Technical Data Sheet

Topxy NF-4111

Product Description

A solvent-free, two-component, high-build, polyamine-cured epoxy phenolic coating engineered to deliver outstanding protection against severe chemical attack. Its low viscosity and superior adhesion properties ensure a strong, durable bond to properly prepared concrete and steel substrates. The coating offers exceptional chemical resistance, low permeability, and excellent mechanical integrity, effectively resisting chipping, cracking, abrasion, and corrosion. It demonstrates proven performance against water, crude oil, diesel fuel, jet fuel (JP-8, Jet A1), and unleaded gasoline, making it a reliable solution for demanding industrial environments.

Product uses:

- Chemical storage tanks and bunds.
- Secondary containment areas.
- Industrial floors & walls exposed to aggressive chemicals.
- Wastewater treatment plants.
- Pharmaceutical and food-processing facilities requiring chemical resistance.

Key Features:

- Superior resistance to strong acids, alkalis, and solvents.
- Solvent-free formulation: low VOC, safe for confined spaces.
- Excellent adhesion to concrete and steel substrates.
- High-build application for long-term durability.
- Easy to apply by roller, brush, or spray.

TECHNICAL PROPERTIES

Appearance/Color	Glossy / Cream, Grey, Green, Oxide Red
Density:	1.42 kg/liter (Mixed)
Volume solids %:	100 %
Theoretical spreading rate:	5 m^2/ltr / 3.85 m^2/kg (200 micron DFT)
Recommended DFT: (Dry Film thickness)	200-400 micron
Viscosity:	2500–3000 cP
Flash Point:	>100°C. /212°F
Surface dry:	8 approx. hour(s) 23°C/73.4°F 50% R.H
Compressive Strength:	*≥ 74 N/mm² (MPa) (ASTM C579)*
Flexural Strength:	*≥ 42 N/mm² (MPa) ASTM D790*
Adhesion to Concrete:	*≥ 3.0 N/mm² (MPa) (ASTM D4541)*
Adhesion to Steel (Pull-Off Strength):	*≥ 4.0 N/mm² (MPa) (ASTM D4541)*
Hard Dry:	16 hours (23°C and 50% R.H.)
Dry to Over Coat Minimum:	16 hours (23°C and 50 % R.H.)
Full cure time:	7 days (23°C and 50 % R.H.)

Application Details

Mixing Ratio:	Component A: 4– Component B: 1 (By weight)
Application method:	Brush – Roller – Airless Spray
Pot Life:	45 min. (23°C and 50% R.H.)
Thinner:	Epoxy Thinner
Thinner Amount:	Brush (Do not thin) – Roller (0 %)- Airless spray (0 %)

Surface Preparation:

All surfaces to be coated should be clean, dry and free from contamination. Prior to paint application all surfaces should be assessed and treated in accordance with ISO 8504:2000. Where necessary, remove weld spatter, and smooth weld seams and sharp edges. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Abrasive Blast Cleaning

This product must only be applied to surfaces prepared by abrasive blast cleaning to Sa2.5 (ISO 8501- 1:2007) or SSPC-SP10. For aqueous cargoes in elevated temperature service, the minimum standard of surface preparation should be abrasive blast clean to SSPC-SP5 or Sa3 (ISO 8501-1:2007). A sharp, angular surface profile of 2-3 mils (50-75 microns) is required. The preferred method of holding the blast standard is by dehumidification. Interline 994 must be applied before oxidation of the steel occurs. If oxidation does occur the entire oxidized area should be re blasted to the standard specified above. Surface defects revealed by the blast cleaning process should be ground, filled or treated in the appropriate manner. Areas of breakdown, damage, weld seams etc., should be prepared to the specified standard (e.g. SSPC SP10 or Sa2½ (ISO 8501-1:2007) or power tool cleaned to SSPC SP11 or Pt3 (JSRA SPSS: 1984)).

APPLICATION CONDITIONS

For the best results; Air Temperature: 5°C minimum, 35°C maximum. Surface Temperature: At least 3°C above dew point, 5°C minimum and 50°C maximum. Relative Humidity: 90% maximum. Good ventilation is required during application.

APPLICATION

Stripe coat all crevices, welds and sharp angles. Apply paint at the recommended film thickness and spreading rate. Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance. Maximum 10-15% thickness difference between wet film and dry film is possible. Staff should wear gas masks and use ex-proof equipment when working in tanks. Maximum coating interval is 7 days. Do not apply more than 350 microns (14 mils) WFT to prevent sagging. When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas and pinholes. If necessary, cross spray at a right angle.

CHEMICAL RESISTANCE (at 21ºC):

Solvents	Acids	Bases / Alkaline
Acetaldehyde	Acetic (1-50%)	Ammonia (1-25%)
Acetone	Acid plating solutions	Ammonium Hydroxide (1-25%)
Acetonitrile	Adipic (1-25%)	Aniline
Acrylonitrile	Azotic (1-25%)	Barium Hydroxide (1-hour)
Butyl acetate	Boric (1-hour.)	Black Pulp Liqueur
Cyclohexane	Chromic (1-30%)	Butyl Amine
Ethanol	Chlorohydric (1-37%)	Cadmium Cyanide Coating
Ethyl acetate	Citric (1-hour)	Calcium Hydroxide (1-25%)
Ethyl alcohol	Dibasic (1-hour)	Chromium Trioxide (1-25%)
Formaldehyde	Ethanoic (1-50%)	Copper Cyanide Coating
Isopropyl Alcohol	Ethics (1-50%)	Dimethyl Aniline
Jet Fuel	Engraving Machines (1-50%)	Hydrogen Peroxide (1-30%)
Kerosene	Hydrochloric (1-37%)	Green Pulp Liqueur
Methyl Ethyl Ketone	Hydrofluoric (1-20%)	Soap solutions
Methanol	Lactic (1-hour.)	Sodium Cyanide (1-15%)
Methyl alcohol	Nitric (1-25%)	Sodium Hypochlorite (1-9%)
Rubbing Alcohol	Oleic (100%)	Sodium Hydroxide (1-50%)
Wood Alcohol	Oxalic (1-hour)	Triethanolamine
1,1,1 Trichloroethane	Phosphoric (1-60%)	Triethylamine
Phenol	Sulfuric (1-98%)	Potassium Hydroxide (1–hour)

Important Remarks:

- It is recommended to use foil while measuring the difference between wet film thickness and dry film thickness.
- Recoating period is minimum 8-10 hours and maximum 7 days (20°C). Recoating interval depends on temperature, humidity and film thickness. If maximum recoating time is exceeded abrade surface, if the surface is highly contaminated apply pressurized fresh water cleaning before recoating.
- High temperatures decrease resistance properties of epoxy based products

Shelf life & Storage:

12 months from date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C.

Safety:

For information and precautions on the safe handling, transportation storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notice:

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