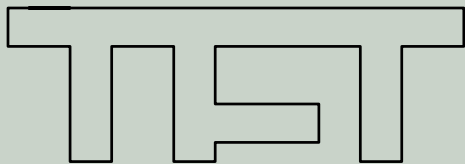


BIO-CHEM™

330

HIGH PERFORMANCE, 100%
SOLIDS EPOXY COATING FOR
AGGRESSIVE CHEMICAL
EXPOSURES



Thin Film Technology, Inc.

PRODUCT DATA SHEET

BIO-CHEM™ 330 is designed for applications where resistance to aggressive chemical exposure is of paramount importance. The sophisticated resin formula has excellent resistance to acids, acid fumes and a wide variety of solvents.

BIO-CHEM™ 330 cures to a very tough, abrasion and impact resistant film. Use as a hopper car lining exposed to impact, abrasion and chemical fumes is particularly recommended.

The high heat resistance of BIO-CHEM™ 330 makes it very attractive for down-hole applications exposed to high ambient temperatures and hydrocarbons.

Application is by heated plural 1/1 airless spray with easy touch up by brush or roller.

RECOMMENDED USES

DOWN-HOLE TUBULAR COATING: ID and OD coating, especially suitable for “Ruffcoat” OD treatment.

TANK LINING: High hydrocarbon chemical resistance and early return to service make BIO-CHEM™ 330 an ideal high build tank lining.

HOPPER CAR LINING: Excellent physical and chemical resistance properties.

CONCRETE CONTAINMENT: Excellent adhesion to concrete and chemical resistance

TECHNICAL INFORMATION

VEHICLE TYPE	Epoxy/Aliphatic amines
PIGMENTATION	Color/Inert
COLORS	Standard Off-White – others available
FINISH	Smooth, satin gloss

THINNER	Not normally required
CLEANER	MEK or lacquer thinner
MIXING RATIO	1.0/1.0 v/v
INDUCTION TIME	Not required
POT LIFE	Approx. 40' / 77°F
FLASH POINT	Over 200°F

SOLIDS BY VOLUME	100%
SPREADING RATE/GAL.....	53 sq. ft./gal @ 30 mils
DRY TIME, (to touch)	8 hours at 77°F
DRY TIME, (recoat).....	12 hrs. min – 5 days max @ 77°F, (25°C)
APPLICATION METHOD.....	Brush, roller, plural heated airless spray, (pref.)
STORAGE CONDITIONS.....	Normal
VOC.	Essentially zero

APPLICATION NOTES

SURFACE PREPARATION: Surface must be free of oil, grease, dirt etc. **For steel in atmospheric service** an SSPC-SP-6 Commercial blast is the minimum acceptable standard of surface preparation. **For steel in immersion service** an SSPC-SP-5 “white metal” blast standard is required. An angular surface profile of 2 – 3 mils, (50 – 75 microns), is recommended. **Concrete** is best prepared by brush blasting at a reduced pressure in order to yield a “medium sandpaper” texture free of gross surface deposits or contamination.

MIXING PROCEDURE: **BIO-CHEM™ 330** is supplied in 10 gallon kits of two 5-gallon containers of epoxy base and curing agent respectively. When applied premixed the components must be intimately mixed before application taking special care to incorporate components from the walls and base of the mixing vessels, *Note: unmixed components will never cure.*

APPLICATION BY HEATED PLURAL AIRLESS SPRAY:

Pump:	45:1 King (Graco) or similar with the ability to maintain 3,000 psi during application	Fluid Hose:	3/8”, 100’ max
High Pressure Filter:	60 mesh	Fluid temp:	140°F, (60°C) recommended
		Spray Tips:	0.019” – 0.027”
		Substrate temp:	40°F, (4.5°C), minimum

CURING BEFORE SERVICE: Allow 72 hours curing at 77°F before immersion service in hydrocarbon service – check with TFT before scheduling return to service.

CHEMICAL RESISTANCE CHART

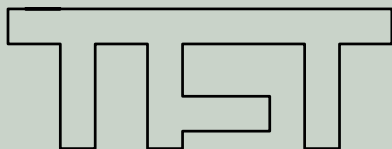
CHEMICAL	TEST METHOD	TIME	PASS / FAIL	CHEMICAL	TEST METHOD	TIME	PASS / FAIL
Acetone	BJ	3 Mo	Pass	Methylene Chloride	BJ	1 Mo	Fail
Adipic Acid (Dry)	BJ	6 Mo	Pass	MIBK	BJ	3 Mo	Pass
Adipic Acid (Solution)	BJ	2 Mo	Fail	Mineral Spirits	AC	3 Mo	Pass
Caustic Soda 5%	AC	2 Mo	Fail	Nitric Acid 10%	BJ	1 Mo	Fail
Diesel	AC @ 100 F	8 Mo	Pass	Nitric Acid 5%	BJ	1 Mo	Fail
Ethyl Alcohol	BJ @ 35 F	6 Mo	Pass	Paraffin Wax	BJ	3 Mo	Pass
Ethyl Alcohol	BJ @ 100 F	6 Mo	Pass	Phosphoric Acid 0.5%	BJ	3 Mo	Pass
Ethylene Glycol	BJ	4 Mo	Pass	Phosphoric Acid 10%	BJ	3 Mo	Fail
Furfuryl Alcohol	BJ	3 Mo	Fail	Phosphoric Acid 5%	BJ	3 Mo	Pass
Gasohol	AC	6 Mo	Pass	Salt Water	AC	8 Mo	Pass
Gasoline (Leaded)	AC	6 Mo	Pass	Sour Crude	AC @ 100 F	8 Mo	Pass
Gasoline (Unleaded)	AC	6 Mo	Pass	Sulfur (Molten)	AC	4 Mo	Pass
Glycol Ether PM	BJ	3 Mo	Pass	Sulfuric Acid 1%	BJ	3 Mo	Pass
Hexane	BJ	3 Mo	Pass	Sulfuric Acid 20%	BJ	3 Mo	Pass
Hydraulic Oil	BJ	6 Mo	Pass	Sulfuric Acid 5%	BJ	3 Mo	Pass
Isopropyl Alcohol	AC	4 Mo	Pass	Sweet Crude	AC @ 100 F	8 Mo	Pass
Jet Fuel	AC	4 Mo	Pass	Tap Water*	AC	8 Mo	Pass
Kerosene	AC	8 Mo	Pass	Tetrahydrofuran	BJ	2 Mo	Fail
MAK	BJ	3 Mo	Pass	Toluene	AC	3 Mo	Pass
MEK	BJ	6 Mo	Pass	Xylene	AC	6 Mo	Pass
Methanol	BJ	2 Mo	Fail				

AC = Atlas Cell BJ = Bell Jar

*Not approved for potable water

Tests performed at 77 F unless otherwise noted.

WE URGE YOU TO READ THE MATERIAL SAFETY DATA SHEET (MSDS) BEFORE USING AND TO CALL THIN FILM TECHNOLOGY, INC., AS NECESSARY FOR ADVICE OR INFORMATION BEFORE ANY ACTUAL OR CONTEMPLATED APPLICATION.



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