



PRODUCT DATA SHEET

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NON-METALLIC, NON-SHRINK GROUTING

Sika® M-Bed® Standard

NON-SHRINK, GASSING, CEMENTITIOUS GROUT

Description	Sika® M-Bed® Standard is a non-metallic, non-shrink, gassing grout composed of cement, gassing and flow agents, and graded siliceous sand. Sika® M-Bed® Standard meets ASTM C1107 Grade Classification A.
Where to Use	General purpose, can be used for the installation of anchor bolts, machine equipment base plates, column sole plates, etc
Advantages	<ul style="list-style-type: none"> ▪ Versatile, can be applied in any consistency from dry pack to fluid by varying water content. ▪ The rapid strength development, both in compression and in flexure, provides for early loading, specifically when used at the drier consistencies. ▪ Good efficiency in freeze thaw condition. ▪ Sika® M-Bed® Standard does not contain chlorides. ▪ Formulated with inert, non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR). ▪ Approved by the Ministère des Transports du Québec (MTQ) ▪ The Road Authority (TRA) qualified (evaluations & standards MI-110, MI-120, OPSS Prov. 904, OPSS 922. ▪ Approved by the Alberta Ministry of Transportation. ▪ Product recognized by the British Columbia Ministry of Transportation (BC DoT).

Technical Data			
Packaging	25 kg (55 lb) bag		
Colour	Concrete Grey		
Yield	Approx. 13 L (0.46 ft ³) per bag of fluid grout		
Shelf Life	1 year in original, unopened bag. Store dry at temperatures between 5 and 32 °C (41 and 89 °F) ensuring that product is not exposed to rain, condensation or high humidity. Condition product between 18 and 29 °C (65 and 84 °F) before using.		
Mix Ratio	4.5 L (1.19 US gal.) of water per bag max.		
Properties at 23 °C (73 °F) and 50 % R.H.			
	Dry Pack	Plastic	Flowable
	(Water:solids 0.12)	(Water:solids 0.14)	(Water:solids 0.18)
Litres (US gal.) of water/bag	3 (0.79)	3.5 (0.92)	4.5 (1.19)
Yield, L (ft³)/bag	12 (0.42)	12.8 (0.45)	13.6 (0.48)
Wet Density, kg/m³ (lb/ft³)	2280 (142)	2245 (140)	2180 (136)
Work Life	The fresh grout may be re-tempered within one (1) hour after the initial mixing, after which time the grout should then be discarded.		
Initial Setting Times			
10 °C (50 °F)	5 h 30 min	6 h	8 h
22 °C (71 °F)	2 h	3 h 15 min	5 h 35 min
45 °C (113 °F)	1 h 40 min	2 h	3 h
Final Setting Times			
10 °C (50 °F)	6 h 30 min	7 h	9 h 30 min
22 °C (71 °F)	3 h 15 min	5 h	7 h
45 °C (113 °F)	2 h 10 min	3 h	3 h 30 min
Compressive Strength ASTM C109, MPa (psi)			
1 day	54 (7832)	35 (5076)	19,6 (2843)
7 days	66 (9572)	54 (7832)	39 (5656)
28 days	70 (10 153)	62 (8992)	41.2 (5976)
VOC Content	0 g/L		
Chemical Resistance	Please consult Sika Canada Technical Services		
Flowability U.S. Corps of Eng. CRD-C227 & ASTM C109			
	Water:Solids	Consistency	% Flow
	0.12	Dry pack	34 % at 25 drops
	0.14	Plastic	100 % at 25 drops
	0.18	Flowable	138 % at 5 drops
	Water:Solids	Age (days)	Results, MPa (psi)
Modulus of Elasticity ASTM C348	0.12	7	325 (47.2 x10 ³)
Flexural Strength ASTM C348	0.12	28	11.2 (1625)
	0.14	28	9.3 (1349)
	0.18	28	8.7 (1262)
Unrestrained Expansion ASTM C827	0.14	3 h	2.5 - 3 %
Freeze/Thaw Resistance	Good		

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

HOW TO USE

Surface Preparation

All grease, oil laitance, ice or snow and foreign deposits shall be removed from all surfaces with which the grout will come in contact. The concrete foundation shall be roughened to the extent that it does not present a smooth surface, which would impede the bond of the grout to the foundation. All dust and loose particles shall be removed by sandblasting, high pressure waterblasting or other suitable means.

Concrete foundations less than 28 days old shall be kept wet for at least 12 hours, and older foundations for a minimum of 24 hours before placing grout (SSD condition). All free-standing water shall be removed from concrete surfaces prior to grouting. All items to be grouted into place shall be properly positioned and anchored prior to grouting except for anchor bolts and dowels, which may be placed into the fresh grout if job conditions permit and at the discretion of the engineer in charge. For grouting of base plates the formwork used to contain the grout shall be constructed in a workmanlike manner and caulked to prevent leakage of grout. Provisions shall be made at the high points for air to be vented as it is displaced by grout.

Mixing

Mix using a heavy duty low-speed drill/mixer (300 - 450 rpm) and mixing paddle (*Jiffy* or *Exomixer*[®]/spiral type) or using a grout mixer. Use only the necessary amount of water for the required consistency without exceeding 4.5 L (9.5 pt) of water per bag. Mix for 3 minutes until a uniform consistency is achieved. For application greater than 150 mm (6 in) in thickness, add up to 12 kg (26.5 lb) of 10 mm (3/8 in) coarse aggregate (as per ASTM C33, Table 2, size number 8). The aggregate must be non-reactive, clean, well graded, saturated surface dry (SSD), have low absorption, high density and comply with ASTM C33.

Application

Make sure not to use the grout in unconfined areas. The prepared grout may be pumped or transported to the forms in buckets or wheelbarrows and deposited without delay. External vibration and agitation of the grout in the forms is permitted. Prepared grout shall be agitated until used. Grout having been prepared but not placed within 45 minutes after mixing shall be discarded. After initial set, exposed grout may be trimmed or shaped to desired finish. Forms should be left as long as possible but not removed before 24 hours at 23 °C.

Dry pack application: Refer to the Sika Cementitious Grouting Method Statement.

Curing

To achieve performance consistent with Technical Data, curing is required and must be provided as per ACI 308 recommendations for cement concrete. Execute curing by recognized methods such as wet burlap covered with white polyethylene film, misting with water, or approved water-based curing compound, such as Sika[®] Floreseal[®] WB-18 & -25. Alternatively, the use of Sika[®] Ultracure DOT[™] or NCF[™] wet curing blankets is strongly recommended. Curing must commence immediately after placing and finishing. Protect freshly applied product from direct sunlight, strong winds and rain.

Clean Up

Clean all tools and equipment after use with water. Once hardened, the product can only be removed manually or mechanically. Wash soiled hands and skin thoroughly in hot soapy water or use Sika[®] Hand Cleaner towels.

Limitations

- Minimum application thickness (neat without additional aggregate): 25 mm (1 in).
- Maximum application thickness (neat without additional aggregate): 150 mm (6 in). Thicker applications are possible with the addition of suitable aggregate (see Mixing section). Please contact your Sika Canada Technical Sales Representative if needed.
- Extending with aggregates will reduce compressive and flexural strengths. Dimensions and grading of aggregates will influence effect on physical properties; pre-testing is recommended.
- For best results, condition product to 18 to 29°C (65 to 84°F) prior to mixing and installation. Lower temperatures may result in slower strength development and longer cure times.
- Maintain wet grout, ambient and substrate temperatures between 5 - 32 °C (41 - 89 °F) for a period of 72 hours after placing. Protect the grout from freezing during the application and setting.
- Storage is particularly important, it is essential to protect material from exposure to rain, condensation and high humidity as moisture may penetrate packaging, causing lumps.
- Not recommended for areas of extremely high vibration.
- Not recommended for areas where service temperatures will exceed 176 °C (348 °F).
- Do not use as a patching or overlay mortar or in unconfined areas.
- Use only potable water.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

The Information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions, within their shelflife. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

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