EN

VF SYSTEMS
SOLUTION FOR RAIL by HET

VF SYSTEMS – Polyurethane grouting systems for track construction

HET Elastomertechnik GmbH
Hagenauer Straße 53 ■ DE-65203 Wiesbaden
T: +49(0)611 50 40 29-10 ■ info@het-group.com

het-group.com
/hetsocialmediateam @het_elastomertechnik

HET ELASTOMERTECHNIK

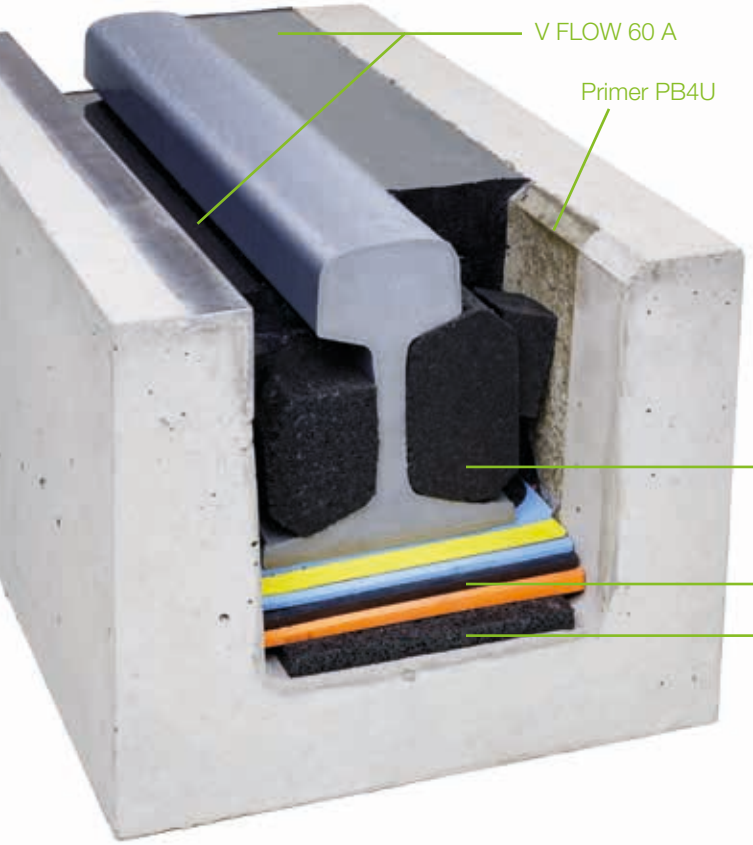
V FLOW – Polyurethane grouting systems for embedded track construction and rail undergrouting

V FLOW 60 A is a two-component polyurethane grouting system tested according to EN 13481-5 and classified under category C of fastening systems as per EN 13481-1:2012. It has been developed for embedded track constructions as well as for fastening tracks on concrete support slabs. V FLOW 60 A consists of liquid, solvent-free, and filler-free two-component PU elastomers.

PROPERTIES

- Good adhesion to concrete and metal
- UV and hydrolysis resistant
- Resistant to micro-organisms
- Good specific resistance
- Vibration-reducing
- Very good flowability to ensure complete filling of the rail trough
- Suitable for manual and machine grouting
- Stray current insulating

PROPERTIES AT 23°C NF EN 10204-3.1	NORM	VALUE
Colour		black
Density	DIN 53 479	1,09
Shore hardness A	DIN 53 505	60 ±5
Elongation at break	DIN 53 504	180 %
Tensile strength	DIN 53 504	8 MPa
Compressive modulus 10 %	ASTM D695	7 MPa
Tear resistance	ISO 34-1	19 kN/m
Compression set (72h / 23°C)	ISO 815-1	7 %
Resilience	DIN 53 512	39 %
Adhesion to concrete	EN 1542	> 2,0 MPa
Adhesion to metal	EN 1542	> 2,0 MPa
Surface resistivity	EN 61340-2-3	1,8 x 10^{10} Ohm
Volume resistivity		5,08 x 10^{9} Ohm.m
Temperature resistance		-20°C to +60°C
Serviceable after mixing (23°C)		After 24 hours



V FLEX – Polymeric sealant

V FLEX 20 A and V FLEX 40 A are solvent-free, flowable, elastic, and self-leveling two-component polyurethane grouting compounds suitable for longitudinal joints of grooved and Vignole rails, even with highly elastic rail support, as well as for expansion and dummy joints.

PROPERTIES

- Good adhesion to concrete and metal
- UV and hydrolysis resistant
- Resistant to microorganisms
- Stray current insulating
- Good chemical resistance
- Thixotropic for slopes ≤7%
- Open to traffic after 4 hours (23°C)
- Good specific resistance
- Suitable for manual and machine grouting

PROPERTIES AT 23°C NF EN 10204-3.1	NORM	VALUE V FLEX 20 A	VALUE V FLEX 40 A
Colour		black	black
Density	DIN 53 479	1,04	1,05
Shore hardness A	DIN 53 505	20 ±5	40 ±5
Elongation at break	DIN 53 504	350 %	370 %
Tensile strength	DIN 53 504	1 MPa	7 MPa
Tear resistance	ISO 34-1	6 kN/m	17 kN/m
Compression set (72h / 23°C)	ISO 815-1	3 %	5 %
Resilience	DIN 53 512	60 %	60 %
Adhesion to concrete	EN 1542	> 0,8 MPa	> 0,8 MPa
Adhesion to metal	EN 1542	> 0,8 MPa	> 0,8 MPa
Surface resistivity	EN 61340-2-3	4,74 x 10^9 Ohm	1.04 x 10^{10} Ohm
Volume resistivity		3,29 x 10^8 Ohm.m	3.88 x 10^8 Ohm.m
Temperature resistance		-30°C to +60°C	-30°C to +60°C
Serviceable after mixing (23°C)		After 4 hours	After 4 hours

V FIX – Polyurethane epoxy mortar

V FIX 50 D is a solvent-free, flowable, self-leveling, two-component polyurethane epoxy mortar for the undergrouting of base plates on concrete support slabs.

PROPERTIES

- Good adhesion to concrete and metal
- UV and hydrolysis resistant
- Stray current insulating
- Good chemical resistance
- Ready for traffic after 48 hours (23°C)

PROPERTIES AT 23°C NF EN 10204-3.1	NORM	VALUE
Density	ISO 2811-1	1,33 ±0,05
Shore hardness D	ISO 868	50 ±5
Shore hardness D 60°C	ISO 868	Approx. 25
Elongation at break	EN 527-2	≥ 30 %
Compressive elasticity modulus 10 %	UNE EN ISO 604	88 MPa
Adhesion to concrete	EN 1542	≥ 2 Mpa
Adhesion to metal	EN 1542	≥ 4 Mpa
Loading test 3 000 000 cycles – Vertical dynamic deflection of foot of rail	EN 13 481-5	0,5 – 1,0 mm
Electrical insulation under 500 V	1340-4-1 CET 1995	> 100 GΩ (insulating)
Temperature resistance		-20°C to +60°C
Serviceable after mixing (23°C)		after 48 hours

RESPONSIBILITY

The following information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our advice concerning safety does not release you from the obligation to determine the safety measures designed for your production environment, that we may not be able to anticipate, to check abilities and to inform the people who will use, handle or be in contact with these products.

The products characteristics described in the present technical data sheet may be modified at any time as a result of changes in techniques or regulations and are therefore only valid providing that they have not been cancelled and superseded by a more recent issue.

HET Elastomertechnik GmbH | Hagenauer Straße 53 | 65203 Wiesbaden |
Telefon: +49 (0)611 504029-10 | Fax: +49 (0)611 504029-30 |
het-group.com | shop.het-group.com

Picture credits: iStock/EoNaYa
Version 09/2024

HET ELASTOMERTECHNIK