

Technical Data Sheet



Product Code: RWIP120-PRIMER

Edition March 2024 Revision 1

Product Name

High build epoxy coating primer

Product Description

The RWIP120 system is an air drying 2 component Solvent based full epoxy product with Low VOC's. The coating has been designed for application under the RWIP120 Epoxy and RWIP48 Polyurethane topcoats to achieve a high- performance protective coating for rail components operating in aggressive environments. The topcoat finish coat is available in a matt, to gloss finish, and both topcoat and primer are available in a range of BS, and RAL colours. Specially developed for use within the Rail Industry on vehicles and civils and for the heavy engineering industry.



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EN45545-2 Fire and Smoke Performance Results

Indestructible Paint Ltd certify that our epoxy coating system RWIP120 applied at 120 microns obtained the below EN45545-2 fire and smoke classification when applied to steel substrate in accordance with our Technical Data Sheets.

EN45545-2 R1 steel substrate results.								
Test Method.		EN455452 R1 Requirements				Test Report		Hazzard Level Classification.
Test.	Parameter		HL1	HL2	HL3	Number	Results	
TO2 ISO 5658-2	CFE kWm ²	min	20	20	20	ICL/H19/11850	41.92	HL1 / HL2 / HL3.
TO3.01 ISO 5660-1	MARHE kWm ²	max	---	90	60	ICL/H19/11851	3.5	
T10.01 EN ISO 5659-2 50 kWm ²	Ds(4)	max	600	300	150	HCL/H19/11852	28.25	
T10.02 EN ISO 5659-2 50 kWm ²	VOF4 min	max	120 00	600	300	HCL/H19/11852	63.96	
T11.01 EN ISO 5659-2 50 kWm ²	CITG	max	1.2	0.9	0.75	HCL/H19/11853	0.007 (4min) 0.010 (8min)	

EN45545-2 R7 steel substrate results.								
Test Method.		EN45545-2 R7 Requirements.				Test Report.		
Test.	Parameter		HL1	HL2	HL3	Number	Results	
TO2 ISO 5658-2	CFE kWm ²	min	20	20	20	ICL/H19/11850	41.92	HL1 / HL2 / HL3.
TO3.01 ISO 5660-1	MARHE kWm ²	max	---	90	60	ICL/H19/11851	3.5	
T10.04 EN ISO 5659-2 50 kWm ²	Ds Max	max	---	600	300	HCL/H19/11852	38.1	
T11.01 EN ISO 5659-2 50 kWm ²	CITG	max	---	1.8	1.5	HCL/H19/11853	0.007 (4min) 0.010 (8min)	

EN45545-2 R9 steel substrate results.								
Test Method.		EN45545-2 R7 Requirements.				Test Report.		
Test.	Parameter		HL1	HL2	HL3	Number	Results	
TO3.02 ISO 5660-1 25 kWm ²	MARHE kWm ²	max	90	90	60	ICL/H19/11851	3.5	HL1 / HL2 / HL3.
T10.03 EN ISO 5659-2 25 kWm ²	Ds Max	max	---	600	300	HCL/H19/11852	38.1	
T11.02 EN ISO 5659-2 50 kWm ²	CITG	max	---	1.8	1.5	HCL/H19/11853	0.007 (4min) 0.010 (8min)	

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Performance Properties

RWIP120 primers are part of a family of coatings developed by Indestructible Paint. Manufactured from a high grade 2-part epoxy system initially procured for use in aerospace applications. Indestructible subsequently take this resin binder system to manufacture a range of low VOC primer coatings intended for Rail, Industrial, Transport and Architectural applications. When the primer is overcoated with the RWIP120 epoxy finish coat or RWIP48 polyurethane top the system is then ideally suited for use on underframe components including chassis parts, bogies and wheelsets, brake components, fluid and air receivers, control enclosures and support structures. The composition of the epoxy and its chemical bonding allow use on a range of substrates including ferrous and non-ferrous metallics and a wide range of composites. The cured coating gives a tough chemically resilient finish that has been tested against a variety of corporate and national standards.

After 7 days air curing or force curing for 30 minutes at 125°C, the coating will pass:

- Heat resistance: 48 hours at 204°C (400°F).
- Heat resistance: 100 hours at 180°C (356°F).
- Hot oil immersion: 8 hours in ASTM Fluid 101 (ASTM D 471) at 177°C (350°F) showing no peeling or softening.
- Hot lube oil immersion: 100 hours at 150°C (302°F)
- Fuel resistance: immersion in ASTM ref fuel B for 4 hours at room temperature without peeling or softening.
- Fuel resistance: room temperature immersion 100 hours.
- Corrosion resistance: after exposure to heat (48 hours at 400°F) cross scratched X withstands 350 hours salt spray ASTM B117
- Heat Salt Fog Resistant to 10 cycles: each cycle, 4 hours at 250°C (300°F) then 20 hours salt fog.
- Resistant to temperatures down to -50°C.

Id.	Requirements	Test method	Acceptance criteria.	Results on steel. 120 microns dft.	Comment.
A.1	Adhesion	BS EN ISO 2409	Classification < 1		Ok
A.2	Impact Resistance	BS EN ISO 6272 2011 at 23±2°C. & at -15±2°C.	No cracking, flaking, wrinkling, or delamination	500mm/kg impact, no cracking, flaking, delamination	Ok
A.3	Chip Resistance	ASTM D 3170-01	Chipping rating < 4a, 5b, 10c, 10d	4A, 5b, 10c, 10d	Ok
A.4	Scratch Resistance	BS EN ISO 1518: 2019, Using a 2Kg weight	No penetration of the paint surface	No penetration to substrate	Ok
A.5	Abrasion Resistance	ASTM D 4060-95 500 cycles using a CS10 wheel.	Weight loss, < 30 mg	No penetration to substrate	Ok
A.6	Flexibility	BS EN ISO 1519: 2011 6mm diameter mandrel	No cracking, flaking or detachment from substrate	No flaking or detachment from substrate	Ok
A.7	Resistance to UV Light	ASTM D 4587-01 For 2000 hr	Colour change <3.0, Gloss reduction <10%	Not relevant for epoxy coatings.	Not Tested
A.8	Resistance to Humidity	BS 3900-F15 :1995 (ISO 11503: 1995) Cycle for 2000 hr	No softening, swelling, blistering or under film corrosion	No lifting, blisters, film softening or under film corrosion	Ok

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Components

RWIP120-PRIMER, RWIPCAT-PR, RWIP-42000

Application

Refer to IPAS for full detailed instructions.

Surface Preparation	Ensure clean, dry and free from debris.
Paint Preparation	Ensure full mixed up, checking for settlement on bottom of can.
Mixing Ratio	Mix 3:1 part by volume with RWIPCAT
Application Method	Conventional and Airless Spray, Brush and Roller. Apply below 90% humidity or if surface is 3°C above dew point.
Drying and Curing	3-5 Hours touch dry, 24 hours hard dry.

Liquid Technical Properties**

VOC Content	250 g/l
Colour	Range of BS and RAL Colours
Gloss	Matt to Gloss
Thinner	RWIP42000, RWTHIN-R1
Solvent/Clean Up	RWTHIN-R1
Theoretical Coverage	12m ² /l at 50-60 microns.
Pack Size	3L
Pot Life	4 Hours

** - The values referenced are obtained from Batch testing using controlled Quality techniques.

Storage

Highly flammable liquid: store and use in accordance with the flammable liquid regulations

Shelf Life*:** 12 months temperate; 6 months tropical

Before use, refer to Product Safety Data Sheet

*** - Indestructible Paint decline any responsibility deriving from improper storage of Product and its Catalyst.

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Contact

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