Cathacoat® 304L

Inorganic Zinc Rich Silicate

PRODUCT DESCRIPTION

A two component, rapid recoat, fast curing solvent based inorganic zinc rich ethyl silicate primer. Conforms to SSPC Paint 20 Level 1.

Available in ASTM D520, Type II zinc dust version as standard.

INTENDED USES

Ideal for protection of steel structures found in such places as pulp and paper mills, sewage and waste treatment plants, chemical processing plants, refineries, and for bridge and tank coatings. Fast drying properties make Cathacoat 304L ideal for use in fabrication shops.

PRACTICAL INFORMATION FOR CATHACOAT 304L

Colour	Green Grey
Gloss Level	Matt
Volume Solids	63%
Typical Thickness	50-75 microns (2-3 mils) dry equivalent to 79-119 microns (3.2-4.8 mils) wet
Theoretical Coverage	8.40 m²/litre at 75 microns d.f.t and stated volume solids 337 sq.ft/US gallon at 3 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless spray, Air spray

Drying Time

			Overcoating Interval with recommended topcoats	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
5°C (41°F)	30 minutes	3 hours	18 hours	Extended[1]
15°C (59°F)	20 minutes	90 minutes	9 hours	Extended[1]
25°C (77°F)	10 minutes	1 hour	4.5 hours	Extended[1]
40°C (104°F)	5 minutes	30 minutes	1.5 hours	Extended[1]

[1] See International Protective Coatings Definitions and Abbreviations

The drying times quoted have been determined at the quoted temperature and 55% relative humidity. The 5°C (41°F) time was determined at 60% relative humidity. Prior to overcoating, verify a value of 4 via ASTM D4752 MEK rub test. See Product Characteristics section for more details on overcoating.

REGULATORY DATA

Flash Point (Typical)	Part A 19°C (66°F);Part B Not applicable; Mixed 19°C (66°F)	
Product Weight	2.44 kg/l (20.4 lb/gal)	
VOC	3.92 lb/gal (470 g/lt)	EPA Method 24

See Product Characteristics section for further details

Cathacoat® 304L

Inorganic Zinc Rich Silicate

SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to lining application, all surfaces should be assessed and treated in accordance with 8504:2000.

Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Steel
Abrasive blast clean to Sa2½ (ISO 8501-1:2007) or SSPC-SP6 (or SSPC-SP10 for optimum performance). If oxidation has occurred between blasting and application of Cathacoat 304L, the surface should be reblasted to the specified visual standard.

Surface defects revealed by the blast cleaning process should be ground, filled, or treated in the appropriate manner.

A surface profile of 40-75 microns (1.5-3.0 mils) is recommended.

Shop Primed Steelwork
Cathacoat 304L is suitable for application to unweathered steelwork freshly coated with zinc silicate shop primers. If the zinc shop primer shows extensive or widely scattered breakdown, or excessive zinc corrosion products, overall sweep blasting will be necessary. Other types of shop primer are not suitable for overcoating and will require complete removal by abrasive blast cleaning.

Weld seams and damaged areas should be blast cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP6.

Damaged / Repair Areas
All damaged areas should ideally be blast cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP6. However, it is acceptable that small areas can be power tool cleaned to Pt3 (JSRA SPSS:1984) or SSPC-SP11, provided the area is not polished. Repair of the damaged area can then be carried out using a recommended zinc epoxy primer - consult International Protective Coatings for specific advice.

APPLICATION

Mixing
Cathacoat 304L is supplied in two parts, a liquid Binder base component (Part A) and a Powder component (Part B). The Powder (Part B) should be slowly added to the liquid Binder (Part A) whilst stirring with a mechanical agitator. DO NOT ADD LIQUID TO POWDER. Material should be filtered prior to application and should be constantly agitated in the pot during spraying. Once the unit has been mixed it should be used within the working pot life specified.

Mix Ratio
3.1part(s):1part(s)by volume
Mix ratio is given for advice; **always mix the product in the proportions supplied**.

Working Pot Life

5°C (41°F)	15°C (59°F)	25°C (77°F)	40°C (104°F)
12 hours	8 hours	4 hours	2 hours

Airless Spray
Recommended
Tip Range 0.38-0.53 mm (15-21 thou)
Total output fluid pressure at spray tip not less than 112 kg/cm² (1593 p.s.i.)

Air Spray (Pressure Pot)
Recommended

Typical pump	Graco X-Treme 40:1 or similar
Gun	DeVilbiss MBC-510 or JGA-510 (Binks 2100)
Air Cap	704 or 765 (Binks 66SD or 68PB)
Fluid Tip	E (1.8mm or D (2.2mm) or Binks 66,67

Brush
Suitable
Small areas only. Typically 25-50 microns (1.0-2.0 mils) can be achieved

Roller
Not recommended

Thinner
International GTA138 or International GTA415
Not normally required. Do not thin more than allowed by local environmental legislation

Cleaner
International GTA138 or International GTA415

Work Stoppages
Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA138. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.

Clean Up
Clean all equipment immediately after use with International GTA138. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays.

All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

Cathacoat® 304L

Inorganic Zinc Rich Silicate

PRODUCT CHARACTERISTICS

Prior to overcoating, Cathacoat 304L must be clean, dry and free from both soluble salts and excessive zinc corrosion products.

Surface temperature must always be a minimum of 3°C (5°F) above dew point.

When applying Cathacoat 304L in confined spaces ensure adequate ventilation.

The minimum overcoating interval is dependent upon the relative humidity during cure. At relative humidities below 40%, curing will be retarded and humidity may need to be increased via suitable methods such as steam or water spraying.

If thinning is required to assist spray application in warmer climates, (typically >28°C (82°F)), it is recommended that International GTA138 or International GTA415 thinners are used.

Excessive film thickness and/or over-application of Cathacoat 304L can lead to mudcracking, which will require complete removal of the affected areas by abrasive blasting and re-application in accordance with the original specification. Care should be exercised to avoid application of dry film thickness in excess of 125 microns (5 mils).

For high temperature service, the thickness of Cathacoat 304L should be restricted to 50 microns d.f.t. Continuous dry temperature resistance of Cathacoat 304L is 400°C (752ºF) if left untopcoated.

It is recommended that prior to overcoating a solvent rub test to ASTM D4752 should be undertaken. A value of 4 indicates a satisfactory degree of cure for overcoating purposes.

Untopcoated Cathacoat 304L is not suitable for exposure in acid or alkaline conditions or continuous water immersion.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in colour and normal manufacturing tolerances.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also affect VOC values determined using EPA Method 24.

SYSTEMS COMPATIBILITY

When it is necessary for Cathacoat 304L to be overcoated by itself due to low dry film thickness, the coating surface must be fresh and unweathered. A minimum of 50 microns (2 mils) d.f.t. of any subsequent coat of Cathacoat 304L is needed to ensure good film formation.

Before overcoating with recommmeded topcoats ensure the Cathacoat 304L is fully cured (see above) and if weathering has occurred all zinc salts should be removed from the surface by fresh water washing, and if necessary, scrubbing with bristle brushes.

Typical topcoats and intermediates are:

Bar-Rust 231	Bar-Rust 235
Bar-Rust 235V	Bar-Rust 236
Devran 201H	Devran 203
Devran 224V	

In some cases it may be necessary to apply a mist coat of suitable viscosity to minimise bubbling. This will depend upon the age of the Cathacoat 304L, surface roughness and ambient conditions during curing and application. Alternatively, an epoxy sealer coat, such as Intergard 269, can be used to reduce bubbling problems.

Cathacoat® 304L

Inorganic Zinc Rich Silicate

ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

PACK SIZE

Unit Size	Part A Vol	Part A Pack	Part B Vol	Part B Pack
5 US gal	3.78 US gal	5 US gal	1.22 US gal	5 US gal
1 US gal	0.76 US gal	1 US gal	0.24 US gal	1 US gal

Metric Equivalent:

Unit Size	Part A Volume	Part B Volume
5 US gal	14.31 litres	4.62 litres
1 US gal	2.86 litres	0.92 litres

For availability of other pack sizes, contact International Protective Coatings.

SHIPPING WEIGHT (TYPICAL)

Unit Size	Part A	Part B
5 US gal	34.4 lb	72.4 lb
1 US gal	6.9 lb	14.5 lb

Metric Equivalent:

Unit Size	Part A Weight	Part B Weight
5 US gal	15.60 kg	32.80 kg
1 US gal	3.13 kg	6.58 kg

STORAGE

Shelf Life: Part A 6 months minimum at 25°C (77°F).
Part B 12 months minimum at 25°C (77°F).
Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.

Important Note

www.international-pc.com