

Technical Data

Chemflake Special



Product description

This is a glass flake reinforced vinyl ester coating. It is an ultra high build, extremely chemical resistant and fast curing barrier coating. Can be used as a two coat system in atmospheric and immersed environments. Suitable for properly prepared carbon steel and concrete substrates.

Recommended use

Specially designed as an internal lining for offshore, onshore and buried tanks and pipes such as chemical tanks, flue gas ducts, cooling towers, funnels, pipes, waste water, grey water, concrete bund, pressure vessels. Specially suitable in acidic conditions. Refer to Protective Product Resistance List. Recommended for areas subject to extreme chemical exposure and mechanical wear and where future maintenance is challenging.

Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry (µm)	600	1000	750
Film thickness, wet (µm)	650	1080	800
Theoretical spreading rate (m ² /l)	1,55	0,93	1,24

Comments

All vinyl ester and polyester resin systems are subject to some shrinkage during the curing process. This results in a practical spreading rate lower than the theoretically calculated. The shrinkage depends on actual dry film thickness applied and conditions during application.

Physical properties

Colour	Red, White
Solids (vol %)*	96 ± 2
Flash point	34 °C ± 2 (Setaflash)
VOC	36 gms/ltr UK-PG6/23(97). Appendix 3
Gloss	Semiflat
Water resistance	Excellent
Abrasion resistance	Excellent
Solvent resistance	Excellent
Chemical resistance	Excellent
Flexibility	Limited

*Theoretically calculated

Surface preparation

All surfaces should be clean, dry and free from contamination. The surface should be assessed and treated in accordance with ISO 8504.

Bare steel

Cleanliness: Blast cleaning to min. Sa 2 ½ (ISO 8501 1:2007). Roughness: use suitable abrasives to achieve Grade Coarse G (75 - 130 µm, Ry5) (ISO 8503-2).

Other surfaces

The coating may be used on other substrates. Please contact your local Jotun office for more information.

Condition during application

The temperature of the substrate should be minimum 15°C and at least 3°C above the dew point of the air. The temperature and the relative humidity should be measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying. The coating should not be exposed to oil, chemicals or mechanical stress until fully cured.

Application methods

Spray	Use normal airless spray or two-comp. airless spray equipment
Brush	Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness.

Application data

Mixing ratio (volume)	See table below.
Pot life (23°C)	35 - 45 minutes.
Thinner	Styrene. Max 5 % Styrene.
Cleaner	Jotun Thinner No. 17/23/27.
Guiding data airless spray	
Pressure at nozzle	15 - 25 MPa (150-280 kp/cm ² , 2100-4000 psi.).
Ratio/Capacity:	> 45:1. Min. 12 l per minute. Slow moving piston.
Nozzle tip	0.86 - 1.14 mm (0.034 - 0.045").
Spray angle	40 - 80°
Filter	To be removed.
Note	For further details please see separate "Working Manual".

Drying time

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with:

- * Good ventilation (Outdoor exposure or free circulation of air)
- * Typical film thickness
- * One coat on top of inert substrate

Substrate temperature	15°C	23°C	40°C
Surface dry	8 h	4 h	2 h
Through dry	8 h	4 h	2 h
Cured	8 d	4 d	2 d
Dry to recoat, minimum	8 h	4 h	2 h
Dry to recoat, maximum ¹	36 h	24 h	12 h

1. The surface should be dry and free from any contamination prior to application. If the maximum dry to recoat time is exceeded, please contact Jotun for advice

The given data must be considered as guidelines only. The actual drying time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. A complete system can be described on a system sheet, where all parameters and special conditions could be included.

Typical paint system

On steel:

Chemflake Special **2 x 750 µm** **(Dry Film Thickness)**

Holiday detector after last coat: NACE RPO 188-88. (400 volt per 100 µm)

Tankguard Holding Primer 1 x 40 µm can be used as a temporary protection before the full system is applied.

Other systems may be specified, depending on area of use

Mixing Ratio Table - Additives

Choose peroxide and, if necessary, inhibitor or accelerator according to the table below. Inhibitor or accelerator (if used) must be thoroughly mixed with Chemflake Special before adding the required amount of peroxide. Mechanical agitation for one minute or more.

The steel temperature shall not be lower than the paint temperature and not more than 20 °C above the paint temperature.

Additive volume (ml) in 16 litres product.

Additive	Paint temperature				
	15-19 °C	20-24 °C	25-29 °C	30-34 °C	35-40 °C
Jotun Accelerator Co1P	400	300	300	200	200
Jotun Accelerator DMA10	100	100	100	100	100
Jotun Peroxide 1 or Jotun Peroxide 11	400	400	300	300	300
Jotun Inhibitor 53					30

Note: Check temperature of pump during application. Friction in piston may cause increase in temperature. If this should happen, keep pump going to get heated Chemflake Special out as quickly as possible.

If the temperature is ranging near the max. temperature in a zone, it is recommended to reduce the content of peroxide/accelerator respectively, or to increase the content of inhibitor.

Approved alternatives to Jotun Peroxides can be used. Please contact your local Jotun office.

Warning: Accelerator and peroxide must never be mixed directly together.

Storage

The product must be stored below 25°C and in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed.

SHELF LIFE: 4 months, at 23°C, subject to re-inspection thereafter. Shelf life very much depends on temperature. Lower temperatures (if possible below freezing point) will lengthen the shelf life considerably, while high temperature may lead to gelling in the tin.

Accelerator and peroxide must be kept in their original containers. No other materials shall be stored in the same room as peroxides.

Always consult your local/national authorities for storing peroxides!

Handling

Handle peroxide with care. Avoid that it comes in contact with flameable substances. Accelerator and peroxide must never be mixed directly together. Before handling, see safety data sheet for accelerator and peroxide.

Packing size

20 litre unit: 16 litres in a 20 litre container .

Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not breathe or inhale mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

For detailed information on the health and safety hazards and precautions for use of this product, we refer to the Material Safety Data Sheet.

DISCLAIMER

The information in this data sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, as the product can be used under conditions beyond our control, we can only guarantee the quality of the product itself. We also reserve the right to change the given data without notice. Minor product variations may be implemented in order to comply with local requirements.

If there is any inconsistency in the text the English (UK) version will prevail.

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