



PRODUCT

FLEXITAR 30. 35 **Polyamide, Coal Tar-Epoxy Coating**

DESCRIPTION

FLEXITAR 30.35 is a two-component, polyamide epoxy-coal tar product that cures as a continuous film at room temperature.

It combines the time-tested and proven desirable characteristics of selected coal tar pitch with the outstanding chemical resistance of epoxy resin.

The resultant heavy-duty coating is unequalled in versatility and provides a protective film that has excellent immersion and environmental resistance to fresh and salt water; many organic and inorganic acids; inorganic bases and salts; crude oils, petroleum and petrochemical products; oil brines; hydrogen sulfide liquors and fumes; and sewage waters.

USES

FLEXITAR 30.35 offers superior protection to the following end uses:

- 1) Off-shore and marine equipment including barges, ships, tugs and other ocean-going vessels. It is suitable for use above and below the water line and for coating bilge areas.
- 2) Steel and concrete surfaces of bridges and highway overpasses where salt and other materials promote rapid corrosion.
- 3) Structural steel, tanks pipe racks etc. exposed to severe environmental conditions common to pulp and paper plants, fertilizer plants, refineries, chemical complexes and many others.
- 4) Sewage treatment plants, water processing units, water cooling towers and air conditioning units.
- 5) Electrical transformers in areas where a non-conductive coating is required. Pilings, piers, bulkheads, etc. in salt or fresh water service.

SPECIFICATION

- Form:	Two-component, two liquids.
- Color:	Part "A" (Resin) black Part "B" (Hardener) amber Mixed: black
- Mix ratio:	86 parts "A" to 14 parts "B" by weight.
- Typical density at 23° C:	1.25(kg/ dm ³)
- Typical viscosity at 23° C:	12-15 Poises
Solids content of mixed material:	75% (\pm 1 %)
Dry Time- Normal Conditions -:	To Touch : 2 hours To Handle : 4 to 6 hours
Overcoating Time	Not less than 8 hrs not more than 48 hrs depending on ambient atmosphere.
Typical cure schedule:	7 days
- Recommended Wet Film Per Coat :	175-185 microns
- Recommended Dry Film Per Coat :	125-135 microns
- Reduction :	Spray up to 10% with Thinner 101. For brush, reduce up to 50% for primer coat on concrete.



- Storage Life : 18 months (minimum) if stored in the original, tightly sealed containers.
- Limitations : Not recommended when ambient and/or surfaces temperature is below 10° C and falling.
- Heat Limitations : Dry Heat: 150° C
Wet Heat: 80° C
- Packaging: FLEXITAR 30.35 is available in 5 Kg and 20 Kg. units.

HOW TO USE

SURFACE PREPARATION

Surfaces must be sound, dry and free from dirt, grease, old paint residues, loose material, rust or other contaminants.

The recommended methods of cleaning are:

1) Metals:

Minimum: SSPC-SP 6-63 Commercial Blast for environmental exposures.

For Immersion Service: SSPC-SP 5-63 White Metal Blast is mandatory.

Epoxy S PRIMER recommended for steel prior to finishing with FLEXITAR 30.35.

2) Concrete and masonry: wire-brushing, sand-blasting, brush-hammering or acid etching.

3) Timber: sanding.

MIXING

Check uniformity of each component and stir parts "A" and "B" separately.

Mix only the quantity of material that can be used before expiration of pot-life. For standard quantities, pour all of part "B" into can containing part "A". Mix thoroughly using a mechanical low speed mixer with a paint mixing paddle until material attains uniform consistency and colour. Carefully scrape the sides and bottom of the containers while mixing. Thorough mixing will take 3 to 5 minutes.

For larger batches check uniformity of each component, stir parts "A" and "B" separately and thoroughly, measure the two components in the proportion specified on the labels into a clean container and proceed as above.

APPLICATION

Spray, air or airless. May be brushed, after delution, on small areas on metal. Dilute and brush as first coat on concrete. To secure proper film build and prevent pin holing during hot weather, apply thin successive coats to exterior surfaces.

One a metal, wood or smooth toweled concrete surfaces, one kg. of FLEXITAR 30.35 will cover up to 4,5 sq.

SPRAY EQUIPMENT

19, # 62 or # 69 hand spray.

Fluid Nozzle:

66, orifice .070. Standard.

Air Nozzle:

63 P.B. External Mix.

Suggested Atomization Pressure :

5 kg/sqcm. (75 psi).

Suggested Fluid Pressure

0,8 kg/sqcm (12 psi).

Airless Spray

Gun:

43 hand spray.

Pump:

41-6930, to 1 ratio.

Nozzle:

9-1560. Insert not recommended.

Filter:

None.

Fluid Hose:

71-231, ¼ inch.



Air Hose: 71-106, 5/16 inch.
 Fluid Pressure: 200 kg/sqcm. (3000 psi)

CLEAN UP

Epoxy thinner "101" or M.E.K.

CHEMICAL RESISTANCE

Tests conducted to determine the resistance of a paint system consisting of an inhibitive epoxy S PRIMER and two 125 microns coats of FLEXITAR 30.35 were performed under laboratory conditions at room temperature. The results obtained indicate the described FLEXITAR 30.35 System to be an acceptable coating for a variety of services. Tests under actual operating conditions should be conducted as environmental factors of heat, humidity, concentrations and film thickness often vary enough to invite further investigation. The listed FLEXITAR 30.35 System applied as a pinhole free coating system over steel blasted to white metal is recommended for immersion service at normal temperature in the following materials:

- | | |
|---------------------------------|------------------------------------|
| Aluminum Hydroxide | Oxalic Acid to 5% |
| Aluminum Sulfate 5% (Alum) | Phosphoric Acid to 5% |
| Ammonium Nitrate | Potassium Chloride Borax |
| | Potassium Hydroxide, 5 to 40% |
| Boric Acid | Potassium Sulfate |
| Calcium Carbonate | Propane |
| Carbon Dioxide | Sewage (General) |
| Carbon Monoxide | Soap Solutions |
| Castor Oil (Will discolor) | Sodium Carbonate (Soda Ash) |
| Citric Acid | Sodium Bicarbonate (Baking Soda) |
| Diesel Oil (Will discolor) | Sodium Chloride |
| Ethylene Glycol (Will discolor) | Sodium Hydroxide to 50% |
| Fatty Acid (Non-edible) | Sodium Phosphate (Mono, Di-, Tri-) |
| Ferric Chloride | Sodium Silicate (Water Glass) |
| Formaldehyde 5% | Sodium Sulfate |
| Fuel Oil (Will discolor) | Sodium Sulfide |
| Gelatin | Soya Oil (Non-edible) |
| Glucose | Stannic, Stannous Chloride |
| Glycerin | Stearic Acid |
| Hydrochloric Acid to 10% | Sulfate Black Liquor |
| Hydrogen Sulfide | Sulfur |
| Kerosene (Will discolor) | Sulfur Dioxide (Dry, Wet) |
| Lactic Acid | Sulfuric Acid to 10% |
| Linseed Oil (Low Acid) | Tannic Acid |
| Magnesium Chloride | Turpentine |
| Magnesium Hydroxide | Water, Fresh |
| Magnesium Sulfate | Water, Sea |
| Mineral Oil | |

The FLEXITAR 30.35 System described for immersion service at normal temperatures will provide protection against splashes, spills and fumes of the following materials:

- | | |
|----------------------|------------------------------|
| Acetates and ketenes | Formaldehyde (5 to 35%) |
| Alcohol, Ethyl | Furfural |
| Alcohol, Isopropyl | Gasoline |
| Alcohol, Methyl | Hydrochloric Acid (over 10%) |
| Ammonia | Methanol |



Butanol	Oxalic Acid (over 5%)
Calcium Hypo chlorite	Sodium Hypo chlorite
Carbon Tetrachloride	Toluene
Chlorine, Dry	Trichlore ethylene
Chlorine, Gas	Water, Distilled
Chlorinated Solvents	Xylene
Ether (Diethyl)	

FLEXITAR 30.35 System is not recommended for immersion, or for splash, spill and fume areas of surfaces exposed tot he following materials

Acetic Acid	Methyl ethyl Ketene
Acetic Acid, Glacial	Nitric Acid
Acetone	Perchlore ethylene
Benzyl	Phenol
Butyl Acetate	Phosphoric Acid over 5%
Carbolic Acid (Phenol)	Picric Acid
Chlorine; Wet	Potassium Dichromate
Chromic Acid	Sulfuric Acid 50%
Ethyl Acetate	Sulfuric Acid, fuming
Formic Acid	Sulfurous Acid
Hydrofluoric Acid	Vinegar
Hydrogen Peroxide	

HANDLING AND TOXICITY

“A” and “B” Components For Industrial Use Only!

The solvents used in this coating are volatile, flammable and, in some cases, irritating to the skin. When mixing, wear gloves and eye shields of some kind to prevent the curing agent from coming in contact with the skin. In case of contact, flush skin with soap and water. For eyes, flush with plenty of water. For eyes, flush with plenty of water and get medical attention immediately. Use water solvent creams instead of petroleum jelly to protect the skin. Keep containers closed and away from heat and open flame. During application, all flames, welding and smoking must be prohibited. Avoid prolonged breathing of vapors. Use only with adequate ventilation. Explosion proof equipment must be used in confined area.

NOTES

All information and directions contained in this bulletin are intended for use by persons having practical application skills and experience. Since SINIT S.r.l. has no control over storage, handling, use or application of the products listed, it must disclaim responsibility for any unsatisfactory results obtained. SINIT S.r.l. guarantees that each product listed conform to its standard quality.

Statements and methods described herein are based upon the best information and practices know to SINIT S.r.l.

All tests have been carried out at 23°C

Revised: March 2002

This data supersedes all previously published data.



APPLICATION NOTES

FLEXITAR 30.35

HEAVY DUTY MAINTENANCE COATINGS

SINIT S.r.l. offers two coal tar-epoxy coating materials under the registered trademark FLEXITAR 30.35. Polyamide and a mine cured types are available. Each type has individual characteristics and in some instances, it is necessary to adjust spray equipment, application practices and techniques when applying the individual materials under job conditions.

Special equipment, other than application, is required for quality work. A wet and dry film gauge is needed for measuring film thickness. Standard panels representing the various qualities of sandblast are also necessary. A Holiday Detector is required to check dry paint films for continuity when applying a coating system for immersion service. A moisture meter and vacuum cleaning equipment is necessary for checking the moisture content of wood and concrete, and for removing all sand and loose cement from concrete prior to coating.

A good working knowledge of the materials and their application characteristics is essential for good results. It is very difficult to adequately describe the wide variety of job conditions and environmental factors that often affect results. The following notes cover some of the problems the applicator may experience:

- 1) Do not attempt to apply enough material with a single spray pass to deliver a dry film of 250 microns. This is especially true for exterior applications on vertical surfaces exposed to direct sunlight during the hot summer months or in tropical climates. The aromatic solvents in FLEXITAR 30.35 begin to vaporize at 27° C, and at higher temperatures they will form gas, increasing the probability of pinholes, blisters and craters in the dry film. Under such conditions, apply a normal wet film of 75 to 125 microns and allow several minutes for the solvent to flash off before making a return pass to complete the wet film build necessary for a 150 to 175 microns dry film per coat. In order for Coal Tar-Epoxy Coatings to be effective, they must be applied as a paint system and the minimum dry film for the Coal Tar-Epoxy portion of the system is 300 microns.
- 2) When necessary to apply FLEXITAR 30.35 in production areas where product dust and fines contaminate the surface, always clean the surface before application.
Under certain conditions, this is very difficult to do. However, care must be exercised, otherwise, early failures may occur.
- 3) The shelf life of FLEXITAR 30.35 is limited to 12 months for interior storage at normal temperatures. When storing the material at jobsite, it should be protected from excessive heat.
- 4) When applying FLEXITAR 30.35 to an old masonry or concrete substrate that has been exposed to acid, make sure the sandblast operation removes the affected surface.
Neutralize the surface, wash thoroughly and vacuum clean before applying the bond coat of FLEXITAR 30.35. Concrete and masonry surfaces that are acid etched to remove form oils, etc., should be neutralized, flushed clean with water and vacuum cleaned before applying FLEXITAR 30.35.
- 5) When it is necessary to apply FLEXITAR 30.35 to small areas by brushing, use an inexpensive fiber brush and discard it after use.
- 6) When using airless equipment to apply FLEXITAR 30.35, the pump must be of a type that will deliver 200 kg/sq.cm (300 psi) for proper atomization.
- 7) Before applying FLEXITAR 30.35 to an old concrete surface that has been immersed in an acid or alkaline solution, be sure all surface contamination is removed. In some instances, a portion of the concrete must be removed before painting is done. The surface must be clean, dry and solid before FLEXITAR 30.35 is applied. Voids the surface should be filled with an epoxy-cement grout or epoxy caulking compound.
- 8) Brush application of the bond coat on concrete is recommended. The FLEXITAR 30.35 used for this operation is prepared by mixing equal parts of mixed material and Epoxy Thinner "101". Apply as a full continuous coating making sure the surface is completely covered.



- 9) When applying FLEXITAR 30.35 to exterior surfaces exposed to direct sunlight during hot weather, the recoat time for proper interfilm adhesion is greatly reduced. The black color holds the heat hastens the final cure. Recoat under such conditions within 24 to 48 hours for the amine cured material, and 3 days for the polyamide cured product.
- 10) FLEXITAR 30.35 Systems for immersions service should cure completely before they are put in use. Under normal conditions, the time required is seven days. Hot air or infrared heating can be used to hasten the cure. Heating from 90 °C to 120 °C for 4 to 8 hours is required to completely cure FLEXITAR 30.35 within a 24 hours period.

PAINT SYSTEMS

1) Polyamide Cured Coal Tar-epoxy over Polyamide Cured Inhibitive Primer

Three-coat system, minimum 300 microns dry film. Minimum surface preparation. Commercial Blast SSPC-SP 6-63. For immersion service, blast clean to White Metal, SSPC-SP 5-63.

First Coat: "PRIMER S" primer at 50 microns dry used for shop primer.

Second Coat: Polyamide FLEXITAR 30.35, 125 microns dry.

Third Coat: Polyamide FLEXITAR 30.35, 125 microns dry.

2) Polyamide Cured Coal Tar-Epoxy , two- coat application over Commercially Basted Steel, 300 microns minimum dry film

Minimum surface preparation, Commercial Blast SSPC-SP 6-63. This system is not recommended for immersion service.

First Coat: Polyamide Cured FLEXITAR 30.35, 150 microns dry.

Second Coat: Polyamide Cured FLEXITAR 30.35, 150 microns dry.

3) Polyamide Cured Coal Tar-Epoxy Coating for concrete or masonry surfaces.

Three-coat system 375 microns, minimum dry film. Blast clean and vacuum or acid etch and vacuum. Be sure the substrate is dry, clean and solid before applying bond coat.

Bond Coat : Apply an equal parts mixture of FLEXITAR 30.35, spray apply, 150 microns minimum dry film.

Second Coat: Polyamide FLEXITAR 30.35, spray apply, 150 microns minimum dry film.

Third Coat : Polyamide FLEXITAR 30.35, spray apply, 150 microns minimum dry film.

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