

## TECHSIL PU21965 BLACK

A high performance, fast curing polyurethane resin system.

### Application:

- Rubber bonding
- Conveyor Belts

### Key Properties:

- Enhanced elongation and toughness
- Fast curing

### Physical Properties

Test	Resin	Hardener	Mixed
Colour	Black	Light Amber	Black
Specific Gravity	1.1	1.1	1.1
Viscosity (mPas) @ 25°C	1650	1500	1550

### Cure Schedule:

Temperature	Working life	Gel Time (minutes)	Light Handling (minutes)	Full Cure (hours)
RT	60-90	4	120	24
40°C			60	12
60°C				

\*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: 1:1  
Mix ratio by volume: 1:1

### Approvals:

Test	Mixed
RoHS compliant	Yes
UL94 V-0	No
REACH (SVHC concentration)	0%

### Contact Details

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### Typical Properties:

Test	Result	Unit
Shrinkage (volume)	0.5	%
Thermal Conductivity	0.2	W/mK
Operating Temperature	-55 to +125	°C (application and geometry dependant)
Hardness	65	Shore A
Heat deflection	Flexible	
Elongation at Break	1000	%
Tensile Strength	12	MPa
Tack Free (10g @ RT)	60	Minutes
Tear Resistance	30	MPa
Tg	-40	°C

### Packaging:

Techsil PU21965 Black is available in Bulk, Twinpacks and Kits.

### Cartridge Mixing:

It is essential for best results that the cartridge is 'balanced' before use to ensure correct mixing. Loading the cartridge into the gun before attaching the mixer element and pumping the gun to push a small amount of the contents forward will achieve this. Wipe the excess from the cartridge tip and add the static mixer. The cartridge is now ready for use.

### Twinpacks:

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 Material:

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. The bulk resin and hardener materials can be dispensed from suitable dispensing machines, details available on request.

### Kits and Sets:

Kits and Sets are provided in separate containers to the correct ratio. In Kit form, pour the hardener into the larger resin 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 is hardened.

### 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.

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### 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 Health and Safety data or our Technical Service Department for individual/specific advice.

### DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their particular use.

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