

METALLIX®

EPOXY BASED METALLIC RESIN

METALLIX® is a high solids, low VOC, low odour, water clear, high gloss epoxy resin used to create premium quality high build coatings. METALLIX® formulation contains advanced raw materials and additives blended to create an aesthetic, clear epoxy surface.

WHERE TO USE

Typically used in decorative application where a premium quality high build clear or pigmented coating is required: automotive showrooms, garages, retail stores and commercial buildings.

ADVANTAGES

- Glossy finish
- Durable, impermeable and seamless surface that is easy to clean
- Impact resistance
- Low VOC-content, low odour

TECHNICAL DATA (PROPERTIES AT 23 °C (73 °F) AND 50 % R.H.)

PACKAGING

7.5 L (2 US gal)
Component A: 5 L Resin
Component B: 2.5 L Hardener
15 L (4 US gal.)
Component A: 10 L Resin
Component B: 5 L Hardener
30 L (8 US gal.)
Component A: 20 L Resin
Component B: 10 L Hardener

COLOUR

Clear or field pigmented with Sikafloor® Epoxy Color Additive

YIELD

0.65 - 1,13 m²/L (27 - 40 pi² /gal US) 30 - 60 mil w.ft.
Note: These figures do not allow for surface porosity, profile or wastage

SHELF LIFE

2 years in original, unopened packaging under proper storage conditions. Store dry at temperatures between 4 and 32 °C (40 and 90 °F). Protect from freezing. If frozen, consult Sika Canada. For best results condition product at temperatures between 18 and 24 °C (65 and 75 °F) for at least 24 hours before use.

MIX RATIO

A:B =2:1 by volume

SOLIDS CONTENT

~ 98 % by volume

VISCOSITY (MIXED)

~ 600 cps

WORKING TIME

~45-60 minutes at a temperature of ~23 °C (73 °F)

WAITING/RECOAT TIMES (before applying second coat of METALLIX)

from ~8 hours to ~24 hours at a temperature of 20 °C (69 °F)

CURE TIME

At a temperature of 20 °C (68 °F): ~16 hours for foot traffic, ~2 days for light traffic, ~7 days for full cure

PULL-OFF STRENGTH ASTM D7234

> 2,5 MPa (363 psi) - Concrete failure

HARDNESS SHORE D ASTM D2240

~ 78 - 82

GLOSS (60 degrees) ASTM D523

~90

CHEMICAL RESISTANCE

Communicate with Prosol

HOW TO USE

SURFACE PREPARATION

Concrete surfaces must be clean, sound and dry. Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, form oils, hydraulic or fuel oils, brake fluid, grease, fungus, mildew, biological residues or any other contaminants which may prohibit good bond. Prepare the surface by any appropriate mechanical means, in order to achieve an open textured profile equivalent to ICRI / CSP 3 - 4. The compressive strength of the concrete substrate should be at least 25 MPa (3625 psi) at 28 days and a minimum of 1.5 MPa (218 psi) in tension at the time of application of METALLIX®. Whenever shot-blasting is utilized, be careful to leave concrete with a uniform texture and not create tracking as this will be visible through coatings and in some cases thin section mortars. Over blasting will also result in reduced coverage rates and increased consumption of the primer. Sweep and vacuum any remaining dirt and dust with a wet / dry vacuum. Removing residual dust will help ensure a tenacious bond between the primer and substrate.

All projections, rough spots, etc. should be dressed off to achieve a level surface prior to the application. Repairs to cementitious substrates, filling of blowholes, levelling of irregularities, etc. should be carried out using an appropriate moisture tolerant, structural profiling mortar. Contact Prosol for recommendations.

MIXING

Mix ratio : Components A:B 2:1 by volume

Pre-stir Components A and B separately, making sure all solids, are evenly distributed and uniform consistencies are achieved within each individual Component. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin) or empty Component A into a suitably sized and clean pail and add Component B in the correct ratio. Blend the combined components thoroughly for at least three (3) minutes using a low speed drill (300 - 450 rpm) fitted with an Exomixer® or Jiffy type paddle suited to the dimensions of the mixing container and keep the mixing paddle in the mix to minimize entrapped air. Take care not to introduce any air bubbles while mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in the coating. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing.

Field Pigmented:

Premix each component separately. If color is desired, the appropriate metallic pigment is added to Component B. Mix Component B for two (2) minutes with a low speed drill (300 - 450 rpm) fitted with Exomixer® or Jiffy type paddle suited to the volume. Empty Component B (Hardener) in the correct mix ratio to Component A (Resin) and mix for additional two (2) minutes. Be careful not to introduce any air while mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in the coating. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing.

Note : Do not try to attend to unmixed material that may gather on the sides of the mixing container while mechanical or electrical parts are in motion.

Important : TMixing attempted at material and ambient temperatures below 18 °C (65 °F) will result in a decrease in product workability. Do not mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature.

APPLICATION

Apply METALLIX® using a non-marking squeegee.

Note : Prosol strongly recommends that a test area be applied to confirm specific top coat selection and application rates required to produce the desired final appearance.

CLEAN UP

Clean all tools and equipment immediately with Sika® Epoxy Cleaner. Once cured, product can only be removed mechanically. Wash hands and skin thoroughly with hot soapy water or use Sika® Hand Cleaner towels. Dispose of product in accordance with current applicable local, provincial and federal regulations.

LIMITATIONS

- METALLIX® is best installed by skilled and experienced applicators. Consult Prosol for advice and recommendations.
- Prior to application, measure and confirm the following: substrate moisture content, ambient relative humidity, ambient and surface temperature and dew point. During installation, confirm and record above values at least once (1) 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 less than 4 % (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 greater than 4 % (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter. If moisture content of concrete substrate exceeds 4 % (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®CA.
- 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. ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.
- Material temperature: Precondition material for at least 24 hours at temperatures between 18 and 24 °C (65 and 75 °F).
- Ambient and substrate temperatures (minimum / maximum): 10 °C / 30 °C (50 °F / 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.
- 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 METALLIX®. Mechanically mix only. Pre-stir each component thoroughly and do not allow mixed material to stand and settle. Failure to pre-stir and keep product agitated will result in variation in gloss levels appearance and performance.
- 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 72 hours.
- Do not apply METALLIX® to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the METALLIX® coating 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.
- Any aggregate used with METALLIX® 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.
- Use of unvented heaters and certain heat sources may result in defects (e.g. blushing, whitening, debonding, etc.).
- Mechanical, chemical & physical properties will be fully achieved at full cure.
- 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

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

***The Information, and in particular, the recommendations relating to the application and end-use of Crystal Coat products, are given in good faith based on Crystal Coat'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.crystalcoat.ca*