Ceilcote® 2000 Flakeline

Epoxy Novolac

PRODUCT DESCRIPTION

Ceilcote 2000 Flakeline is a high performance, flake filled epoxy novolac coating that is designed to provide maximum resistance to 98% sulphuric acid.

INTENDED USES

For use on structural steel exposed to chemical spillage, concrete floors and chemical trenches in process areas, chemical pump pedestals and areas which may be exposed to repeated chemical spillage or fumes.

Ceilcote 2000 Flakeline is employed in many applications in the chemical processing and mining market sectors, where resistance to high concentrations of acid are required.

PRACTICAL INFORMATION FOR CEILCOTE 2000 FLAKELINE

Color	Gray, Tile Red
Gloss Level	Not applicable
Volume Solids	100%
Typical Thickness	15-25 mils (375-625 microns) dry equivalent to 15-25 mils (375-625 microns) wet per coat
Theoretical Coverage	80 sq.ft/US gallon at 20 mils d.f.t and stated volume solids 2 m²/liter at 500 microns d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors. Coverage will vary according to individual systems and the configuration of the surface to be coated; consult the relevant Application Guidelines and specification for further information.
Method of Application	Airless Spray, Roller, Brush

Drying Time

			Overcoating interval with self	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
50°F (10°C)	24 hours	24 hours	12 hours[1]	4 days[2]
59°F (15°C)	18 hours	18 hours	10 hours[1]	3 days[2]
77°F (25°C)	3 hours	6 hours	6 hours[1]	48 hours[2]
104°F (40°C)	1.5 hours	3 hours	2 hours[1]	24 hours[2]

[1] Minimum overcoating intervals are indicative and overcoating may take place as soon as walk-on hardness is achieved.
[2] The values quoted relate to use within an enclosed tank environment. For situations where UV exposure between coats is likely, maximum overcoating intervals will be shorter. Contact International Protective Coatings for more details.

REGULATORY DATA

Flash Point (Typical)	Part A 259°F (126°C); Part B 228°F (109°C); Mixed >212°F (100°C)	
Product Weight	10.3 lb/gal (1.23 kg/l)	
VOC	0.00 lb/gal (0 g/lt)	EPA Method 24
	36 g/kg	EU Solvent Emissions Directive (Council Directive 1999/13/EC)

See Product Characteristics section for further details

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SURFACE PREPARATION

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

Oil or grease should be removed in accordance with SSPC-SP1 Solvent Cleaning.

Steel Substrates

For immersion service or service in humid conditions or elevated temperatures, this product should be applied to surfaces which have been prepared by abrasive blast cleaning to Sa3 (ISO 8501-1:2007), SSPC SP5 or NACE #1. For dry environments, abrasive blast cleaning to Sa2½ (ISO 8501-1:2007), SSPC SP10 or NACE #2 will be suitable. A sharp, angular surface profile of 3-4 mils (75-100 microns) is required.

Concrete Substrates

Ceilcote 2000 Flakeline is also suitable for application to concrete in certain conditions; please see Product Application Guidelines for further information.

APPLICATION

Mixing

Ceilcote 2000 Flakeline must always be mixed and applied in accordance with the detailed Application Guidelines for the subsequent system.
Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed, it must be used within the working pot life specified.

(1) Agitate Base (Part A) with a power agitator.
(2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

Do not mix more material than can be applied within the recommended pot life.

Mix Ratio

Always mix full units.

Working Pot Life

50°F (10°C)	59°F (15°C)	77°F (25°C)	104°F (40°C)
45 minutes	35 minutes	25 minutes	20 minutes

Airless Spray

Recommended

Tip Range 23-27 thou (0.58-0.68 mm)
Total output fluid pressure at spray tip not less than 3512 psi (247 kg/cm²)

Brush

Suitable - Touch up and small areas only

Multiple coats may be required to achieve specified film thickness.

Roller

Suitable

Multiple coats may be required to achieve specified film thickness.

Thinner

DO NOT THIN

Cleaner

Ceilcote T-410 Solvent (or International GTA203)

Work Stoppages

Do not allow material to remain in hoses, guns or spray equipment. Thoroughly flush all equipment with Ceilcote T410 or International GTA203. 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.

Once units have been mixed, work should continue until all mixed material has been used.

Clean Up

Clean all equipment immediately after use with T-410 Solvent. 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 regualtions/legislation.

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PRODUCT CHARACTERISTICS

The detailed Application Guidelines for the relevant Ceilcote system should always be consulted prior to use.

The exact specification with regards to dry film thickness and number of coats will be provided by International Protective Coatings prior to application start up.

Surface temperature must always be a minimum of 5°F (3°C) above dew point. Ensure adequate ventilation is provided throughout application and curing. Dehumidification (DH), air conditioning and/or heating equipment may be necessary to control environmental conditions.

This product can be susceptible to amine blush; if present, wash with water and allow to dry before overcoating.

Relative humidity should be <85%.

When working outside or in direct sunlight, concrete "gassing" or "breathing" may occur when the surface temperature is rising due to sunlight or increasing ambient temperature. This can cause bubbles or holes in the applied floor, lining or coating. When this problem occurs it is necessary to shade the surface from sunlight and/or apply the material in the cooler evening or at night so that initial cure can take place without air escaping from the concrete. Consult International Protective Coatings for more detailed recommendation.

Ceilcote 2000 Flakeline may be returned to service (for concentrated sulphuric acid immersion service) after the following intervals;
70ºF (20ºC): 7 days
90ºF(35ºC): 3 days

However, for immersion service in sulfuric acid at concentrations of 90% or higher, Ceilcote 2000 Flakeline must be post-cured for 6-8 hours at 158ºF (70ºC). Some discoloration of the product may occur. For exposure to 98% sulfuric acid, temperature must not exceed 104ºF (40ºC).

Ceilcote 2000 Flakeline is not intended to be used as a cosmetic finish and color stability will not be achievable.

Maximum continuous dry temperature resistance for Ceilcote 2000 Flakeline is 248°F (120°C).

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 color 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

Ceilcote 2000 Flakeline should be applied to correctly prepared substrates. However, it is suitable for application to the following primers:

Ceilcote 680M

Ceilcote 2000 Flakeline may also form a constituent part of other systems such as

Ceilcote 2000 Ceilline Ceilcote 2000MR

Ceilcote 2000 Flakeline should only be overcoated with itself.

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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
- Ceilcote 2000 Flakeline Application Guidelines

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

Proper ventilation must be provided during application and afterwards during drying (Refer to product datasheets for typical drying times) to keep solvent concentrations within safe limits and prevent fires and explosions. Forced extraction will be required in confined spaces. Ventilation and/or respiratory personal protective equipment (airfed hoods or appropriate cartridge masks) must be provided during application and drying. Take precautions to avoid skin and eye contact (overalls, gloves, goggles, masks, barrier cream, etc).

Before use, obtain, read and then follow the advice given on the Material Safety Data Sheets (Base and Curing Agent if two-pack) and the Health and Safety section of the Coatings Applications Procedures for this product.

In the event that 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.

The detailed safety measures are dependent on application methods and the work environment. If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product and consult International Protective Coatings.

PACK SIZE

Unit Size	Part A		Part B	
	Vol	Pack	Vol	Pack
20 liter	16 liter	20 liter	4 liter	5 liter
5 US gal	2.83 US gal	5 US gal	0.8 US gal	1 US gal

For availability of other pack sizes contact International Protective Coatings

SHIPPING WEIGHT (TYPICAL)

Unit Size	Part A	Part B
20 liter	22.4 kg	4.44 kg
5 US gal	34.8 lb	7.3 lb

STORAGE

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

Disclaimer

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