

SOLRES 05

A two-part, room temperature curing polyurethane system

Application

- Cable joints
- Hand held tool handles
- Abrasion resistant liners

Key Properties

- Outstanding abrasion resistance
- Excellent tear resistance
- Medium viscosity
- UV resistant

Description

- Basic Two-component polyurethane system
- Resin RL217C
- Hardener HL217C

Physical Data (approx. – values)	Resin	Hardener	Mixed
Colour	Black	Amber	Black
Specific Gravity	1.06	1.20	1.07
Viscosity (mPas) @ 25°C	3000-7000	690	7200

Cure Schedule (150ml)	Working Life	Gel Time	Light Handling	Full Cure
Temperature	(minutes)	(minutes)	(hours)	(hours)
RT	30	120	24	72
30°C	-	-	16	48
60°C	-	-	4	24
80°C	-	-	2	12

*RT is defined as 20-25°C

The above are typical values and will vary depending on the cured mass and application. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exotherm. Experimentation and testing is suggested to avoid side effects. For maximum properties a post cure may be required – Contact our technical service department for advice.

Processing

Mix ratio by weight 9.5:1
 Mix ratio by volume 10.57:1

Approvals	
RoHS compliant	Yes
UL94 V-0	No
REACH (SVHC concentration)	Refer to SDS

Typical Properties	Result	Unit
Hardness	85	Shore A
Operating Temperature	-60 - +130	°C (application & geometry dependent)
Abrasion resistance	110	mm ³
Tensile Strength	18	MPa
Elongation at break	800	%
Tear resistance	50	N/mm
Water resistance (24hrs @ 25°C)	0.84	%
Tg	- 45	°C
100% modulus	7	MPa
300% modulus	9.3	
500% modulus	10.7	

Packaging & Part Numbers

SOLRES 05 is available in Bulk, Twinpacks & Kits

Availability

Available through

Twinpacks

SOLRES 05/BK/250

SOLRES 05/BK/500

SOLRES 05/BK/1000

Twinpacks are pre-weighed resin and hardener components contained in a tough flexible film, separated by a removable clip and rail. Once the clip and rail is removed the resin and hardener is thoroughly mixed within the bag and is immediately ready for use. Mixing will normally take ~ 2 minutes due to the viscosity; but pay special attention to the corners. Twinpacks are ideal for small to medium production runs, prototyping and on-site or field use. The twinpack weight/volume may also be tailored to a specific size on request.

Bulk Materials

Available on request

Both resin and hardener are supplied in 5kg, 25kg and 200ltr drums and fully evacuated and ready for use.

Care should be taken to ensure when mixing the resins air is not entrained in the mixture. If this is unavoidable the mixed resin and hardener should be re-evacuated before dispensing.

Kits & Sets

SOLRES 05/BK/1KGKIT

SOLRES 05/BK/5KGKIT

Kits and Sets are provided in separate containers to the correct ratio.

In Kit form, pour the contents of the smaller container into the larger container and use it as a mixing vessel.

Stir well using an appropriate mixer until homogeneous.

Note: Incomplete mixing will be characterised by erratic or partially incomplete cure even after extended time periods.

Cleaning

All equipment contaminated with mixed material should be cleaned before the material has hardened.

TS130 is a suitable non-flammable cleaning agent, although other solvents may be found suitable.

TS130 will also remove cured material provided it can soak for several hours.

Storage and Shelf Life

24 months at 25 °C bulk Specialty packaging may be less.

Bulk containers should be inverted every two to three weeks to reduce the accumulation of the fillers on the bottom of the containers.

Isocyanates are sensitive to moisture and should be kept in their original container or in a volume tank under dry nitrogen blanketing.

Many isocyanates are prone to dimerization, the formation of a white precipitate. Products with minor amounts of this precipitate normally cure to full properties.

Storage at 20 +/- 5 °C (60 °F to 86 °F) is recommended to ensure full shelf life.

Health and Safety

Please refer to SOLRES 05 Health and Safety data or our Technical Service Department for individual/specific advice.

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