CRYSTALCOAT®
Powered by PROSOL

ASPARTIX®

POLYASPARTIC RESIN

Polyaspartic resin with two components and fast working time. It is used to install a floor system with flakes. Thanks to its shortened working time, ASPARTIX® will allow you to complete a garage in just one day. Its installation however becomes more complex and requires a high-level installer. ASPARTIX® is used as a topcoat. Its high resistance makes this resin very popular in garages and terraces.

WHERE TO USE

ASPARTIX® can be used as a concrete primer, binder, and sealer especially when fast cure times and UV resistance are required

ADVANTAGES

- Fast cure at low temperatures down to 4.5 °C (40 °F)
- Durable, impermeable and seamless
- Superior mechanical resistance
- Superior aesthetic glossy finish
- Excellent UV resistance
- Excellent chemical resistance to a wide range of organic and inorganic acids, alkalis, salts and solvents
- High density prevents dirt penetration, which provides easy cleaning
- Low VOC content

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

PACKAGING

7.5 L (2 gal US) Unit
Component A : 4.5 L Resin
Component B : 3 L Hardener
15 L (4 gal US) Unit
Component A : 9 L Resin
Component B : 6 L Hardener
30 L (4 gal US) Unit
Component A : 18 L Resin
Component B : 12 L Hardener

COLOUR

Clear or Pigmented using Sikafloor® SCO Urethane Color Additive - 0.95 L per 11.4 mixed litres (1 US quart per 3 mixed US gal.)

COVERAGE

Smooth Finish Coating:
Prime coat: 4 - 8 m2/L (160 - 320 ft2/US gal.) at 5 - 10 mils (w.f.t.)
Wear coat: 2.6 - 4 m2/L (107 - 160 ft2/US gal) at 10 - 15 mils (w.f.t.)
These figures do not allow for surface porosity, profile or wastage.
Thinning Solvent - Use Sika® Urethane Thinner and Cleaner - maximum 5 % by volume (if required).
(50 mL/L - 6.4 oz/US gal). Contact Prosol for additional information.

SHELF LIFE

1 year in original unopened container under proper storage conditions. Store dry at temperatures between 10 and 25 °C (50 and 77 °F).

MIX RATIO

A:B =3:2 by volume

APPLICATION TEMPERATURE

4 °C min., 30 °C max. (40 °F min., 85 °F max.)

CURE TIME (at 60% R.H.)

At a temperature of 23 °C (68 °F): ~4 hours for foot traffic, ~8 hours for light traffic, ~5 days for full cure

WAITING/RECOAT TIMES (at 60% R.H.)

from ~90 mins to ~24 hours at a temperature of 23 °C (73 °F)
Note: High temperatures and high humidity levels will accelerate curing and reduce working time.

VISCOSITY (MIXED)

~ 840 cps

TENSILE STRENGHT ASTM C307

~43.4 MPa (6300 psi)

ELONGATION ASTM D638

~12 %

PULL-OFF STRENGHT ASTM D7234

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

HARDNESS SHORE D ASTM D2240

~ 76

CHEMICAL RESISTANCE

Communicate with Prosol

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

Surface must be clean, sound and dry. Remove dust, laitance, grease, curing compounds, bond inhibiting impregnations, waxes and any other contaminants. All projections, rough spots, etc., should be ground off or removed to achieve a level surface prior to the application.
Concrete - Should be cleaned and prepared to achieve a laitance- and contaminant-free, open textured surface by shot-blasting or equivalent mechanical means to achieve ICRI / CSP 3. 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. Whenever shot-blasting is utilized, be careful to leave concrete with a uniform texture. Over-blasting will result in reduced coverage rates of the primer and/or subsequent top coats. It is also possible that the texture of the shot-blast pattern may show through the last coat. This is known as "tracking". The compressive strength of the concrete substrate should be at least 24 MPa (3500 psi) at 28 days and at least 1.5 MPa (215 psi) in tension at the time of application of ASPARTIX®.

PRIMING

Priming for concrete substrate is required. Prime with either Sikafloor®-156, Sikafloor®-1610 or Sikafloor®-165 FS. Allow the primer to cure (varies with temperature and humidity) until tack-free before applying subsequent coats. Ensure that the primer is pore- and pinhole-free and provides uniform and complete coverage over the entire substrate. When using ASPARTIX® as primer extra precaution has to be taken on the substrate preparation and on the moisture content, see product limitations for further details.

MIXING

Mixing Ratio - A:B = 3:2 by volume.
For bulk packaging, when not mixing full units, each component must be pre-mixed separately to ensure product uniformity.
Clear Resin:
Premix each Component separately. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin). Mix the combined components at low speed (300 - 450 rpm) for at least three (3) minutes using a drill fitted with an Exomixer® or Jiffy type paddle suited to the volume of the mixing container to minimize entrapped air. Be careful 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:
If colour is desired, the appropriate Sikafloor® SCO Urethane Color Additive is added to Component A at a rate of 0.95 L per 11.4 mixed litres (1 quart per 3 mixed gal.) (i.e. Components A+B) for all colours. Mix Component A and Sikafloor® SCO Urethane Color Additive at low speed (300 - 450 rpm) for two (2) minutes (or until a uniform colour is achieved) with a drill fitted with an Exomixer® or Jiffy type paddle suited to the volume of the mixing vessel. 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 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.
NOTE: Sikafloor® SCO Urethane Color Additive can shorten the Pot Life and Working Time of ASPARTIX®. Do not mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature.

APPLICATION

As a Pigmented Topcoat/Sealer Coat for Smooth or Broadcast Finish: Squeegee and back roll ASPARTIX® at a rate of 2.6 - 4 m2/L (107 - 160 ft2/US gal.) [10 - 15 mils] to provide a uniform coverage without ponding. If required, repeat this procedure for a second coat.
As a Clear Topcoat for a Broadcast Quartz or Flake System: Squeegee and back roll ASPARTIX® at a rate of 2.6 - 4 m2/L (107 - 160 ft2/US gal.) [10 - 15 mils] to provide a uniform coverage without ponding. If required, repeat this procedure for a second coat.
As a Stand Alone Double Broadcast Quick-cure Decorative Quartz and Flake System:
Step 1: Primer - Apply neat ASPARTIX® on prepared substrate as a primer using a squeegee and back roll at a rate of 4 - 8 m2/L (160 - 320 ft2/US gal.) [5 - 10 mils] to provide a uniform coverage without ponding. Note: When using ASPARTIX® as primer extra precaution has to be taken on the substrate preparation and moisture content.
Step 2: First Broadcast Application - Squeegee and back roll ASPARTIX® at a rate of 2.6 - 4 m2/L (107 - 160 ft2/US gal.) [10 - 15 mils] to provide a uniform coverage without pounding. Broadcast preblended decorative flakes or coloured quartz aggregates into the binder to saturation. Broadcast in a manner so that aggregates fall vertically into the binder. Broadcast to rejection. Ensure that broadcast flakes / aggregates cover entire surface. Allow broadcast system to cure sufficiently to be able to resist foot traffic without damaging the surface. Remove excess flakes / aggregates from the surface by sweeping up, followed by vacuuming, until surface is free of all loose particles and dust.
Step 3: Second Broadcast Application - Squeegee and back roll ASPARTIX® at a rate of 2.6 - 4 m2/L (107 - 160 ft2/US gal.) [10 - 15 mils] to provide a uniform coverage without ponding. Broadcast preblended decorative flakes or coloured quartz aggregates into the binder to saturation. Broadcast in a manner so that aggregates fall vertically into the binder. Broadcast to rejection. Ensure that broadcast flakes / aggregates cover entire surface. Allow broadcast system to cure sufficiently to be able to resist foot traffic without damaging the surface. Remove excess flakes / aggregates from the surface by sweeping up, followed by vacuuming, until surface is free of all loose particles and dust.
Step 4: Finish Coat - Squeegee and back roll ASPARTIX® at a rate of 2.6 - 4 m2/L (107 - 160 ft2/US gal.) [10 - 15 mils] to provide a uniform coverage without ponding. When required, repeat this procedure for a second coat.

CRITICAL RECOAT / OVERCOAT TIME

It is important to apply subsequent coats of this and other products within 6 to 24 hours (under normal curing conditions). If this coating is allowed to cure longer than the 24 hours before subsequent recoats, light sanding, vacuum cleaning and solvent wiping will be necessary. The floor surface should be sanded / abraded to the effect that a uniform dullness is achieved. There should be no gloss present on the floor after vacuuming and before applying the next coat.

CLEAN UP

Wash soiled hands and skin thoroughly in hot, soapy water or use Sika Hand Cleaner. Uncured material can be removed with Sika® Urethane Thinner and Cleaner. Cured material (Component A combined with Component B) can only be removed mechanically. In case of spill, ventilate area and contain spill. Collect with absorbent material and place in properly sealed container. Dispose of in accordance with current applicable local, provincial and federal regulations.

LIMITATIONS

- ASPARTIX® 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 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 not exceed 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, Sikafloor®-81 EpoCem®CA or Sikafloor®-22NA PurCem®.
- 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 or Sikafloor®-22NA PurCem®.
- 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 between 18 to 24°C (65° to 75°F)
- Ambient and substrate temperature: Minimum/Maximum 4° / 30 °C (40 °/ 86 °F)
- Mixing and application attempted at material, ambient and/or substrate temperature conditions lower than 18 °C (65 °F) will result in a decrease in product workability and slower cure rates.
- Minimum ambient humidity: 30 % - Maximum ambient humidity: 75 % (during application and curing).
- Note: Low Ambient Relative Humidity may result in slower cure.
- 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 ASPARTIX®. Mechanically mix only.
- If ASPARTIX® is used as a primer, apply the coating to the prepared substrate using a squeegee and back roll to provide uniform coverage. Ensure that the coating is pore- and pinhole-free and provides uniform and complete coverage over the entire substrate. If necessary, apply an additional coat to ensure the coating is pore- and pinhole-free and provides uniform and complete coverage over the entire substrate.
- 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.
- Use of clear UV resistant top coat may not prevent discoloration of underlying coatings.
- Do not apply ASPARTIX® to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below ASPARTIX® 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 ASPARTIX® 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.)
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.
- Published Dynamic Coefficient of Friction (DCOF) wet and dry test results are approximate values based on laboratory test samples produced in a controlled environment following the application instructions published on the product data sheet. Resin flooring products are hand applied finishes subject to minor variations in surface texture due to influences partly beyond Prosol's control. Substrate profile, environmental conditions, variable regional aggregate size, shape and gradation, aggregate distribution, uniformity of applied resin mil thickness, and application technique can all affect the final DCOF test results achieved. Adequate provision should be made by the client throughout the selection and installation process to ensure the finished surface texture meets the end user's traction requirements.

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*

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