T-Rex Power Crystal

Technical data

Basis	SMX® Polymer
Consistency	Stable paste
Curing system	Moisture curing
Skin formation* (20°C / 65% R.H.)	Ca. 10 min
Curing speed * (20°C / 65% R.H.)	2 mm/24h → 3 mm/24h
Hardness	38 ± 5 Shore A
Density	1,04 g/ml
Elastic recovery (ISO 7389)	> 75 %
Maximum allowed distortion	± 20 %
Max. tension (DIN 53504)	2,40 N/mm²
Elasticity modulus 100% (DIN 53504)	0,80 N/mm²
Elongation at break (DIN 53504)	300 %
Temperature resistance	-40 °C → 90 °C
Application temperature	5 °C → 35 °C

(*) these values may vary depending on environmental factors such as temperature, moisture and type of substrates

Product description

T-Rex Power Crystal is a high quality, crystal clear, neutral, elastic, 1-component adhesive sealant based on SMX-Polymer.

Properties

- Crystal clear formulation
- Excellent adhesion on nearly all surfaces, even if slightly moist.
- Very good mechanical characteristics.
- Impervious to mould, contains ZnP (biocide with fungicidal action)
- Suitable for sanitary applications.
- Good extrudability even at low temperatures
- Free of isocyanates, solvents, halogens and acids
- Can be painted with all water based paints and many other systems (to be tested)
- Permanent elastic after curing
- Food safe

Applications

- All common bonding and sealing applications, both in and outdoor.
- Transparent and elastic bonding in construction and building applications.
- Invisible bonding of glass and other transparent materials in indoor applications.
- Joints in bathrooms and kitchens.

Packaging

Colour: transparent
Packaging: 290mL cartridge

Shelf life

At least 12 months in unopened packaging in a dry storage place at temperatures between +5°C and +25°C.

Chemical resistance

Good resistance to (salt)water, aliphatic solvents, hydrocarbons, ketones, esters, alcohols, diluted mineral acids and alkalis. Poor resistance to aromatic solvents, concentrated acids and chlorinated hydrocarbons.

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Substrates

Substrates: Timber, tiles, brick, concrete, most plastics including PVC, Perspex (acrylic), polycarbonate (not PE & PP), fibreglass, insulation materials, polystyrene, metal including steel, galvanised steel/iron, aluminium including composite panel, brass, copper, plasterboard, cement sheeting, stone, most rubber (pre-test), cork, glass and mirrors, most coatings (pre-test). **Test is best – substrates can vary from manufacturer, we recommend prior compatibility testing.**

***Surface preparation*:** surfaces must be clean, dry, free of dust and grease. Porous surfaces in water loaded applications should be primed with Primer 150. Non-porous surfaces require cleaning prior with Soudal Cleaner & Degreaser and for critical applications treated with Soudal Surface Activator.

T-Rex Power Crystal has been tested on following metal surfaces: AlCuMg1, AlMg3, AlMgSi1, stainless steel, electro-galvanized steel, brass, steel ST1403, hot dip galvanized steel. T-Rex Power Crystal also has a good adhesion on plastics: polystyrene, polycarbonate (Makrolon®), PVC, polyamide, fiberglass reinforced epoxy, polyester. While producing plastics very often releasing agents, processing aids and other protective agents (like protection foil) are used. These should be removed prior to bonding. For optimum adhesion and for critical applications the use of Surface Activator is recommended. We recommend a preliminary adhesion test on every surface. NOTICE: bonding plastics like PMMA (e.g. Plexi® glass), polycarbonate (e.g. Makrolon® or Lexan®) in stress loaded applications can give rise to stress cracking and crazing in these substrates. The use of T-Rex Power Crystal is not recommended in these applications. There is no adhesion on PE, PP, PTFE (Teflon®) and bituminous substrates.

Joint dimensions

Min. width for bonding: 1 mm
Max. width for bonding: 3 mm
Min. width for joints: 5 mm
Max. width for joints: 10 mm
Min. depth for joints: 5 mm

Application method

- For more detailed info, refer to the current Technical Data Sheet on our website prior to use.
- Surfaces must be dry, clean, free from dust, grease / contaminants.
- Apply at temperatures between +5°C to +35°C.
- Ensure correct joint dimension and preparation, consult the technical bulletin "Joint Preparation & Joint Dimensions" on our website.
- **For Bonding:** Apply in beads onto one of the surfaces and press together firmly. Leave to cure, full end strength is reached within 24 hours.
- **For Sealing:** Apply into the joint then smoothen with Soudal Joint Finish before skin formation. Minimum depth for joints: 5mm.
- Clean up: Uncured with Soudal Swipex, Cleaner & Degreaser, white spirits. When cured remove with Sealant Remover.
- Store in cool and dry place between +5°C and +25°C

Health- and Safety Recommendations Take the usual labour hygiene into account. Consult label for more information

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Remarks

- T-Rex Crystal is paintable with water based paints, however due to the large number of paints and varnishes available we strongly suggest a compatibility test before application.
- The drying time of alkyd resin based paints may increase.
- T-Rex Crystal can be applied to a wide variety of substrates. Due to the fact that specific substrates such as plastics, like polycarbonate, etc, may differ from manufacturer to manufacturer, we recommend preliminary compatibility test.
- T-Rex Crystal is not suitable for expansion joints.
- Do not use in applications where continuous water immersion is possible.
- T-Rex Crystal has a good UV resistance but can discolour under extreme conditions or after very long UV exposure.
- T-Rex Crystal cannot be used as a glazing sealant.
- T-Rex Crystal cannot be used on natural stone. Because the adhesion surface will discolour under influence of the sealant (looks wet) and because this is visible through the crystal clear sealant it seems like staining has occurred.
- The sanitary formula should not replace regular cleaning of the joint. Excessive contamination, deposits or soap remaining will stimulate the development of fungi.

Environmental clauses

Leed regulation:

T-Rex Power Crystal conforms to the requirements of LEED. Low –Emitting Materials: Adhesives and Sealants. SCAQMD rule 1168. Complies with USGBC LEED® 2009 Credit 4.1: Low-Emitting Materials – Adhesives & Sealants concerning the VOC-content.

Liability

The content of this technical data sheet is the result of tests, monitoring and experience. It is general in nature and does not constitute any liability. It is the responsibility of the user to determine by his own tests whether the product is suitable for the application.