



FIRETEX® PLATINUM-120

EPOXY INTUMESCENT

Revised 07/2023 Issue 1

PRODUCT DESCRIPTION

A solvent and halogen free, 100% solids, 2-pack, modified epoxy based intumescent fire protection coating for internally or externally exposed structural steel, where it provides highest durability and combined corrosion protection (up to ISO 12944, corrosivity category C5 very high) and fire protection (up to R120).

- Application directly on blast cleaned steel surfaces
- Highly resistant to mechanical impact and damage in service
- Expected life cycle > 25 years
- Meets Type X classification (e.g. exterior conditions), no primer and topcoat needed
- Complies with the sustainability requirements of DGNB (level 4)

RECOMMENDED USE

FIRETEX® Platinum-120 was developed to fulfil the highest sustainability requirements, paired with the highest mechanical and chemical stresses and fire resistance periods of up to 120 minutes.

PRODUCT TECHNICAL DATA

Volume Solids:	100 ± 2% (ISO 3233-3)
Weight Solids:	100 ± 2%
VOC:	0 g/l determined practically in accordance with Protective Coatings Directive of German Paint Industry Association (VdL-RL 04). 3 g/l calculated from formulation to satisfy EC Solvent Emissions Directive. 2 g/kg calculated from formulation to satisfy EC Solvent Emissions Directive (UK).
Colours:	Light grey, approx. RAL 7035
Flash Point:	Base: > 101°C, Hardener: 113°C
Cleaner/Thinner:	Thinner E+B (for cleaning). Thoroughly clean tools and equipment immediately after use. Do not thin FIRETEX® Platinum-120.
Pack Size:	A two component material supplied in separate containers to be mixed prior to use: 17.2 kg (13.2 litre) and 3.7 kg (2.8 litre) units when mixed. Volume will vary with density.
Mixing Ratio:	100 parts base to 7.5 parts hardener by weight. 100 parts base to 12 parts hardener by volume.
Density:	1.3 kg/l
Shelf Life:	2 years from date of manufacture, stored in originally sealed containers in a cool and dry environment.

Recommended Application Methods:

Airless Spray, Brush and Roller

Typical Thickness:

	Typical
Dry	1000 µm
Wet	1000 µm
Theoretical Consumption*	1.300 kg/m ² 1.000 l/m ²
Theoretical Coverage*	0.77 m ² /kg 1.00 m ² /l

* This figure makes no allowance for surface profile, uneven application, overspray or losses in containers and equipment.

Fire rate of FIRETEX® Platinum-120 depends on national standard. See corresponding separate consumption table / diagram.

Pot Life:

+ 20°C	+ 35°C
30 min	15 min

Pot life is dependent on temperature and volume.



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AVERAGE DRYING TIMES

For 1000 µm Dry Film Thickness:

	+ 20°C
Dry to touch	8 hours
Dry to handle	24 hours

Minimum and maximum recoat intervals (at + 20°C)

Between primer Macropoxy® 2706 EG and FIRETEX® Platinum-120:

Min: 8 hours and drying stage 6 must be achieved at least

Max: On demand depending on storage conditions

Between FIRETEX® Platinum-120 coats:

Min: 6 hours

Max: Interior 7 days and exterior 2 days

Between FIRETEX® Platinum-120 and Acrolon® Topcoats / Macropoxy® 2707:

Min: 24 hours

Max: Interior 7 days and exterior 2 days

These figures are given as a guide only. Factors such as air movement, film thickness and humidity must also be considered.

For information on other primers and topcoats please consult Sherwin-Williams Customer Service.

APPROVALS & ENDORSEMENTS

Independently fire tested and approved to major European and national standards including:

- EN 13381-8 (ref: ETA 20/1162)
- BS 476 parts 20-22 (ref: CF 5396)
- Epoxy coating for steel protection according to EN 13501-2 and EAD 350402-00-1106, DoP, with CE-mark.

SURFACE PREPARATION

Ensure surfaces to be coated are clean, dry and free from all surface contamination such as oil, grease, dirt and corrosion products to achieve satisfactory adhesion.

Steel substrates shall be blast-cleaned to Sa 2½ according to ISO 8501-1 (ISO 12944-4).

Average surface profile Rz ≥ 50 µm.

Manual preparation with wire brushing or power tool cleaning according to ISO 8501-1, St 3.

Hot-dip galvanized substrates shall be prepared by degreasing or, in case of condensation, sweep blasting according to ISO 12944-4 with a non-ferrous blasting abrasive.

Other surfaces: Tests should be carried out on the specific surfaces.

MIXING

Stir component A very thoroughly using an electric mixer (start slowly, then increase up to approx. 300 rpm). Add component B carefully and mix both components very thoroughly (including sides and bottom of the container). Mix for at least 3 minutes until a homogeneous mixture is achieved. We recommend to fill the mixed material into a clean container and mix again shortly as described above to avoid incorrect mixing. During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothings.

APPLICATION CONDITIONS

Substrate temperature shall be between + 10°C and + 40°C and at least 3°C above the dew point.

Material temperature shall be above + 15°C.

Relative air humidity shall be below 80%.



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APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for satisfactory application characteristics. Always purge spray equipment before use with listed cleaner.

Airless Spray

Unit: Efficient airless equipment (pressure ratio > 65: 1)

Tip Size: 0.48 – 0.64 mm (0.019 – 0.025 inch)

Fan Angle: 20° - 40°

Operating Pressure: min. 200 bar (2900 psi)

Airless spray equipment e.g. single-leg spray equipment with a flow heater, or plural component spray equipment.

Material temperature: approx. + 35°C at the nozzle outlet.

Helpful hints:

- Remove filter mesh
- Use direct material feed (without suction hose)
- At lower temperatures we recommend insulating the spray hose
- Max. 25 m length of spray hose

The airless spray details given above are intended as a guide only.

Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent satisfactory atomisation.

As conditions will vary from job to job, it is the applicators responsibility to ensure that the equipment in use has been set up to give the best results.

If in doubt consult Sherwin-Williams customer service.

Brush and Roller

Small areas and touch-up only.

Repair

- Clean flaws or damaged areas, grind or sweep-blast overlapping areas to a matt finish and clean off all traces of dust
- Mask if necessary and then apply the FIRETEX® Platinum-120 immediately

RECOMMENDED SYSTEMS

Approved generic primer types:

On blast cleaned steel:

- Without priming coat
- 2-pack epoxy, e.g. Macropoxy® 2706 EG
- Zinc rich epoxy, e.g. Zinc Clad® R Plus
- Water dispersed zinc rich epoxy
- Zinc silicate, e.g. Zinc Clad® ZS (+ tiecoat Macropoxy® 2706 EG)
- Oil alkyd for small areas, e.g. Unitherm® 1705

On manually prepared steel: Macropoxy® Primer HE N

On galvanized steel: Macropoxy® 2706 EG

Intumescent coating FIRETEX® Platinum-120 without topcoat:

- Internal exposure
- External exposure where common epoxy behaviour or visual changes of the original colour are not an issue.

Intumescent coating FIRETEX® Platinum-120 with topcoat:

If a decorative, colour resistant finish is required, then we recommend to use an Acrolon® topcoat (2-pack AY PUR)

Coating System C5 high (according to ISO 12944-5)

Priming: e.g. Macropoxy® 2706 EG

Intumescent coating: FIRETEX® Platinum-120

Topcoat: e.g. Acrolon® 2330

Coating System C5 very high (according to ISO 12944-5)

Priming: e.g. Zinc Clad® R

Intumescent coating: FIRETEX® Platinum-120

Topcoat: e. g. Acrolon® 2330

Decontaminable (food)

Priming: e.g. Macropoxy® 2706 EG

Intumescent coating: FIRETEX® Platinum-120

Topcoat: Macropoxy® 2707



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ADDITIONAL NOTES

Drying times, curing times and pot life should be considered as a guide only.

Epoxy Coatings - Tropical Use

Epoxy coatings at the time of mixing should not exceed a temperature of 35°C. Use of these products outside of the pot life may result in inferior adhesion properties even if the materials appear fit for application. Thinning the mixed product will not alleviate this problem. If the air and substrate temperatures exceed 40°C and epoxy coatings are applied under these conditions, paint film defects such as dry spray, bubbling and pinholing etc. can occur within the coating.

Chemical resistance:

Sulphuric Acid (10%) 168 hours / Sodium Hydroxide (10%) 168 hours / White Spirit 168 hours

Abrasion resistance (ISO 5470-1):

~65 mg/1000 R (load: 1000g; disc: CS 10)

Compressive strength (ISO 604): ~45 MPa

Tensile strength (ISO 527-2): ~10 MPa

Tensile adhesion strength (EN ISO 4624):

Blast cleaned Steel: ~10 N/mm²

In cold conditions it will help mixing and application if the material can be stored in a warm environment for at least 24 hours prior to use. A temperature of 20°C is recommended.

Slight variation in colour between different batches may be experienced. It is advised that joining up in the middle of the surface with different batches should be avoided.

The values stated below are the maximum allowable measured mean dry film thicknesses for this product.

Numerical values quoted for physical data may vary slightly from batch to batch.

HEALTH & SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

WARRANTY

Whilst all statements made about our products (whether in this data sheet or otherwise) are correct and accurate to the best of our knowledge, we have no control over the quality or the condition of the substrate, the application conditions or the many other factors affecting your use and application of our product.

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