



Scorpion Oceanics

SOLRES05

A two-part, room temperature curing polyurethane system

Application

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

Key Properties

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

Description

- Basic Two-component polyurethane system
- Resin SOLRES05
- Hardener SOLRES05

Physical Data (approx. – values)

	Resin	Hardener	Mixed
Colour	Natural Black	Amber Amber	Natural Black
Specific Gravity	1.06	1.20	1.07
Viscosity (mPas) @ 25°C	6000-8000	800	5000

Cure Schedule (150ml sample)

Temperature	Working Life (minutes)	Gel Time (minutes)	Light Handling (hours)	Full Cure (hours)
RT	90	120	24	48
30°C	-	-	16	36
60°C	-	-	4	8
80°C	-	-	2	4

*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 9.32:1
Mix ratio by volume 10.57:1

Approvals

RoHS compliant	Yes
UL94-V0	NO
REACH (SVHC concentration)	0%

Typical Properties

Test	Result	Unit
Hardness	78	Shore A
Operating Temperature	-60 - +130	°C (application & geometry dependent)
Abrasion resistance	110	mm ³
Tensile Strength	21	MPa
Elongation at break	600	%
Tear resistance	50	MPa
Water resistance (24hrs @ 23°C)	0.12	%
Water resistance (7 days @ 23°C)	0.78	%

Packaging & Part Numbers

SOLRES05 is available as standard in Twinpacks (other forms of packaging available upon request).

Twinpacks

SOLRES05 - 0100	SOLRES05 - 0150	SOLRES05 - 0250
SOLRES05 - 0500	SOLRES05 - 01000	SOLRES05 - 01500

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.

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 is allowed to soak for a number of hours.

Storage and Shelf Life

Material stored in the original unopened containers under cool dry condition between 15° and 25°C will have a shelf life of at least two years. Once used the containers must be kept sealed to prevent effects from water, air or contaminants.

Health and Safety

Polyurethane resin systems may cause sensitisation by skin contact or inhalation may be corrosive, harmful or toxic. It is therefore strongly recommended that skin and eye contact is avoided by the using of appropriate personal protective equipment such as gloves, safety glasses or goggles and overalls. Wash any contamination from the skin immediately and thoroughly and do not eat, smoke or drink in the working vicinity. Under normal working conditions a good source of ventilation is adequate, however if the material is heated, or where vapour levels are likely to exceed the occupational exposure limits appropriate respiratory protection must be worn. Local exhaust ventilation (LEV) may be required especially for curing ovens or where large volumes of material are curing. The above is given as a guide only; please refer to SOLRES05 Health and Safety data or our Technical Service Department for individual/specific advice.

Warranty

The results and information above does not constitute a specification and is given in good faith and without warranty. The information is derived from test/or extrapolations believed to be reliable and is quoted for guidance only. The product is offered for evaluation on the understanding the customer satisfies himself that the product is suitable for his intended by proper evaluation and testing.

Contact Details

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