682 B

Flexible flame retardant polyurethane system with good thermal conductivity and thermal shock resistance (-40/+120°C). Component A (resin) contains non-abrasive fillers. Hardener available in blue and black colors.

## APPLICATIONS

- Designed to make PCB transformers, capacitors, voltage regulators, pressure sensitive devices and other electrical applications.

## 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 |
|---|---|---|
| Colour (Part A/Part B) | visual | Cream/Blue or Black |
| Density at 23°C (Part A/Part B) | g/cm$^3$ | 1.32/1.23 |
| Viscosity at 23°C (Part A/Part B) | mPa.s | 1520/200 |
| Mix ratio A : B | pbw | 100 : 20 |
| Pot life [150g at 23°C] | minutes | 90 |
| Gel time [150g at 23°C] | minutes | 120 |
| Demoulding [150g at 23°C] | hours | 24 |
| Post-curing | hours | 6 at +80°C |
| Hardness | Shore | 82 A |
| Tensile strength | MPa | 2.9 |
| Elongation at break | % | 66 |
| Tear strength | N/mm | 19 |
| Linear shrinkage [500x50x10mm] | % | 0.12 |
| Thermal conductivity ISO 8894-1 | W/mK | 0.5 |
| Max service temperature IEC 60085 | | Class B |
| Flammability [6mm] | UL 94 | V-0 |
| Glow-wire test [850°C] IEC 60695-2-11 | | passed |
| Water absorption [1d a 23°C] ISO 62/80 | % w/w | 0.15 |
| Water absorption [10d a 23°C] ISO 62/80 | | 0.50 |
| Dielectric strength [2mm] IEC 60243-1 | kV/mm | 25 |
| Dielectric loss factor IEC 60250 | % | 11 |
| Dielectric constant IEC 60250 | | 6 |
| Volume resistivity IEC 60093 | Ω cm | $10^{13}$ |

Note: values determined on ISO standards curing 24 hours at 23 ° C + 6 hours at 80 ° C.

## HOW TO USE

Open both containers A and B and examine the components; if they show signs of crystallization, place them in an oven at 50-60°C until the crystals are completely melted. Mix Part A (polyol) before each withdrawal from the container. The two components must be processed at a temperature between +20 and +30°C.

## MIXING

Mix the two components in the correct mixing 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. Pour into another container and repeat mixing. To eliminate air bubbles, we recommend vacuum degassing the mixture before and after casting.

## CURING

The curing time depends on the mass: thinner thicknesses require longer curing times. An high temperature of the product or of the environment lead to reductions in workability and hardening times. Contrariwise, low temperatures mean longer times. A cross-linking temperature between 20 ° C and 30 ° C and relative humidity of 60% is recommended. The demoulding time depends on the ambient temperature and the mass. Usually it is possible to demould the product after 12 hours, in some cases, particularly with thin thicknesses and small casting mass, it is recommended to wait at least 24 hours. The product full cures after about 5 days. To reduce crosslinking times, a post-cure in the oven 6 hours at +80°C is recommended.

## HANDLING PRECAUTIONS

The information for a correct and safe handling of the products are contained in the safety data sheet. Consult the safety data sheets before use for complete information on the risks for health and environment and for suitable protective devices to be adopted. Share the safety data sheets with all the 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. Be sure to close containers tightly after use. Polyol and isocyanate, if stored in the specified conditions, have a shelf life of 6 months from the date of manufacture.

## PACKAGING

The components are supplied in 25 liter cans, 200 liter drums or 1000 liter tanks. 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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