TECHNICAL SPECIFICATIONS GUIDELINE

RUST-O-THANE 9200 WATER-BASED PU

High durability water-based polyurethane topcoat.

CHARACTERISTICS

- Virtually no odour
- Highly UV resistant, no yellowing
- High abrasion resistance
- Smooth satin finish, easy to clean
- Versatile : floors, walls, woodworks
- Tintable to any colour

ACCEPTABLE SUBSTRATES

CONCRETE

Surface condition

New concrete must dry and cure for 30 days as a minimum prior application of the coating system. In compliance with usual standard, mass humidity should not exceed 4%. This will be checked by use of a humidity tester, or with a taped plastic sheet under which no formation of condensation should be observed overnight. Surface must be clean and dry prior and during application.

TILES

Surface condition

Tiles should be well-adhered to the substrate, which will be checked using a rubber mallet. Tiled floors should have a proper evaporation margin to prevent moisture capillary rising. Surface must be clean and dry prior and during application.

STEEL

Surface condition

Steel substrates must be properly supported to avoid warping, which could cause the coating to work and lead to cleavage.

A: Steel substrate extensively covered with adhered mill scale but with few or no rust at all.

B: Steel substrate that has started to rust and whose mill scale has started to delaminate.

C: Steel substrate from which mill scale has disappeared under action of rust, or that can be removed by scrapping, but showing some rust cankers visible by naked eye.

D: Steel substrate from which mill scale has disappeared under action of rust, or that can be removed by scrapping, but showing a lot of rust cankers visible by naked eye.

NON-FERROUS METALS

Surface condition

Surfaces must be made up of solid and non-deformable structures.

BITUMEN

Surface condition

Bituminous surfaces should be aged of at least 1 year and sufficiently oxidized so that oily nature typical of bituminous compounds can be taken away. Surfaces should have not been polluted by mineral oils or other contaminants likely to rise up by lifting prior to application of any coating system.

WOOD

Surface condition

Wooden surfaces will be sound and solid, all rotten or doubtful part will be removed. Wood humidity should not exceed 18% in exterior and 10% in heated interior. In case of doubt on nature and characteristics of the wood (particular species etc), contact Rust-Oleum Technical Service.

OLD COATINGS

Surface condition

Old paints and coatings should be perfectly adherent and compatible with a solvent-based epoxy system. In case of doubt, carry out a test on a small control-surface. Compatibles glossy coatings will be sanded mechanically.

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SURFACE PREPARATION

GENERAL

Remove any dust, debris etc ; degrease and eliminate any contamination by alkaline cleaning with Cleaner-Degreaser RUST-OLEUM ND14 or high pressure cleaning combines with appropriate detergent, followed by thorough rinsing and full drying. In case of presence of mould (moss, lichens etc), decontaminate concerned surfaces with AMW Concentrate, followed by thorough rinsing and full drying. For severely contaminated areas, it is recommended to double the fungicidal treatment.

CONCRETE

Very dense, smooth, non-absorbing, power-floated concretes, will be etched by dustfree fine abrasive blasting, or with etching acid solution RUST-OLEUM SURFA-ETCH 108, followed by thorough rinsing, if a mechanical preparation is not possible. Laitance layers, concrete curing compounds will be eliminated by abrasive blasting.

On old concrete, remove laitance, old coatings in poor conditions, curing compounds, any loose or doubtful parts of concrete by abrasive blasting or grinding.

TILE

See General.

STEEL

See General.

Remove rust, rust scales, mill scale and old paints in bad condition, either manually or mechanically, according to the surface* :

Grades A and B : abrasive blasting SA 2 ½ (ISO 8501-01), max. rugosity 50 µm.

Grades C and D : pitting, grinding or scrapping-wire brushing to degree of care St 2/3 (ISO 8501-01), abrasive blasting SA 2 ½ (ISO 8501-01), max. rugosity 50 µm.

** Large surfaces will be preferably treated by abrasive blasting.*

GALVANIZED STEEL

See General.

New galvanized steel will be degreased and etched with acidic etching solution RUST-OLEUM SURFA-ETCH 108 followed by thorough rinsing with fresh water.

Zinc oxides, « white rust » will be eliminated with acidic etching solution RUST-OLEUM SURFA-ETCH 108 followed by thorough rinsing with fresh water.

NON-FERROUS METALS

See General.

New aluminum will be degreased and etched with acidic etching solution RUST-OLEUM SURFA-ETCH 108 followed by thorough rinsing with fresh water.

Salts and oxides will be eliminated with acidic etching solution RUST-OLEUM SURFA-ETCH 108 followed by thorough rinsing with fresh water.

BITUMEN

See General.

RECOMMENDED WORKING PROCEDURES

PRECAUTIONS

During application and first phase of drying (± 4 hours), a high humidity and/or condensation can cause a reaction with the activator. As a consequence, some foaming of the paint film can occur, with a mat aspect as a result.

Although Rust-O-Thane 9200 system is water-based, it is recommended, during its application, to store food or food products in a separate room. Mobile equipment will be moved away from the area of paintworks execution.

PREPARATION

To prevent water infiltration, most frequently at transition areas - entrances, door steps, gutters, drainage shafts etc – it is recommended to cut a chase of minimum 2 mm depth with a grinder, in order to allow anchorage of the coating system.

REPAIRS

Concrete :

Surface imperfections, holes, cracks etc in the concrete will be repaired with appropriate RUST-OLEUM repair products: Epoxyshield Small Cracks Repair 203010, epoxy mortars 5180 or 5190 following depth of repair to be carried out.

Bitumen :

Surface imperfections, holes, cracks etc in the bituminous substrate will be repaired according to their importance, either with a mix of Asphalt Restorer 5478 and quartz, ratio 1 :5, either with Cold Bitumen Repair Compound Rust-Oleum 5410.

Wood :

Surface imperfections will be repaired with Mathys acrylic filler Pegaflex, followed by sanding and thorough dust removal. These repairs will receive the appropriate recommended primer.

PRIMERS

Metallic substrates will receive an anticorrosion primer.

Very porous mineral substrates (water drop test : absorption in less than 2 minutes) will receive a coat of epoxy impregnation primer RUST-OLEUM 5401, or 5421 for faster recoating.

Very smooth and non-absorbing substrates such like tile or power-floated concrete (water drop test : no absorption after 4 minutes) will receive a coat of adhesion primer RUST-OLEUM 3333, or 3366 for faster recoating, in case a mechanical preparation would be impossible. This alternative will however not be an option in case of severe mechanical challenges.

Concrete with a humidity percentage between 5 and 10% will receive a coat of epoxy impregnation primer RUST-OLEUM 5401 prior application of topcoat system 9200.

Concrete with a humidity percentage between 11 and 20% will receive a coat of Damp Surface epoxy primer RUST-OLEUM 5130 DSP prior application of topcoat system 9200.

APPLICATION CONDITIONS

Temperature of air, substrate and product should be between 5 and 35°C, and relative humidity below 80%. Substrate temperature will be 3°C superior to dew point.

Product mixing: mix base material with a slow speed electric mixing machine, maximum 300 rounds/minutes, until homogeneous result is obtained. Add activator to the base : mix well until uniform appearance is reached, scrapping product from sides and bottom of the can, then pour into base can and mix again the two components together until a perfectly homogeneous product is obtained. In case of use of an outer container of a sufficient volume, the base material will be first pour in this container, scrapping product from sides and bottom of the can.

Consult technical data sheets for details on drying times, induction times, pot-life, dilution and recommended application methods. Consult safety data sheets for any information related to safety during use of products.

BACK TO SERVICE (FLOORS)

Depending on temperature, most of polyurethane coatings will be hard after 24h and pedestrian traffic will be possible. However the coating remains vulnerable to the action of humidity, detergents and chemicals, until full hardness is reached. It is therefore necessary to take precautions on the coating system as a consequence for one week. During application and drying, coatings require good ventilation, particularly in closed spaces (extraction). Best results are obtained when product is applied at an average temperature of 20°C (air, substrate), and when relative humidity can be maintained below 70%. To the extent that hardening of product is a chemical reaction between its two components, temperature plays an important role ; full hardness is reached after about 2 days et 20°C.

SURFACE MAINTENANCE

A RUST-OLEUM 9200 RUST-O-THANE system can be maintained by cleaning with a neutral detergent or alkaline detergent diluted with water. For floors, 2903 Painted Floor Cleaner is ideal. A worn coat can be easily restored by adequate surface preparation and application of a new coat of product. On metal, in case of rust reformation, it is advised to not postpone repair, to prevent any growth.

SYSTEMS OVERVIEW

FLOORS & WALLS SYSTEMS

SUBSTRATE	CONCRETE	TILE	BITUME (1)
Low agressive exposure	System : D.F.S. :	System : D.F.S. :	System : D.F.S. :
Primer	5401WB 30 µm	3333 20 µm	Tarmacoat 70 µm
1st coat	9200 60 µm	9200 60 µm	9200 60 µm
2nd coat	-	-	-
Total film thickness	90 µm	80 µm	130 µm
Moderately agressive to agressive exposure	System : D.F.S. :	System : D.F.S. :	System : D.F.S. :
Primer	5401WB 30 µm	3333 20 µm	B95 150 µm
1st coat	9200 60 µm	9200 60 µm	9200 60 µm
2nd coat	9200 60 µm	9200 60 µm	9200 60 µm
Total film thickness	150 µm	140 µm	270 µm

1) Floors only

Options and remarks :

In case a bright or dark topcoat color is chosen, application of a protective coat of varnish 9211 ou 4900 Polycoat 2K is mandatory on floors.
To make the surface slip preventive, it is possible to add – by mixing or broadcasting - RUST-OLEUM additive NON SKID 200, 300 or 500 according to desired rugosity.

ANTICORROSION SYSTEMS

SUBSTRATES	STEEL	PAINTED STEEL	GALVANIZED STEEL	NON-FERROUS METALS
Low agressive exposure	System : D.F.S. :	System : D.F.S. :	System : D.F.S. :	System : D.F.S. :
Primer (1)	MCP(1) (2) 35 µm	MCP* 35 µm	MCP 35 µm	MCP 35 µm
1st coat	9200 40 µm	9200 40 µm	9200 40 µm	9200 40 µm
2nd coat	-	-	-	-
Total film thickness	75 µm	40 µm	75 µm	75 µm
Agressive exposure	System : D.F.S. :	System : D.F.S. :	System : D.F.S. :	System : D.F.S. :
Primer (1)	Noxyde Plus 175 µm	Noxyde Plus 175 µm	Noxyde Plus 175 µm	Noxyde Plus 175 µm
1st coat	9200 40 µm	9200 40 µm	9200 40 µm	9200 40 µm
2nd coat	-	-	-	-
Total film thickness	215 µm	215 µm	215 µm	215 µm

Remarks :

(1) MCP = Metal Cladding Primer

(2) Steels blasted to SA 2 ½ will be primed with two coats of Metal Cladding Primer of contrasting colors.

** On metallic bare areas only*

WOOD SYSTEMS

SUBSTRATE	BARE WOOD	PANELS	PAINTED WOOD
Low agressive exposure/vertical surfaces	System : D.F.S. :	System : D.F.S. :	System : D.F.S. :
Primer	Pegalink 35 µm	Pegalink 35 µm	Pegalink(1) 35 µm
1st coat	9200 40 µm	9200 40 µm	9200 40 µm
2nd coat	-	-	9200 40 µm
Total film thickness	75 µm	75 µm	80 µm
Moderately agressive to agressive exposure	System : D.F.S. :	System : D.F.S. :	System : D.F.S. :
Primer	B95 120 µm	B95 120 µm	-
1st coat	9200 60 µm	9200 60 µm	9200 60 µm
2nd coat	9200 60 µm	9200 60 µm	9200 60 µm
Total film thickness	240 µm	240 µm	120 µm

1) On bare wood areas only.

Options and remarks :

In case a bright or dark topcoat color is chosen, application of a protective coat of varnish 9211 ou 4900 Polycoat 2K is mandatory on floors.
To make the surface slip preventive, it is possible to add – by mixing or broadcasting - RUST-OLEUM additive NON SKID 200, 300 or 500 according to desired rugosity.

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Available colours and pack sizes: See the relevant product page at www.rust-oleum.eu for actual available colours and pack sizes.

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