

Technical Data Sheet

601 Super Cast Compound

UNIGRIP
DANTECH ELITE COMPOSITES

UNIGRIP 601 Super Cast- Epoxy Casting Compound

Characteristics:

- Solvent-Free – 100% solids formulation with no shrinkage.
- High Strength – Excellent compressive and mechanical strength for heavy-duty applications.
- Dimensional Stability – Maintains precise alignment under load and vibration.
- Chemical Resistant – Withstands oils, fuels, seawater, and a wide range of industrial chemicals.
- Temperature Resistant – Performs reliably across a broad temperature range.
- Strong Adhesion – Bonds effectively to steel, concrete, and other common construction and industrial substrates.
- Vibration & Shock Absorption – Provides damping capacity, reducing wear and fatigue in mounted equipment.
- Easy Mixing & Application – Simple 2-component system with reliable curing.
- Non-Corrosive – Protects against galvanic/bimetallic corrosion.
- Long-Term Durability – Resistant to corrosion, erosion, and mechanical stresses, ensuring extended service life.
- Versatile Use – Suitable for chocking, casting, and grouting of machinery, foundations, and structural components.
- Cures Under Severe Conditions (from 32 °F (0 °C) – Can be applied and cured in demanding marine and industrial environments

Application methods

- Pouring

Application temperature

- 50°F (10°C) to 140°F (60°C)

Technical properties

Density Mixed product:

- Approx. 2.2 kg/dm³ at 20°C (DIN 53217)

Solid content:

- 100 volume percent (= 100 weight percent)

Mixing Ratio:

- Component A: 94.7 parts by weight
- Component B: 5.3 parts by weight

Potlife:

- Approx. 20 minutes of 1 kg of mixed product at 20°C.

Pot life peak exotherm:

- Minutes Degrees Celsius**
- Pot life: 63min
 - Peak temperature: 34° Celsius (100 gram)

Recommended layer thickness

- Max. 3 cm/ layer
(Layer thicknesses > 3 cm. should be applied in more layers with an interim of approx. 2 hours. In bigger layer thicknesses it is possible that core burning occurs due to the exothermic reaction. On cooling down it is also possible that crack-formation exists by thermal shrinkage.)

Theoretical spreading rate:

- 0.45 m²/kg. (= 1.0 m²/l) at 1 millimeter layer thickness.

Practical spreading rate:

- 2.2 kg/m² at 1 millimeter layer thickness (Depending on the conditions of the substrate and method of application, etc.)

Drying time (20°C / 65% R.H.)

- Dust-dry
 - Light foot traffic
 - Fully cured
- Approx. 60 min @20° Celsius 65 RV. 3 cm layer
 - Approx. 120 min @20° Celsius 65 RV. 3 cm layer
 - 7 days

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Technical property	Standard	Values
Specific gravity (mixed product)	DIN 53217	2.2 kg/dm ³
Mixing Ratio (A:B)	-	94.7 : 5.3
Potlife (1 kg mixed product @ 20°C)	-	20 mins
Hardness Shore D (A+B)	ISO 868	>80
Compressive Strength A + B	E-modulus R Brk	1025 N/mm ² 106 N/mm ²
A + B + 25% Silver sand	E-modulus R Brk	855 N/mm ² 98 N/mm ²
A + B + 25% Filler granulate 2.0-2.5 mm	E-modulus R Brk	1147 N/mm ² 94 N/mm ²
A + B + 50% Filler granulate 2.0-2.5 mm	E-modulus R Brk	450 N/mm ² 100 N/mm ²
Bending Tensile strength	DIN 53452	43.2 N/mm ²
E-modulus	ISO 527	7.200 N/mm ²
Shear Strength	-	6.8 N/mm ²
Tensile strength	ISO 527	16.8 N/mm ²
Linear expansion coefficient	ASTM E 831	5 x 10 ⁻⁵ K ⁻¹
Chemical resistance (24-hrs load)		Not determined (Not used as end coat/layer)

Note: All determinations were made after 7 days of curing at 20°C.

Density	g/cm ³ g/cm ³	Component A+B (theoretical)	Component A: 2.03-2.20 Component B: 1.02-1.04 (A+B = 2.169)	
Viscosity	mPa·s	MCR 92	Viscous paste	Ca. 350
VOC content	gr/Ltr gr/Ltr	Component A+B calculated	Component A: 0 Component B: 0 (A+B = 0)	

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	E (N/mm ²)	Peak (N)	Tension peak (N/mm ²)	F Crack (N)	Tension break (N/mm ²)	Displ. peak (mm)	Displ. peak (mm)
Compressive strength	1025.1	546.6	17401	98.008	17401	0.203	0.204
Tensile strength	8124.1	1452.8	24.986	1374.6	23.655	0.441	0.463

Dyna pull on steel	N/mm ² N/mm ² N/mm ² N/mm ²	A+B 1st A+B 2nd A+B 3rd Average	>7.5 n/mm ² >7.5 n/mm ² 7.4 n/mm ² 7.5 n/mm ²	a/b 10% B 100% -Y 100%	B 90%
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Dyna pull on aluminum	N/mm ² N/mm ² N/mm ² N/mm ²	A+B 1st A+B 2nd A+B 3rd Average	>7.5 n/mm ² >7.0 n/mm ² 6.5 n/mm ² 7.0 n/mm ²	A 100% A 95% A 70%	B 5% -Y 30%
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	E (Nmm ²)	Peak (N)	Tension peak (N/mm ²)	F Crack (N)	Tension break (N/mm ²)	Displ. peak (mm)	Displ. peak (mm)
Shear adhesion on steel	-	12085	30.212	12085	30.212	0.301	0.301

Temperature resistance	230 °F (110 °C)
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Application method/s:

Pouring

- Shuttering:
If necessary place a liquid proof shuttering, which is covered with plastic foil or has been treated with a release agent before Unigrip Super-Cast will be applied.

Application temperature

- 0 - 25°C
Remark: The application of two component products should happen at a relative humidity lower than 85% and a ambient and substrate temperature higher than 0 degrees centigrade; the temperature of the substrate has to be 3 degrees centigrade above dew point. The maximum strength and resistance of the applied system is reached after curing. This corresponds with a drying period of 7 days at 20 degrees centigrade or so much shorter or longer corresponding to a higher or lower curing temperature.)

Application data:

- May not be diluted

Cleaning instructions

- Brush thinner EP / Spray thinner EP.
(To be completed prior to curing of the product).

Mixing instructions

- Add component B to component A Mix thoroughly and mechanically until a uniform blend is achieved. Transfer the mixture into a clean container and mix again to ensure full homogeneity, avoiding weak spots or incomplete curing caused by insufficient mixing. Note: "Pot life is significantly reduced when mixing larger quantities".

Systems:

Substrate

Substrate conditions

- Steel, Concrete, cementitious and stony substrates.
- The substrate must be clean, dry, grease & dust-free and comply with the normal applicable conditions and requirements.
Metallic substrates should be free from corrosion, and if necessary apply a primer layer.

Chemical resistance:

- Resistance to chemicals, hydrocarbons, Ketones, alcohols, esters, halocarbons, aqueous salt solutions, dilute acids, bases, solvents, and alkalis
(For full overview of chemical resistance, please see the full UNIGRIP chemical list.)