

Odovzdávací a preberací protokol
Hand-over and take-over protocol

Preberajúci / Recipient : CMP Arles
1 rue Nicolas Copernic, Zone Industrielle
13200 Arles, FRANCE

Odovzdávajúci / Presenter : Elmontex
Ing. Ján Zachar
Kežmarská 8
040 11 Košice

Stavba / Location : Kyslíkárň v objekte U.S.Steel Košice s.r.o.
Oxygen Plant in U.S.Steel Košice s.r.o.

Predmet / Subject : Nátery na LOX a LIN nádržiach na základe CMPA Arles
objednávky 05 0820 / 784, Dodatok č.1

Painting of LOX and LIN Tanks, based on CMP Arles Purchase
Order No. 05 0820 / 784, Amendment No.1

Vyjadrenie odberateľa /
Recipient Statement :

V Košiciach / Košice

12/12/05 DUFLOT. PH

[Handwritten signature]



.....
preberajúci (meno a podpis)
recipient (name and signature)

.....
odovzdávajúci (meno a podpis)
presenter (name and signature)

NOR - MAALI OY

EPOCOAT 21 PRIMER /

PENGUARD PRIMER NM / PENGUARD HB NM

Epoxy Primer

APPLICATION INSTRUCTIONS

Surface preparations:

Ice, concrete, plaster and other solids should be removed by scraping or brushing. Remove salt and other water soluble contaminants by water cleaning with brush, high pressure, steam or alkali cleaning. Grease and oil should be removed by alkaline-, emulsion- or solvent cleaning (SFS-EN ISO 8504-3, SFS-EN ISO 12944-4).

Steel surfaces:

Blast cleaning to minimum of Sa2½ (SFS ISO 8501-1, SFS-EN ISO 8504-2).

Shop primed surfaces:

Damaged or corroded surfaces should be blast cleaned to a minimum of Sa2½ (SFS-ISO 8501-2, SFS-EN ISO 12944-4).

Aluminium surfaces:

Remove grease, anodising residues and other contaminants. Sand-sweeping before painting improves adhesion.

Galvanized surfaces:

Remove grease, zinc salts and other impurities. Sand-sweeping before painting improves adhesion.

Primer:

**EPOCOAT 21 PRIMER/
PENGUARD PRIMER/HB NM,
NORMAZINC SE, RESIST 86**

Top coat:

**EPOCOAT 210, EPOTEX HB,
NORMADUR 50/50**

Environmental conditions during application:

The surface should be dry and clean. During application and drying time the temperature of the paint, air, and surface should be above +10°C and the relative humidity below 80 %. The surface temperature should be min 3°C above the dew point of the air.

Method of application:

Use airless spray or brush. Stir resin and cure separately and then mix both components thoroughly. The mixing ratio is 4:1 (resin:cure) by volume. Thin only as needed for workability with no more than 15 % of OH 17. High pressure airless spray with a nozzle tip of 0,013" - 0,018" orifice. Spray angle depending on the object to be painted.

CAUTION



HARMFUL

Special risk indications

Flammable. Harmful by inhalation and in contact with skin. Irritating to eyes and skin.

Safety precautions

Use only in well ventilated areas. Do not breathe spray. Avoid contact with eyes.

The above information is given to the best of our knowledge based on laboratory tests and practical experience. However, as the paint is often used under conditions beyond our control, we cannot guarantee anything but the quality of the paint itself. We reserve the right to change the given data without notice.

For specific information on hazardous constituents, required ventilation, possible consequences of contact and safety measures see Safety Data Sheet.

NOR - MAALI OY



NORMASTIC 405

high-solids epoxy coating

APPLICATION INSTRUCTIONS

Surface preparation:

Ice, concrete and other solids should be removed by scraping or brushing. Remove salt and other water soluble contaminants by high pressure fresh water cleaning. Grease and oil should be removed by alkaline-, detergent- or solvent cleaning (SFS-EN ISO 8504-3, SFS-EN ISO 12944-4).

Steel surfaces:

Exposed to weather: Sand blasting to Sa 2 or steel brushing to min. St2.

Exposed to immersion: Sand blasting to min. Sa2½ (SFS-ISO 8501-1, SFS-EN ISO 8504-2).

Old painted surfaces:

NORMASTIC 405, may be used over most types of properly prepared and tightly adhering coatings, however a test patch is recommended for use over existing coating.

Primer:

NORMASTIC 405,
NORMAZINC SE, EPOCOAT 21 PRIMER,
EPOCOAT 21 SE

Top-coat:

NORMASTIC 405,
NORMADUR 85 HS, NORMADUR 80/85,
NORMALOX 333

Environmental conditions during application:

The surface to be coated must be dry.
During application and drying, the temperature of the coating should be above +10°C, and the relative air humidity below 80%. The temperature of the surface to be coated should be at least 3°C above the dew-point of the air.

Method of application:

Use high pressure airless spray or brush. Stir resin and cure separately and then mix both components thoroughly. The mixing ratio is 1:1 (resin : cure) by volume. Thin only when needed 5-10% (OH 17). High pressure airless spray with a nozzle tip of 0,017" - 0,023" orifice. Spray angle depending on the object to be painted.

CAUTION



HARMFUL

The screed contains epoxy resin.
Follow the protection instructions given in the Safety Data Sheet.

Special risk indications

Flammable. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

Safety precautions

Good ventilation must be ensured. Do not breathe spray. If the product comes into contact with the eyes or skin, rinse off with plenty of water.
Wear suitable protective clothing, protective gloves, and eye protection or a face shield.

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NOR - MAALI OY



NORMASTIC 405

high-solids epoxy coating

TECHNICAL DATA SHEET 9/02

PROPERTIES AND RECOMMENDED USAGE:

Paint type:

NORMASTIC 405 is a two-component, pigmented with micaceous iron oxide epoxy based primer/topcoat, which may be applied in high film thickness. Contains special ingredients which penetrate through existing rust.

Typical uses:

NORMASTIC 405 is used over mechanically cleaned or blast cleaned surfaces as a primer or topcoat in environment classes C2-C4 and C5-I, C5-M. Can be used as a single coat on box girders and plate structures. Also suitable for maintenance painting on deep-seated rust and old paint surfaces. NORMASTIC 405 is also suitable for immersion in fresh water and sea water on blast cleaned (Sa2½) steel surface.

Most common SFS-EN ISO 12944-5 systems:

EP250/2-FeSi2

EP120/1-FeSa2½

S4.14 EP280/3 - FeSa2½

S4.21 EPZn(R)EPPUR240/3 - FeSa2½

S7.06 EP500/2 - FeSa2½

S8.01 EPZn(R)EP360/3 - FeSa2½

Chemical resistance:

When mixed as recommended and applied according to the instructions NORMASTIC 405 has good resistance to water and range of process chemicals when exposed to immersion or continued spillage. More precise details of chemical resistance should be clarified for each particular case.

Weather resistance:

NORMASTIC 405 will lose its gloss under the influence of UV-radiation.

TECHNICAL DATA

Volume solids: approx. 80 vol. %
Total mass of solids: approx. 1260 g/l
VOC value: approx. 180 g/l
(Volatile organic compound)

Mixing ratio:

Resin 1 part by volume
Cure 1 part by volume

Pot life: at +23°C

approx. 1 h after mixing

Drying times:

200µm dft at +23°C

To touch 3 hrs
To handle 5 hrs
To recoat 7 hrs
Fully cured 7 d

when exposed to immersion min. re-coating time is 24 hr's.

Calculated theoretical coverage and recommended film thickness:

Dry	Wet	Coverage
120 µm	150 µm	6,7 m²/l
200 µm	250 µm	4,0 m²/l
300 µm	375 µm	2,7 m²/l

Practical coverage:

Depends on the wind conditions, the structure to be painted, the roughness of the surface and the application method.

Colour: RAL-colours with limitations.

Thinner: OH 17

Cleaner: OH 17

Finish: Semigloss