BASF

The Chemical Company

Technical Data Guide

RELATED DOCUMENTS
MasterFlow 713 Installation Guide

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Non-Shrink Grouting

MasterFlow® 713

High-precision non-shrink mineral-aggregate grout

FORMERLY MASTERFLOW 713 PLUS

PACKAGING
55 lb (25 kg) polyethylene-lined bags

YIELD
One 55 lb (25 kg) bag of MasterFlow 713 mixed with 11.25 lbs (5.1 kg) or 1.35 gallons (5.1 L) of water produces approximately 0.52 ft^3 (0.015 m^3) of grout. Water usage will vary with consistency requirements, increasing or decreasing the yield.

STORAGE
12 months when properly stored

SHELF LIFE
Store in unopened containers in a cool, clean, dry area

VOC CONTENT
0 g/L less water and exempt solvents

DESCRIPTION
MasterFlow 713 is a cement-based grout with specially graded mineral aggregates. It can be used at any consistency from fluid to damp pack for applications that require precision support and early form stripping or shoulder trimming.

PRODUCT HIGHLIGHTS
- Single component, ready to mix and use
- Hardens free of bleeding and settlement providing maximum effective bearing area for optimum load transfer
- Highly fluid allowing pumpability into intricate or inaccessible areas
- Fluid, flowable, plastic, or damp-pack consistencies to help adjust to jobsite conditions
- Non-shrinking leaving no gaps around equipment and forms
- Meets the requirements of ASTM C1107 and US Army Corps of Engineers CRD C621 (ASTM C1107-93a, Grades B and C), at a fluid consistency over a 5 – 10 minute working time.
- Freeze/thaw resistant making it suitable for exterior applications
- Has the appearance of concrete or mortar
- Allows early form stripping or shoulder trimming

APPLICATIONS
- Precision-equipment, baseplate, soleplate, and column grouting
- Pump and tank bases
- Conveyors
- Fan housings and drive motors
- Grouting precast wall panels, beams and columns, concrete systems, structural building members and curtain walls
- Grouting anchor bolts, rebar and dowel rods

HOW TO APPLY

DO NOT INSTALL THIS PRODUCT WITHOUT READING AND REFERENCING THE COMPANION MASTERFLOW 713 INSTALLATION GUIDE.

SURFACE PREPARATION
- The surface to be grouted must be clean, SSD, strong, and roughened to a CSP of 5–9 following ICRI Guideline 310.2 to permit proper bond.
- When dynamic, shear or tensile forces are anticipated, concrete surfaces should be chipped with a “chisel-point” hammer, to a roughness of (plus or minus) ⅜" (10 mm). Verify the absence of bruising following ICRI Guideline 210.3.

FORMING
- Forms should be liquid tight and nonabsorbent. Seal forms with putty, sealant, caulk or polyurethane foam.
- Expansion joints may be necessary for both indoor and outdoor installation. Consult your local BASF field representative for suggestions and recommendations.

Technical Data

Composition

MasterFlow 713 is a hydraulic cement-based grout with specially graded mineral aggregates.

Test Data

PROPERTY	RESULTS			TEST METHOD
Compressive strengths, psi (MPa)				ASTM C 942, according to ASTM C 1107
		Consistency		
	Plastic[1]	**Flowable[2]**	**Fluid[3]**	
1 day	3,400 (23)	3,200 (22)	1,000 (7)	
3 day	5,500 (38)	4,800 (33)	3,200 (22)	
7 day	7,000 (48)	6,500 (45)	4,500 (31)	
28 day	8,500 (59)	7,500 (52)	7,000 (48)	

[1]100% flow on flow table, ASTM C 230, 5 drops in 3 seconds.
[2]135% flow on flow table, ASTM C 230, 5 drops in 3 seconds.
[3]25–30 seconds through flow cone per ASTM C 939
The data shown are based on controlled laboratory tests. Expect reasonable variations from the results given. Control field and laboratory tests on the basis of the desired placing consistency rather than strictly on the water content.
If the work requires that strength tests be made at the jobsite or in the laboratory, do not use cylinder molds. Use 2" (51 mm) metal cube molds as specified by ASTM C 942 or ASTM C 1107.

MIXING

- Place estimated water (use potable water only) into the mixer, then slowly add the grout.
- The water demand will depend on mixing efficiency and material and the ambient temperature. Use the minimum amount of water required to achieve the necessary placement consistency. Recommended flow is 25–30 seconds or greater using the ASTM C 939 Flow-Cone Method.
- Mix grout a minimum of 3 minutes after all material and water are in the mixer. Use mechanical mixer only.

APPLICATION

- Contact your local representative for a pre-job conference to plan the installation.
- Always place grout from only one side of the equipment to prevent air or water entrapment beneath the equipment. Place Masterflow 713 in a continuous pour.
- Minimum placement thickness is 1" (25 mm). Consult your BASF representative before placing lifts more than 6" (152 mm) in depth.
- Do not use in marine environments.
- Should not be used as a floor topping.
- Large, exposed areas of grout should be avoided.
- Structural integrity of the grout is not affected by superficial, hairline cracks occasionally observed in shoulders, near base plate edges and around anchor bolts.

CURING

Cure all exposed grout with an approved membrane curing compound compliant with ASTM C 309 or preferably ASTM C 1315.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.basf.us, e-mailing your request to basfbscst@basf.com or calling 1(800)433-9517. Use only as directed.
For medical emergencies only, call ChemTrec® 1(800)424-9300.

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BASF Corporation
Construction Systems
889 Valley Park Drive, Shakopee, MN 55379
www.master-builders-solutions.basf.us
Customer Service 1(800)433.9517
Technical Service 1(800)243.6739