Construction

Product Data Sheet
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Sika® Duochem 8107

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(Formerly Duochem 8107) (Supersedes Sika® Everset® Type II)

High-Solids, Highly-Thixotropic, Epoxy Adhesive, Filler and Resurfacer

Description

Sika® Duochem 8107 is a two-component, high-solids containing, epoxy gel. It is suitable for use on both horizontal and vertical surfaces, owing to its highly thixotropic consistency, and it cures to achieve a strong bond and high strength. Sika® Duochem 8107 is versatile in its uses, including application as an adhesive, a crack filler and a vertical resurfacer.

Where to Use

- Use to bond to concrete, steel, wood and tiles.
- An excellent non-shrinking permanent crack or static-joint filler for concrete, wood and steel.
- A 'pick-proof' sealant for custodial suites and holding cells.
- Use to resurface horizontal and vertical concrete prior to applying Sikafloor® or Sikagard® resin systems.

Advantages

- High- solids content with low VOC content.
- Colour-coded to ensure complete and correct mixing.
- Easy to mix (2:1 by volume ratio) and apply.
- Thixotropic, non-sag characteristic allows horizontal and vertical application.
- Self-priming, excellent adhesion to concrete.
- Cures to provide hard and impact resistant material.
- May be mixed with silica sand to produce patch repair material (consult Sika Canada Inc).
- Very low water absorption and highly durable.
- Fully compatible with Sikafloor® and Sikagard® resin systems.
- Canadian Food Inspection Agency (CFIA) acceptance.

Technical Data

Packaging	3 L (0.8 US gal.) unit
Colour	Grey
Yield	
Neat Resin	1 L = 1 m^2 at 1 mm thick (1 US gal. = 231 in^3) approx.
Extended Mortar	1 L (0.25 US gal.) resin + 1.9 L (0.5 US gal.) sand = 2.1 L (0.55 US gal.) of epoxy mortar = 0.002 m^3 (0.07 ft^3) approx.
Shelf Life	1 year in original, unopened packaging. Store and transport dry between 5 and 32°C (41 and 89°F). Condition product between 18 and 32°C (65 and 89°F) before using.
Mix Ratio	A:B = 2:1 by volume. Where additional filler is required to produce a patching or repair mortar, silica sand may be added at a maximum ratio of 3 parts by weight sand to 1 part mixed resin until the desired consistency is achieved. (Caution: Avoid adding excess sand as material will become too dry to provide adequate adhesion).

Properties at 23°C (73°F) and 50% R.H.

Density	1.1 kg/L (9.17 lb/ US gal.)
Solids Content	99.5% by weight
Pot Life	30 minutes
Drying Times	
Touch dry	8 hours
Overcoat	18 hours
Full cure	7 days

Drying times will vary according to air and substrate temperature and humidity.

Construction

Hardness (Shore D) ASTM D2240	
7 days	77
Tensile Strength ASTM D638	
7 days	7.2 MPa (5394 psi)
Elongation at Break ASTM D638	
7 days	6.4%
Flexural Strength ASTM D790	
7 days	45.0 MPa (6525 psi)
Compressive strength ASTM D695	
7 days	53.9 MPa (7816 psi)
Linear shrinkage ASTM D2566	
7 days	0.65%
Water Absorption ASTM D570	
24 hours	0.12%
7 days	0.54%
2 hours boiling water	1.10%
Weight loss	
7 days at 100°C	1.75%
VOC Content	49 g/L

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

New concrete - Surface must be clean, dry and sound. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles and disintegrated materials, by shotblasting or other mechanical means. Surface and room temperature shall be 13°C (55°F) or higher during application and curing period.

Old Concrete - Floor must be dry, sound and free of all contaminants, sealers, etc.

Plywood - Fir plywood 13 mm (1/2 in) minimum is suitable when securely fastened to a solid substrate. Nail on 150 mm (6 in) centres around perimeter and 300 mm (12 in) centres in the field. Lay out sheets with a 3 mm (1/8 in) space between the sheets.

Terrazzo - Grind to remove all terrazzo sealer and wax, and proceed as with new concrete.

Steel - Sandblast or grind to white metal. Apply Sika® Duochem 8107 immediately after preparation to prevent rusting.

Mixing

Pre-mix each component to ensure that all solids are evenly distributed and consistent colours and consistencies are achieved throughout each component.

Proportion by volume 2 parts of Component A and 1 part of Component B into a clean pail suitably sized for mixing. Mix thoroughly for 3 minutes with paddle on low-speed drill (300 - 450 rpm), until gel is of a uniform colour (without any streaking) and consistency.

Mix only that quantity that can be applied within its pot life. **Note:** Sag resistance will be reduced after pot life has expired.

To prepare an epoxy mortar, slowly add up to 3 parts by weight, dry silica sand and again mix until a uniform consistency is achieved.

Application

To fill cracks, spread the mixed Sika® Duochem 8107 onto a nonporous surface to extend the working time. Using the appropriate spatula or trowel, force Sika® Duochem 8107 into the voids and finish by smoothing it flush with the adjoining surfaces. On vertical applications when filling larger cracks or holes, the addition of silica sand (to desired consistency) is recommended to aid the trowelling and prevent sag. For bonding spread Sika® Duochem 8107 with a notched trowel and apply overlay while material is still tacky.

Clean Up

Collect with absorbent material, flush with water. Dispose of in accordance with local disposal regulations. Uncured material can be removed with local disposal regulations. Uncured material can be removed with Sika® Equipment Cleaner. Cured product can only be removed mechanically.

Construction

Limitations

- Not suitable for use on exterior, slab-on-grade concrete substrates.
- Minimum/Maximum substrate temperature 13°C/30°C (55°F/86°F).
- Maximum relative humidity during application and cure: 85%.
- Substrate temperature must be 3°C (5.5°F) above the measured dew point.
- Moisture content of the substrate must be < 4% when coating is applied or use Sikafloor® 81 EpoCem^{CA}.
- Do not apply to porous surfaces where moisture vapour transmission will occur during application.
- Protect from dampness, condensation and water contact during the initial 24 hour cure period.
- Surface may discolour in areas exposed to constant ultra violet light.
- Do not to be thinned, mix only as supplied or with addition of dry silica sand.
- Maximum thickness: 25 mm (1 in) per layer of neat resin; build up in layers where necessary or extend with silica sand.
- Newly applied material may develop a 'blush' layer under severe conditions (cold or humidity) which can be easily removed with water. Ensure proper drying before overcoating.

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 Material Safety Data Sheet** containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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Construction