



PRODUCT DATA SHEET

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FLUID-APPLIED WATERPROOFING

Sikafloor® Resoclad MRW Type II & III

MECHANICAL ROOM WATERPROOFING SYSTEM

Description	Sikafloor® Resoclad MRW Type II & III are elastomeric polyurethane coating systems designed specifically for mechanical rooms, computer rooms and other areas requiring waterproofing and sound deadening properties.
Where to Use	<ul style="list-style-type: none"> Sikafloor® Resoclad MRW Type II & III, are excellent choices for rehabilitation projects. They are solvent-free systems which eliminate potential odour and flammability problems often associated with solvent-based products. Sikafloor® Resoclad MRW Type II is a two-coat approach to mechanical room protection consisting of a thick, elastomeric waterproofing membrane and a coloured, water-based, epoxy topcoat. Sikafloor® Resoclad MRW Type III is a three-coat approach to mechanical room protection consisting of a thick, elastomeric waterproofing membrane, a coloured, solvent-free, polyurethane base coat and a coloured, water-based, epoxy topcoat. Selected aggregates may be added to the topcoat to improve non-slip properties. Sikafloor® Resoclad MRW Type III is suggested for areas of higher traffic loading or in areas where a heavy non-slip finish is required such as walkways, loading docks, laboratories or areas of high spillage.
Advantages	<ul style="list-style-type: none"> Seamless, waterproof and easy to clean Does not support growth of bacteria Solvent- and odour-free Sound deadening, impact resistant and low maintenance Good abrasion and chemical resistance Reduces human fatigue Available in an anti-skid texture and a wide range of colours Potential of contribution towards LEED®v4 credits. Contact Sika Canada Meets the requirements of CFIA and USDA for use in food plants

Technical Data		
Packaging	Sikalastic®-390 Membrane Sikafloor®-2540 W NA Sikalastic®-391 N Sikafloor® Duochem-942	18 L (4.76 US gal.) unit 18.9 L (5 US gal.) unit 18 L (4.76 US gal.) unit 11.34 L (3 US gal.) and 56.7 L (15 US gal.) units
Colour	Sikalastic®-390 Membrane Sikafloor®-2540 W NA Sikalastic®-391 N Sikafloor® Duochem-942	Green Special colours RAL 7046 Telegrey 2, RAL 7012 Basalt Grey, RAL 7015 Slate Grey and RAL 9017 Traffic Black. Special colours available on request. RAL 9003 Signal White and Clear. Special colours available on request.
Yield		
Sikafloor® Resoclad MRW Type II		
Membrane	Sikalastic®-390 Membrane	~ 1.1 - 1.3 m ² /L (45 - 55 ft ² /US gal.) at 30 - 35 mil d.ft.
Top Coat	Sikafloor®-2540 W NA OR Sikafloor® Duochem-942	~ 4 - 5 m ² /L (163 - 203 ft ² /US gal.) at 8 - 10 mil w.f.t. / ~ 4 - 5 mil d.ft. per coat Apply two (2) coats for optimum service. According to chemical resistance requirements.
Sikafloor® Resoclad MRW Type III		
Membrane	Sikalastic®-390 Membrane	~ 1.1 - 1.3 m ² /L (45 - 55 ft ² /US gal.) at 30 - 35 mil d.ft.
Base Coat	*Sikalastic®-391 N <i>*Selected aggregates may be broadcast into base coat to provide non-slip finish.</i>	~ 2 - 2.7 m ² /L (80 - 110 ft ² /US gal.) at 15 - 20 mil d.ft.
Top Coat	Sikafloor®-2540 W NA OR Sikafloor® Duochem-942	~ 4 - 5 m ² /L (163 - 203 ft ² /US gal.) at 8 - 10 mil w.f.t. / ~ 4 - 5 mil d.ft. per coat Apply two (2) coats for optimum service. According to chemical resistance requirements.
NOTE: Yield and coverage figures provided above do not allow for surface profile, porosity or wastage.		
Shelf Life	1 year in original, unopened container. Store dry at temperatures ranging between 5 - 32 °C (41 - 89 °F). Protect Sikafloor®-2540 W NA from freezing. If frozen, discard.	

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

Application method Refer to separate Product Data Sheets for additional information.

	Sikalastic®-390 Membrane	Sikalastic®-391 N	Sikafloor®-2540 W NA
Solids Content			
Per volume	~ 100 %	~ 100 %	N/A
Per weight	~ 100 %	~ 100 %	~ 61,5 % (+/- 5 %) - Depending upon colour
VOC Content	~ 3 g/L	~ 1 g/L	~ 24 g/L
Mixing Ratio	A:B = 2:1	A:B = 3.5:1	A:B = 2:3
Pot Life	~ 20 minutes	~ 45 minutes	~ 30 minutes
Suggested Primer	Sikalastic®-120 FS Primer on high compression concrete with superplasticizer	Apply over Sikalastic®-390 Membrane	Apply over Sikalastic®-390 Membrane or -391 N, depending on system, (Type II or Type III)
Recoat time	~ 6 hours	~ 8 hours	~ 8 to 72 hours
Curing time			
Traffic	~ 48 hours	~ 24 hours	~ 36 hours
Full cure	~ 7 days	~ 7 days	~ 7 days
Chemical resistance	Consult Sika Canada		

Based a complete polyurethane system, 100 % elastomeric, 2-components with Sikalastic®-390 Membrane at 20 mil and Sikalastic®-391 N top coat at 20 mil.

Water Vapour Transmission ASTM E96

Sikalastic®-390 Membrane ~ 0.028 g/h/m² (0.04 grain/h/ft²)

Water Vapour Permeability ASTM E96

Sikalastic®-390 Membrane ~ 0.0013 ng/Pa•s•m (0.09 perm inch)

Water Vapour Permeance ASTM E96

Sikalastic®-390 Membrane ~ 0.0026 ng/Pa•s•m² (4.65 x 10⁻⁵ perms)

Tensile Strength

Sikalastic®-390 Membrane ~ 9.1 MPa (1320 psi) ASTM D638

Sikalastic®-391 N ~ 9.8 MPa (1421 psi) ASTM D412

Elongation

Sikalastic®-390 Membrane ~ 435 % ASTM D638

Sikalastic®-391 N ~ 190 % ASTM D412

Shore A Hardness ASTM D2240

Sikalastic®-390 Membrane ~ 80

Sikalastic®-391 N ~ 80

Adhesion to Concrete ASTM D7234

Sikalastic®-390 Membrane > 2.4 MPa (350 psi)

Tear Strength ASTM D624 Die C

Sikalastic®-390 Membrane ~ 38.22 KN/m (218.24 lb/in)

Sikalastic®-391 N ~ 16.8 N/mm (95.93 lb/in)

Abrasion Resistance ASTM D4060

Taber Abraser, CS-17 Wheel/1000 g (2.2 lb)/1000 cycles

Sikalastic®-390 Membrane ~ 6 mg loss

Water Absorption ASTM D570

Sikalastic®-390 Membrane ~ 0.26 %

Chloride Permeability AASHTO T-277

Sikalastic®-390 Membrane Negligible as per WHITING table

Fire Rating CAN/S 102.2

Flame Spread Rating (FSR) 0

Smoke Development Classification (SDC) 10

(Sikafloor® Duochem-2540 W NA Top Coat)

Low Temperature Flexibility ASTM C957

10 cycles at -26 °C

Sikalastic®-390 Membrane Passes

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

Surfaces to be protected with the Sikafloor® Resoclad MRW Type II or III must be clean, dry, sound and free from all previous sealers, curing compounds, dirt, oil and other contaminants that may impair the bond of the system. Substrate must be lightly shotblasted, sandblasted or abraded by other mechanical means approved by Sika to achieve a surface profile equivalent to ICRI / CSP 2 - 3. Treat shrinkage cracks, dynamic expansion joints and all horizontal to vertical corners at walls and machine pads prior to the application of the Sikafloor® Resoclad MRW System by routing, cleaning and filling with Sikaflex®-2c SL or Sikaflex®-2c EZ Mix.

Mixing

Pre-mix each component. Empty component B into component A pail or add component B in the correct mix ratio to component A. Mix at low-speed (300 - 450 rpm) for three (3) minutes using a drill fitted with an *Exomixer* type mixing paddle (recommended model) to minimize entrapping air. During the mixing operation, scrape down the sides and bottom of the pail with a flat or straight edge trowel at least once to ensure thorough mixing. Upon completion of mixing, Sikalastic®-390 Membrane / Sikalastic®-391 N / Sikafloor®-2540 W NA / Sikafloor® Duochem-942 should be uniform in colour and consistency.

Mix only the quantity of product that may be used within its pot life.



Application	Sikafloor® Resoclad MRW Type II
	<p>Membrane: Apply Sikalastic®-390 Membrane over the prepared concrete slab using a notched squeegee at a uniform coverage and backroll in order to ensure a minimum thickness of 30 - 35 mil. Allow membrane to cure sufficiently and become tack-free to the touch (minimum 6 hours at 23 °C [73 °F]) prior to over-coating.</p> <p>Top Coat: Apply Sikafloor®-2540 W NA by brush, roller or spray ensuring to provide a uniform applied thickness of 4 - 5 m²/L (163 - 203 ft²/US gal.) at 8 - 10 mil w.f.t. per coat. Allow applied material to cure sufficiently before recoating. Apply a second coat for optimum performance within allowable recoat window of between 8 and 72 hours at 23 °C (73 °F). Allow sufficient cure time (48 hours at 23 °C [73 °F]) before opening to traffic.</p> <p>Optional Top Coat: Sikafloor® Duochem-942 according to chemical resistance requirements.</p>
	Sikafloor® Resoclad MRW Type III
	<p>Membrane: Apply Sikalastic®-390 Membrane over the prepared concrete slab using a notched squeegee at a uniform coverage and backroll in order to ensure a minimum thickness of 30 - 35 mil. Allow membrane to cure sufficiently and become tack-free to the touch (minimum 6 hours at 23 °C [73 °F]) prior to over-coating.</p> <p>Base Coat: Apply Sikalastic®-391 N onto dry Sikalastic®-390 Membrane using notched squeegee and backroll in order to ensure a uniform, minimum thickness of 15 - 20 mil.</p> <p>Slip-Resistant Finish: If a slip-resistant finish is required, lightly broadcast the wet base coat with oven-dried, quartz sand and back roll to encapsulate the aggregate.</p> <p>Allow base coat to cure for a minimum of 8 hours before installing topcoat.</p> <p>Top Coat: Apply Sikafloor®-2540 W NA by brush, roller or spray ensuring to provide a uniform applied thickness of 4 - 5 m²/L (163 - 203 ft²/US gal.) at 8 - 10 mil (w.f.t.). Allow applied material to cure sufficiently before recoating. Apply a second coat for optimum performance within allowable recoat window of between 8 and 72 hours at 23 °C (73 °F). Allow sufficient cure time (36 hours at 23 °C [73 °F]) before opening to traffic.</p> <p>Optional Top Coat: Sikafloor® Duochem-942 according to chemical resistance requirements.</p>
Clean Up	<p>Sikalastic®-390 Membrane and Sikalastic®-391 N: Clean all tools and equipment immediately with Sika® Urethane Thinner and Cleaner. Once cured, product can only be removed mechanically.</p> <p>Sikafloor®-2540 W NA: Clean all tools and equipment immediately with tepid water. One cured, product can only be removed mechanically.</p>
Limitations	<ul style="list-style-type: none"> ▪ Sikafloor® Resoclad MRW Type II & III are best installed by experienced applicators. Consult Sika Canada for advice and recommendations. ▪ Prior to application, measure and confirm Substrate Moisture Content, Ambient Relative Humidity, Ambient and Surface Temperature and Dew Point. During installation, confirm and record above values at least once every three (3) hours, or more frequently whenever conditions change (e.g. Ambient Temperature rise/fall, Relative Humidity increase/decrease, etc.) ▪ Moisture content of concrete substrate must be ≤ 4 % by mass (pbw – part by weight) as measured with a Tramex®CME / CMExpert type concrete moisture meter on mechanically prepared surface according to this product data sheet (preparation to ICRI / CSP 3 - 4). Do not apply to concrete substrate with moisture levels exceeding 4 % mass (pbw – part by weight) as measured with Tramex® CME / CMExpert type concrete moisture meter. If moisture content of concrete substrate exceeds 4 % by mass (pbw – part by weight) as measured with Tramex® CME / CMExpert type concrete moisture meter, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®CA. ▪ ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME / CMExpert type concrete moisture meter as described above. ▪ When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be ≤ 85 %. If values exceed 85 % according to ASTM F2170, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®CA. ▪ Material temperature: Precondition material for at least 24 hours between 18 to 24 °C (65 to 75 °F) ▪ Ambient and substrate temperature - Minimum / Maximum: 10 / 30 °C (50 / 85 °F). ▪ Mixing and application attempted at material, ambient and/or substrate temperature conditions less than 18 °C (65 °F) will result in a decrease in product workability and slower cure rates. ▪ Maximum ambient relative humidity: 75 % (during application and curing). ▪ Beware of condensation! The substrate must be at least 3 °C (5 °F) above the Dew Point to reduce the risk of condensation, which may lead to adhesion failure or “blushing” on the floor finish. Be aware that the substrate temperature may be lower than the ambient temperature. ▪ Do not hand mix Sikafloor® materials. Mechanical mixing only. ▪ Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapour drive at the time of application. Refer to ASTM D4263, may be used for a visual indication of vapour drive. ▪ Freshly applied material should be protected from dampness, condensation and water for at least 24 hours. ▪ Will discolour over time when exposed to sunlight (UV) and under certain artificial lighting conditions. ▪ Do not apply Sikafloor® to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikafloor® product after application. If concrete substrate has or is suspected to have ASR (Alkali Silica Reaction) present, do not proceed. Consult with design professional prior to use.



Limitations
Continued...

- Not suitable for on-grade concrete slabs, unvented metal pan decks, split/sandwich slabs and buried membrane conditions as well as asphalt.
- Any aggregate used with Sikafloor® systems must be non-reactive and oven-dried.
- This product is not designed for negative side waterproofing.
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- Do not apply to substrates exposed to extreme thermal shock.
- Use of unvented heaters and certain heat sources may result in defects (e.g. blushing, whitening, debonding, etc.).
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.

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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