

PRODUCT DATA SHEET

SikaFlow[®]-668

(formerly MFlow 668)

EPOXY CHOCK GROUT FOR MOUNTING EQUIPMENT

PRODUCT DESCRIPTION

SikaFlow[®]-668 Chock Grout is a three-component modified epoxy resin-based grout. It is used where high performance properties are required in less-accessible spaces subject to thermal shock and high vibrations. It can be placed from 1/2–3" (12.5–76 mm) thick on a base grout pour, directly to the concrete or steel to steel.

USES

- Precision grouting of machinery
- Grouting of reciprocating gas compressors
- Grouting of steam and gas turbines
- Steel-to-steel chock grouting
- Where conventional epoxy grouts cannot be used due to limited access

CHARACTERISTICS / ADVANTAGES

- Highly flowable to conform to worn or irregular surfaces.
- Excellent physical properties at a wide temperature range.
- May be used to replace metal chocks, eliminating costly milling.
- Low creep over a wide temperature range minimizes deformation under sustained loads.

PRODUCT INFORMATION

Chemical Base	SikaFlow [®] -668 Chock Grout is a three-component modified epoxy-resin-based grout.	
Packaging	One 59.7 lb (27.5 kg) unit consists of the following: <ul style="list-style-type: none"> ▪ 8.33 lb (3.78 kg) can Part A (Resin) ▪ 1.37 lb (0.62 kg) bottle Part B (Hardener) ▪ 50 lb (22.68 kg) bag Part C (Aggregate) 	
Shelf Life	2 years (for both resin and hardener) when properly stored	
Storage Conditions	Store in unopened containers at 60 to 80° F (16 to 27° C) in clean, dry conditions.	
Density	129lb/ft ³ (2,064kg/m ³)	(ASTM C 905)
	Specific gravity: 2.06	

TECHNICAL INFORMATION

Compressive Strength	Conditioned 1 hour after test temperature			(ASTM C 579 Method B, modified) 2 by 2" cubes
	Test temp	7 day cure at 73°F (23°C)	16 hour cure at 140°F (60°C)	
	73°F (23°C)	18,300 psi (126 MPa)	18,900 psi (130 MPa)	
	140°F (60°C)	13,100 psi (90 MPa)	14,700 psi (101 MPa)	
	170°F (77°C)	13,100 psi (90 MPa)	13,800 psi (95 MPa)	
	235°F (113°C)	8,000 psi (55 MPa)	8,400 psi (58 MPa)	
Flexural Strength	6,200 psi (43 MPa) at 73°F (23°C)		(ASTM C 580)	
Modulus of Elasticity in Flexure	Test Temp	Modulus of Elasticity		(ASTM C 580)
	73°F (23°C)	2.3 x 10 ⁶ psi (16 GPa)		
	110°F (43°C)	2.2 x 10 ⁶ psi (15 GPa)		
	125°F (52°C)	2.1 x 10 ⁶ psi (15 GPa)		
	140°F (60°C)	2.1 x 10 ⁶ psi (15 GPa)		
	155°F (68°C)	2.0 x 10 ⁶ psi (14 GPa)		
	170°F (77°C)	1.7 x 10 ⁶ psi (12 GPa)		
Tensile Strength	2,600 psi (17,9 MPa) at 73°F (23°C)		(ASTM C 307)	
Tensile Adhesion Strength	Bond strength to steel			(Michigan DOT)
	Temperature	Tensile Bond Strength		
	73°F (23°C)	5,300 psi (36 MPa)		
	140°F (60°C)	3,500 psi (24 MPa)		
	170°F (77°C)	3,200 psi (22 MPa)		
	235°F (113°C)	1,200 psi (8 MPa)		
	Bond strength to concrete 350 psi (2.4 MPa); concrete failure			
Slant Shear Strength	Bond strength to steel			(Michigan DOT)
	Temperature	Shear Bond Strength		
	73°F (23°C)	4,500 psi (31 MPa)		
	140°F (60°C)	3,600 psi (25 MPa)		
	170°F (77°C)	3,600 psi (25 MPa)		
	235°F (113°C)	1,200 psi (8 MPa)		
Creep	Temperature	Condition	Creep at 1 year	(Test Method C 1181) Cured according to ASTM C579, Method B
	140°F (60°C)	600 psi (4.1 MPa)	0.8 x 10 ⁻³ n/in (2.03 x 10 ⁻³ cm/cm)	
	140°F (60°C)	900 psi (6.2 MPa)	1.3 x 10 ⁻³ n/in (3.3 x 10 ⁻³ cm/cm)	
	140°F (60°C)	1,200 psi (8.3 MPa)	1.9 x 10 ⁻³ n/in (4.83 x 10 ⁻³ cm/cm)	
Coefficient of Thermal Expansion	19 x 10 ⁻⁶ in/in/°F (34 x 10 ⁻⁶ cm/cm/°C)		at 73 to 210°F (23 to 100°C)	(ASTM C 531)
Water Absorption	0.09%		(ASTM C 413)	

Reaction to Fire

Flash points

SikaFlow®-668 Chock Grout Resin	> 230°F (110°C)	(Pensky-Martens Closed Cup)
SikaFlow®-668 Chock Grout Hardener	210°F (99°C)	

APPLICATION INFORMATION

Coverage

0.47 ft³ (0.013 m³)

Thinner

Working Time

90° F (32° C)	1/2 hr	(Michigan DOT)
73° F (28° C)	1 hr	
55° F (13° C)	3 hrs	

Curing Rate

Compressive Strength when cured at these conditions:

Time (hrs)	55°F (13°C)	73°F (23°C)	90°F (32°C)
8	-	14,500 psi (100 MPa)	18,600 psi (128 MPa)
16	9,500 psi (66 MPa)	17,000 psi (117 MPa)	19,000 psi (131 MPa)
24	14,000 psi (97 MPa)	18,000 psi (124 MPa)	19,200 psi (132 MPa)
48	15,300 psi (106 MPa)	18,800 psi (130 MPa)	19,200 psi (132 MPa)

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

NOTES ON INSTALLATION

DO NOT INSTALL THIS PRODUCT WITHOUT READING AND REFERENCING THE COMPANION SikaFlow®-668 INSTALLATION GUIDE.

- Minimum placement thickness is 1/2" (13 mm).
- Do not add solvent, water, or any other material to the grout.
- Do not alter the resin or hardener proportions.
- Contact your local representative for a pre-job conference to plan the installation.

- Cold material will exhibit decreased flowability and decreased strength development.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of product data sheet and SDS are being used.
- Proper application is the responsibility of the user. Field visits by Sika personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

SURFACE PREPARATION

GENERAL APPLICATION INSIGHTS

- Chock size should be determined by a mechanical or structural engineer, based on anticipated stresses and grout capabilities.
- Most chock grout applications involve the placement of epoxy chocks on a base grout pour. Please see the SikaFlow®-648 grout product data sheet.
- Typical epoxy chock thickness should be from 2–3" (51–76 mm).
- The base grout pour should cure sufficiently before the chock grout application.

MIXING

- Aggregate must be completely dry.
- Precondition all components to 70° F (21° C) for 24 hours before using.
- Pour the hardener (Part B) into a pail of grout resin (Part A) and stir by hand, using a spatula or paint stirring paddle, until well mixed to a uniform amber

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- color.
4. Pour the mixed liquids into a horizontal shaft mortar mixer or a Kol type mixer without delay.
 5. Add the grout aggregate, one bag at a time, and mix only until aggregate is completely wetted out to avoid air entrapment. Caution: Always add aggregate to the mixer after the premixed liquids have been poured in.
 6. Pour the grout into a wheelbarrow or buckets for transporting to pour-site. Remove it from the wheelbarrow within 10 minutes.
 7. After the pour is complete, clean the mixer and tools with acetone, MEK, or lacquer thinner. Exercise caution when using flammable solvents for cleaning.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates (“SIKA”), the user must always read and follow the warnings and instructions on the product’s most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA’s Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product’s shelf life. User determines suitability of product for intended use and assumes all risks. User’s and/or buyer’s sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs.

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