



DATA SHEET

WS 102 INTERIOR EPOXY

WS 102 INT 2.1 Interior Epoxy is a high build, two component, 100% solids epoxy coating system used for applications up to 20 mils and is capable of self-levelling and may be tinted. Its exceptional heat and chemical resistance properties make the coating suitable for applications in harsh environments, such as humid conditions, without creating a foggy surface.

WS 102 has a flexibility of 7% at 20°C (68°F) and a long pot life of 35 minutes, allowing for larger batches and a faster turn around time with minimal labour.

WS 102 is approved by CFIA (Canadian Food Inspection Agency) if incidental contact should occur in federally and provincially inspected meat/poultry plants.

USES

WS 102 fills and seamlessly hides surface imperfections, as well as hairline cracks, to become an integral component of the substrate as it is used on interior applications to waterproof and protect new or existing, interior horizontal concrete structures (including: aircraft hangars, vehicle repair bays, paper mills, service stations, water treatment facilities, waste treatment facilities, meat packing and food processing facilities, dairies, canneries, etc.) and protects:

FEATURES

- **Fast curing**
- **Long pot life (35 minutes @ 20°C (68°F))**
- **Excellent compressive, flexural and tensile strengths**
- **Fill and hides minor surface imperfections**
- **Strong chemical resister**
- **Good vapour permeability**
- **Good workability**
- **Low odor**
- **May be used as a filler when mixed with sand**
- **May be tinted**

- **Fast curing**
- **Substrate from chemicals including: gasoline, aviation fuel, brake fluids, alkalis and solvents**
- **Leakage and moisture intrusion**
- **Scaling and spalling**
- **Deterioration of reinforcing steel caused by chloride, acid, ingress, etc.**



With outstanding chemical properties, WS 102 may be industrially, commercially and municipally used or for displaying multicoloured quartz aggregates. It is designed for one coat applications for up to 20 mils but may be built up within the re-coat window. When mixed with aggregates (sand), WS 102 may be used as a filler or to create a durable, skid resistant surface. All the while to prolong the life of a concrete floor and reduce maintenance costs.

SUGGESTED SYSTEM COMPONENTS

<i>WS Primer</i>	Bonding Primer diluted with max. 10% WS Epoxy Reducer
<i>Topcoat or Intercoat</i>	WS 102 INT 2.1 Interior Epoxy
<i>Alternative Topcoat</i>	WS 104, WS107 or WS 103 (for applications subjected to UV radiation)

SYSTEM ESTIMATING GUIDE

<i>Primer</i>	<ul style="list-style-type: none">• Diluted with 10% (max.) of WS Epoxy Reducer• Film thickness @ 5-6 mils• 270-320 sq. ft./gallon coverage
<i>Topcoat</i>	<ul style="list-style-type: none">• Squeegee, roller or trowel application• Film thickness @ 12-20 mils• 80-130 sq. ft./gallon coverage
<i>Intercoat</i>	<ul style="list-style-type: none">• Squeegee application• Film thickness @ 6-12 mils• 160-300 sq. ft./gallon coverage

Note: Coverage will vary according to surface texture and porosity.



GENERAL DATA

Standard Colors	Clear, 01, 03, 04, 06, 10, 11, 13, 20, 21, 30, 35, 36, 41, 60, 63
Solids Content	100%
Viscosity	940 CP @ 25.5°C
VOC	0
Appearance	Clear
Finish	Glossy
Mix Ratio	2 volumes Resin (A) with 1 volume Hardener (B)
Mixing Method	Low speed jiffy mixer
Pot Life	35 minutes @ 20°C (68°F)
Thinning	Not recommended
Flash Point	Greater than 280°C (536°F)
Specific Weights	<ul style="list-style-type: none"> • 9.6 lbs/gallon (Resin) • 8.1 lbs/gallon (Hardener)
Recommended WFT	6-20 mils
DFT @ 6 mils WFT	6 mils
Coverage @ 6 mils WFT	270 sq. ft./gallon
Application Method	Squeegee, roller or trowel
Shelf Life	1 year, unopened

Note: Longer drying times are required for lower temperatures and/or conditions in high humidity.

CHEMICAL RESISTANCE DATA—PERFORMANCE

ACIDS	CONCENTRATION (%)	IMMERSION	SPILLS	FUMES
Acetic	5	Yes	Yes	Yes
Fatty	-	-	Yes	Yes
Citric	-	Yes	Yes	Yes
Hydrochloric	30	-	Yes	Yes
Lactic	10	Yes	Yes	Yes
Phosphoric	10	Yes	Yes	Yes
Sulfuric	50	Yes	Yes	Yes
Sulfuric	90	-	Yes	Yes



ALKALIS	CONCENTRATION (%)	IMMERSION	SPILLS	FUMES
Ammonia	10	Yes	Yes	Yes
Caustic Salts	-	Yes	Yes	Yes
Detergents	Various	Yes	Yes	Yes
Sodium Hydroxide	50	Yes	Yes	Yes
Sodium Hypo Chloride	10	Yes	Yes	Yes

BREAK FLUIDS	CONCENTRATION (%)	IMMERSION	SPILLS	FUMES
Skydrol, A and B	-	Yes	Yes	Yes
Hyjet	-	Yes	Yes	Yes

SOLVENTS	CONCENTRATION (%)	IMMERSION	SPILLS	FUMES
Acetone (7 days cure)	-	-	Yes	Yes
Gasoline	-	Yes	Yes	Yes
Aliphatic Hydrocarbons	-	Yes	Yes	Yes
Ketones (7 day cure)	-	-	Yes	Yes
Carbon Tetrachloride	-	-	Yes	Yes
Xylene	-	Yes	Yes	Yes

SALTS	CONCENTRATION (%)	IMMERSION	SPILLS	FUMES
Metal Salts (various)	-	Yes	Yes	Yes

Chemical exposure at temperature range 16°C (60°F) to 27°C (80°F)

Intermediate: 2 days

Maximum: 7 days

Limitations

- Avoid applying in direct sunlight in times of increased heat. May result in air bubbling underneath surface, wrinkling, blistering and pinholes.
- Not for exterior use, immersion or applications near moisture on the underside of coating
- Do not apply in temperatures below 10°C/60°F and above 30°C/86°F
- Do not thin (unless for priming purposes) as it will slow down cure time and reduce product quality. Re-coat times will also be affected.
- Do not spray product
- Do not freeze Part A or B



CURING RESIN PERFORMANCE

DESCRIPTION	TEST METHOD	RESULTS
<i>Solids Content</i>	<i>ASTM D2597</i>	<i>100%</i>
<i>Hardness (Shore D)</i>	<i>ASTM D2240</i>	<i>82</i>
<i>Compressive Strength</i>	<i>ASTM D695</i>	<i>13100 psi</i>
<i>Compressive Modules</i>	<i>ASTM D695</i>	<i>331000 psi</i>
<i>Tensile Strength</i>	<i>ASTM D638</i>	<i>8200 psi</i>
<i>Tensile Modulus</i>	<i>ASTM D638</i>	<i>433000 psi</i>
<i>Elongation at Break</i>	<i>ASTM D638</i>	<i>7%</i>
<i>Flexural Strength</i>	<i>ASTM D790</i>	<i>12400 psi</i>
<i>Adhesion</i>	<i>ASTM D4541</i>	<i>350 psi</i>
<i>Izod Impact Strength</i>	<i>ASTM D256</i>	<i>0.52 ft. lbs./in. notch</i>
<i>Taber Abrasion (CS-10)</i>	<i>ASTM D4060</i>	<i>33 mg loss (100 cycles)</i>
<i>Water Resistance</i>	<i>ASTM D570</i>	<i>0.16%</i>
<i>Fungus/Bacteria Resistance</i>	<i>Mil-F-52505</i>	<i>No support of growth (TT- P-34)</i>

MAXIMUM TEMPERATURE LIMITS

<i>Dry Heat</i>	<i>110°C (230°F)</i>
<i>Spills</i>	<i>66°C (150°F)</i>
<i>Immersion</i>	<i>66°C (150°F)</i>
<i>Cold</i>	<i>-40°C (-40°F)</i>

Above temperatures are laboratory test results.

Test Section

Apply WS 102 in an inconspicuous area about 5x5 ft. and examine for compatibility with any existing coatings and adhesion. Refer to surface preparation and application instructions.



Preliminary Floor Inspection and Surface Preparation

Ensure area is clean, stable, dry and at temperatures above 10°C/60°F and below 30°C/86°F for successful application. New concrete must be cured for at least 28 days. Test vapour drive according to ASTM D4263.

Perform following tests if there is any uncertainty to any present curing compound or other coatings on the floor:

- Pour a cup of water on 3 or 4 areas on the floor. If any water bubbles out, it's an indicator that there is no curing compounds or coatings within the floor. If water cohesion is present, it indicates curing compounds or other coatings are present. Remove by chemical or mechanical means.
- Drop muriatic acid on the floor. Acid bubbling indicates a curing compound, or any other coating is not present.
- Examine for moisture presence. Test vapour drive according to ASTM D4263. Vapour drive should not exceed 3 lbs. / 1000 sq. ft./ 24 hours. Follow instructions according to test kits. Remove any debris, residue, sealant or curing compounds and coatings before testing.

Remove any and all surface contaminants including: oil, grease, wax, dirt, laitance, and etc. To clean concrete, use mechanical methods such as: shot-blasting, scarification, and high-pressure water blasting. Sweep and vacuum remaining dirt and dust. Another method is to use a degreaser to remove surface contaminants. Follow up by rinsing and scrubbing using water. Do not use unbuffered acids or other solvents to remove contaminants. Avoid sweeping compounds to remove dust.

Use of WS Primer

New dense surfaces, such as tile, stone (should it contain silicate), smooth concrete, densified concrete, etc., should be free of oil, dirt, grease, curing compounds or other bond breakers. Can be coated with WS Primer resulting in a more efficient and less costly surface preparation such as shot blasting, scarification or grinding.

Mixing and Tinting

Clear application — WS 102 may be applied clear. Prepare by accurately measuring 2 parts by volume of resin (A) and 1 part by volume of hardener (B) into a clean mixing container. Mix for 2-3 minutes and scrape sides and bottom of mixing container to ensure complete mixing.

Tinted application — WS 102 may also be applied tinted. Prepare by accurately measuring 2 parts by volume of resin (A) with the colorant first into a clean mixing container, prior to mixing 1 part by volume of hardener (B) into the tinted Part A/colorant mixture. Do not count the colorants into the volume ratio of the resin (A) and the hardener (B). If using more than a can of colorant, mix all colorant cans in a container prior to use to ensure consistent color as variations between cans/batches or small amounts of colorant left in cans can occur. Mix for 2-3 minutes using a low speed jiffy mixer and scrape sides and bottom of mixing container to ensure complete mixing. Avoid introducing air bubbles when mixing.



- Due to the difference in viscosity of the resin (A) and hardener (B), thoroughly mix both components to avoid partially cured and weak spots within the coating.
- When using a high gallon bulk drum kit, use a mixing ratio of 2 parts resin (A) and 1 part hardener (B), by volume. Do not count colorants in volume ratio.
- Measurement accuracy is an essential component to the quality of product and color consistency between batches, if tinted.

Colorant Data

Kit Size	Colors (# 01, 03, 04, 06, 20, 21, 36, 41, 63)	Colors (# 10, 11, 30, 35, 60)
3 gallon kit	1 quart (0.9 L)	2 quarts (1.9 L)
15 gallon kit	5 quarts (4.7 L)	

Application

WS 102 may be used as is. Thinning or solvent reduction is not recommended. Apply by pouring a bead of material in a ribbon form on the surface to be coated. Do not leave material in container for long periods of time as material will set, reducing its pot life. Use a serrated squeegee to evenly spread poured material to its desired thickness using a slow and steady motion, without exceeding 20 mils with 1 coat. Back roll using a high-quality nap roller and avoid excessive agitation of the material, especially at thinner coats between 6-12 mils as it may result in pinholes or bubbles in film. Use a porcupine roller on thicker built surfaces (12-20 mils) after 10 minutes, to remove any excess bubbles.

Pot Life

Pot life of WS 102 is approximately 35 minutes @ 20°C (68°F). High temperature and humidity conditions will increase curing time and reduce pot life. Pot life is relatively short as it is not a solvent based system. Avoid mixing more kits of material that can be used within this period of time.

Curing Times

Maintain floor area between 10°C (50°F) and 30°C (86°F) during application and curing. For heavy-wheeled traffic and/or chemical spillages, allow for a 72-hour cure. Screening is necessary if WS 102 cures for longer than 24 hours before subsequent re-coats. Screen to the effect that a uniform dullness is achieved. No gloss should be present on the floor before applying the next coat.



Curing Time

Temperature	10°C (60°F)	20°C (68°F)	30°C (86°F)
Tack Free	10-14 hours	8-10 hours	6 -8 hours
Re-coat	12-36 hours	8-30 hours	6-24 hours
Full Cure	72 hours	48 hours	30 hours

Clean Up

Clean equipment immediately after use with solvents, such as WS Reducer.

Troubleshooting

Below is a list of commonly observed problems during application and possible causes.

- Fish Eyes — Oil contamination; Improper substrate cleaning; Mold release agents; Improper mixing
- Slow cure— Low product, substrate or ambient temperature; wrong mix ratios or mixing; use of thinner on product
- Peeling between coats— Re-coat time past critical; coat contamination
- Peeling from substrate— Surface preparation insufficient; hydrostatic water pressure; oil impregnation
- Whitening— Excessive moisture exposure from substrate during curing; exposure to pooling water after full cure
- Coating soft, dulling— Improper mixing; use of thinner with product, extreme weather conditions
- Fast cure— High temperatures
- Pigment flooding, floating or color streaking—Inadequate mixing of Part A with colorant

Quartz Broadcast

Consult Technical Bulletin regarding WS Granite Quartz system

Seeded Floor System

One coat of WS 102 is required over primed substrate at 15-20 mils, seeded with 30-40 mesh round sand at 0.75 lbs./0.34 kg/sq. ft. Dry overnight and remove excess sand. Apply a second coat of tinted WS 102 and sand as before. Dry second coat and remove excess sand then topcoat using tinted WS 102. Additional topcoat using WS 104 or WS 103 is optional. WS 107 Polyaspartic can also act as a top-coat.



Slip Resistance Flooring and Coating

Embed approved aggregate into WS 102 to create a durable, slip resistance coating to provide excellent compressive and tensile strength properties designed for areas requiring a slip resistant finish. Perfect for highly oily manufacturing and assembly plants, for lift ramps and docks, (indoor) showers, lobbies and maintenance shops. Slip resistance requirements may be met by various additive grades. Degree of density of application may be altered for each facility's requirements. Determine the right amount of aggregate for the specific surface needs by evaluation.

Conductive Flooring System

WeatherSkin's Conductive Flooring System contains conductive components to provide conductivity and dissipation of static electricity. Perfect for airline hangars, computer and data processing rooms, electronic manufacturing and testing facilities and explosives manufacturing, assembling and handling facilities.

Recommendations

- Always apply test patch in an inconspicuous area to confirm substrate compatibility
- Interior use only. When exposed to direct sunlight, coating will yellow and chalk
- Seal product immediately after use
- Use a single container to accurately measure the volumes of Part A and B. For accuracy in transfer, scrape the walls of the measuring container.
- Store product in cool dry temperatures between 10°C (50°F) and 30°C (86°F)
- Use clean, dry equipment only

Exposure Risks

WS 102 contains iso-hormone diamine and other proprietary aliphatic polyamines. Corrosive and may cause severe eye and skin burns. If swallowed, may be harmful or fatal resulting in lung damage as an aspiration hazard.

Proposition 65

WS 102 does not deliberately contain any materials listed by the State of California as carcinogenic or known to cause birth defects and other reproductive harms.

Shipping Information

Dangerous goods, Class 8, UN 1760, PG III.

VOC Content

Combined (Part A and B) contains 0 g/L of VOC.



Precautions

Keep out of reach of children. Avoid any personal contact with product and use gloves and eye protection. If TLV is exceeded or product is applied in a poorly ventilated area, use NOISH/MSHA approved respiratory protection according to federal, state, provincial and local regulations, Avoid inhalation of vapours. Empty containers may contain hazardous residues. Observe all and any warning labels until container is commercially cleaned or reconditioned.

First Aid

In case of eye contact, rinse for 15 minutes and consult a physician. For skin contact, wash thoroughly with soap and water. In case of ingestion, seek medical aid immediately— refrain from physically expelling product by vomiting. Seek medical aid immediately if in persisting physical discomfort or breathing difficulty.

Refer to Material Safety Data Sheet (MSDS) for more information.

Safety

WS 102 is certified to be formulated without lead, mercury, asbestos or chromates.

Maintenance

WS maintenance products are specifically formulated to protect and maintain WS coating surfaces. Clean surface periodically using WS Cleaner-Rejuvenator. Protect surface by regularly using WS Polish-Gloss or WS Polish-Satin.

Packaging

3 Gallon Kit (short-filled)

2 Gallons Part A

1 Gallon Part B

15 Gallon Kit

10 Gallons Part A

5 Gallons Part B

165 Gallon Bulk Kit

Warranty Disclaimer

We guarantee our Products adhere to the specifications of Weatherskin Coatings. Weatherskin Coatings makes no warranty or guarantee, expressed or implied, including warranties of fitness for a particular purpose or merchantability, respecting its Products. Liability, if any, is limited to refund or purchase price or replacement of the Product. All consequential damages, labor and cost of labor are hereby excluded.