

edilon)(sedra Dex[®]-G 20/40/80

edilon)(sedra Dex[®]-G is a general-purpose epoxy grout system. Examples, in which the product can be used, are under grouting of machines, engineering structures and railway baseplates. It is also used for bonding steel plates and strips onto concrete as well as bonding edilon)(sedra Trackelast[®] RS/RPU strip as part of the edilon)(sedra Corkelast[®] ERS (Embedded Rail System). The product offers good adhesion to damp, humid or wet surfaces and is available in three types of which the application depends on recommended layer thickness.

FEATURES

+ Excellent adhesion to damp and wet surfaces	+ Minimal shrinkage
+ High performance mechanical properties	+ Long term resistant to vibrations and dynamic loads
+ Provides excellent electrical insulation in rail systems	+ Good flow properties due to low viscosity (Dex [®] -G 20)

PROPERTIES

Type	20	40	80
Density cured product (ISO 1183-1 Method A)	1.61 g/cm ³	1.75 g/cm ³	1.90 g/cm ³
Mixing ratio by weight (comp.1 & comp. 2 : comp. 3)	-	100 : 50	100 : 100
Flexural tensile strength (EN 196-1; 40x40x160mm)	57 MPa	31 MPa	33 MPa
Compression strength (based on EN 196-1; 100x100x40mm)	> 90 MPa	> 126 MPa	> 140 MPa
All types			
Mixing ratio by weight (comp.1 : comp. 2)	100 : 20.1	Indentation hardness after 7 days (ISO 7619-1)	
Colour mixed product	Grey	80 Shore D	
Viscosity mixed product (ISO 2555)	11 Pa·s	Modulus of elasticity (ISO 178)	
Pot life at +15 °C to +30 °C (ISO 10364 Method 1; 200 Pa·s)	40 to 20 min.	> 4500 MPa	
Volume resistivity dry > 1000 MΩm (DIN IEC 60093; VDE 0303-30)	wet (0.1n NaCl) > 1000 MΩm	Flexural strength (ISO 178)	
		> 39 MPa	
		Shear strength (ASTM D1002)	
		> 15 MPa	
		Adhesion strength (ISO 4624)	
		steel (Sa 2) concrete	> 10 MPa > 1.5 MPa ¹⁾

Test results are determined with cured product after 7 days at +23 °C, unless specified otherwise.

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1) Based on cohesive concrete failure.

TYPES

The adhesive is available in three types of which the application depends on recommended layer thickness. Component 3 is a mineral filler material.

On request Catalyst for edilon)(sedra Dex[®]-G component 4 is available for faster curing at low temperature conditions.

Type	Thickness	Components
20	0–20 mm	2
40	20–40 mm	3
80	40–80 mm	3

SURFACE CONDITIONS

Surfaces must be pretreated before the application according to the following table. Apply the product directly after the surface pretreatment in order to prevent contamination or rust on the surfaces.

Concrete surfaces

Surfaces must comply to the following requirements:

- Minimum concrete quality is C20/25 according to EN 206
- During adhesion tests, cohesive failure of the concrete must occur and the adhesion strength of Dex[®]-G to the concrete surface must be more than 1.5 MPa.²⁾

In case surfaces do not comply with these requirements, pretreat the surfaces by blast-cleaning or grinding to achieve a clean and exposed aggregate (stone) surface without laitance.³⁾ Remove dust and debris from the surfaces afterwards.

In case surfaces comply with these requirements, wash down the surfaces by high pressure water cleaning and allow the surfaces to dry afterwards.

SURFACE CONDITIONS (continuation)

Steel surfaces

Remove heavy layers of rust, oil, grease and dirt. Blast-clean the surfaces thoroughly to blast-cleaning grade Sa 2 according to ISO 8501-1. Clean all the surfaces from loose dust and debris.

The surfaces must be free from oil, grease and dirt and from most of the mill scale, rust, foreign matter. Any residual contamination shall be firmly adhering. Formation of rust must be prevented after the pretreatment and cleaning.

The minimum required surface profile (roughness) is Medium. Please use Surface profile comparator (G) according to ISO 8503-1/2.

Galvanized steel surfaces can be pretreated by sweep blasting at low pressure with a fine abrasive. The surface must be free of zinc salts.

- 2) Adhesion strength can be determined by performing a representative number of pull-off tests for adhesion according to ISO 4624. Use the material as adhesive for the pull-off tests and allow it to cure properly before testing.
- 3) Laitance can be weak or contaminated with curing compound, release agent, oil and or grease.
Exception: No pretreatment of the bottom of ERS channels is required in case Trackelast® RS/RPU strip will be bonded.

APPLICATION CONDITIONS

Surface temperature	+5 to +45 °C	Concrete surfaces	Dry to wet and clean
Relative air humidity	No restrictions	Steel surfaces	Dry and clean
Product temperature	+15 to +30 °C	Environment	Dry to wet ⁴⁾

- 4) Exception: Bonding of Trackelast® RS/RPU strip in ERS channels should be done under dry conditions.

MIXING & POT LIFE

Prior to mixing, shake component 2 thoroughly for 20 seconds and pour the complete content into the pail of component 1. If the catalyst is used, then pour this bottle empty into the pail of component 1 prior to mixing.

The components 1 and 2 should be mixed first as described above. The mixing time of the **edilon)(sedra Edimix** mobile mixing machine is preset. In case an electric handheld mixer is used, mix the components thoroughly for 2 minutes. During the mixing move the paddle up and down and around the pail in order to achieve a homogeneous grey coloured mixture. For the electric handheld mixer it is recommended to use a power rating of more than 1000 W.

Product type and application	Mixing machine	Mixing tool
Dex®-G 20/40 for under grouting	Edimix mobile mixing machine	Paddle mixer 210 mm
Dex®-G 80 for under grouting	Electric handheld mixer	General mixing paddle WK-MK 90–120 mm
Dex®-G 20 for bonding a Trackelast® RS/RPU strip in ERS	Edimix mobile mixing machine Electric handheld mixer	Mixing paddle MK190 negative (ERS) Mixing paddle WK90

After mixing components 1 and 2 of type 40/80, the complete amount of component 3 must be added to the mixture. Finally mix again type 40 with the Edimix for the preset time or type 80 with the electric handheld mixer for 1 minute, to mix component 3 homogeneously into the mixture.

The pot life depends on the product temperature. Please see the table in section PROPERTIES. In case the catalyst is used, the pot life is reduced to 26 and 18 minutes at product temperatures of respectively +15 and +20 °C.

CURING

The curing time after mixing of the three product types 20, 40 and 80 is related to the surface temperature.

Surface temperature (°C)	5	10	15	20	25	30–45
Curing time (hours)	32	24	16	12	9	5
Curing time with catalyst (hours)	16	10	7	3	2	2

PACKAGING, STORAGE & SHELF LIFE

The packaging consist of two or three individually packed components with a combined unit size of respectively 10, 15 and 20 kg product (type 20, 40 and 80). The components are packed in the appropriate amounts for mixing. The catalyst for Dex[®]-G component 4 is available in additional bottles.

Store the material either in a depot or at the place of work under dry conditions and away from direct sunlight. The prescribed storage temperature lies between **+5 °C** and **30 °C**.

In its original unopened packaging and under the above mentioned conditions, the product has a shelf life of **24** months maximum.

ADDITIONAL DOCUMENTS

Please see the following documents for more information about edilon)(sedra products:

- Product data sheets for edilon)(sedra products
- Safety data sheets for edilon)(sedra products
- User data sheets for edilon)(sedra products
- Logistical data sheets for edilon)(sedra products

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