

## Litum Extreme

---

### Description

This is a two-component polyamine cured epoxy coating. It is a high build, solvent free product. It provides superior resistance against impacts and abrasion. It has excellent ice friction performance and ice slip properties. Can be used as primer, finish coat or as single coat system in atmospheric and immersed environments. Suitable for properly prepared carbon steel substrates.

### Typical use

**Marine:**  
Recommended for underwater hull in newbuilding and drydocking. Designed as a premium solution where abrasion resistance, impact resistance and ice slip properties are required. Suitable as anode shield around ICCP anodes.

**Protective:**  
Designed as a premium solution where abrasion resistance, impact resistance and ice slip properties are required. Compatible with cathodic protection systems.

### Approvals and certificates

Approved as ice-resistant coating in accordance with RMRS Class Program for Classification and Construction of Sea-Going Ships, section 2.5, Part XIII, edition 2017.  
Approved and listed by Federal Waterways Engineering and Research Institute (BAW)

### Colors

Selected range of colors

### Product data

Solids by volume	98±2%
Gloss level (GU 60°) (ISO 2813)	Gloss (70-85)
Flash point (ISO 3679 Method 1)	90°C
Density	1.5 kg/l

The provided data is typical for factory-produced products, subject to slight variation depending on color. All data is valid for mixed paint. Gloss description is subject to Litum definition.

### Film thickness per coat

#### Typical recommended specification range

Dry film thickness	350-550 µm
Wet film thickness	350-550 µm
Theoretical spreading range	2.8-1.8 m <sup>2</sup> /l

### Surface preparation

To secure lasting adhesion to the subsequent product all surfaces shall be clean, dry and free from any contamination.

### Surface preparation table

### Carbon steel

<b>Minimum</b>	Sa 2½ (ISO 8501-1)
<b>Recommended</b>	Sa 2½ (ISO 8501-1)

### Stainless steel

<b>Minimum</b>	The surface shall be hand or machine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface.
<b>Recommended</b>	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media that is suitable to achieve a sharp and angular surface profile.

### Coated surfaces

<b>Minimum</b>	Clean, dry and undamaged compatible coating.
<b>Recommended</b>	Clean, dry and undamaged compatible coating.

## Application

### Application methods

**Spray:**  
Use airless spray.

**Brush:**  
Recommended for stripe coating and small areas. Please be careful to achieve the specified dry film thickness.

### Mixing ratio

3:1 (by volume)

### Thinner

Litum Thinner Nº 17  
Thinning is not recommended, but if needed max. 3 %.  
Sag resistance will decrease with added thinner.

### Induction and pot life

Pot life 45 minutes (23°C)

### Airless application

Nozzle tips range (inch/1000): 19-23  
Pressure nozzle outlet (minimum): 250 bar/3625 psi

### Drying

Surface temperature	0°C	5°C	10°C	15°C	23°C	40°C
Touch dry		17h	13h	7h	4h	2h
Handle (hard) dry		24h	18h	14h	9h	3h
Overcoat minimum		24h	18h	14h	9h	3h

Overcoat maximum	7d	5d	3d	2d	1d	
Cured for immersion	4d	4d	4d	2d	2d	
Service dry	42d*	14d	10d	10d	7d	3d

\*Vessels destined for trade in icy waters must be allowed curing for 42 days if the substrate temperature is between 0 °C and 5 °C.

Curing/drying time is increasing when coating applied at relative humidity (RH) below 85%, and at average of the DFT range for the product.

**Touch dry:** the state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.

**Handle (hard) dry:** minimum time before the coating can tolerate normal pressing without permanent marks or other physical damage.

**Overcoat minimum:** the recommended shortest time before the next coat application.

**Cured for immersion:** minimum time before the coating can be permanently immersed in sea water.

**Service dry:** minimum time before the coating can be constantly exposed to the intended environment.

## High temperature resistance

Dry, atmospheric 120°C (continuous)

Immersed, sea water 50°C (continuous)

Immersed, sea water 60°C (peak)

Duration of superior temperature limit is maximum 1 hour. The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures.

Note that the coating will be resistant to various immersion temperatures depending on the specific chemical and whether immersion is constant or intermittent. Heat resistance is influenced by the total coating system. If used as part of a system, ensure all coatings in the system have similar heat resistance.

## Compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown below. Contact Litum for specific system recommendation.

Next coat: epoxy, polyurethane, vinyl epoxy

## Packing size

	Volume (L)	Container (L)
<b>Litum Extreme</b> comp. A	13,5	20
<b>Litum Extreme</b> comp. B	4,5	5

The volume stated is for factory made colors.

## Storage and shelf life at 23°C

Storage conditions are to keep the containers in a dry, cool, well-ventilated area and away from source of heat and ignition. Containers must be kept tightly closed. Handle with care.

<b>Litum Extreme</b> comp. A	12 months
<b>Litum Extreme</b> comp. B	24 months

The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

## Qualification, health and safety

This product is for professional use only. The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Litum's technical documentation. Applicators and operators shall use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product. Any suggested deviation to suit the site conditions shall be forwarded to the responsible Litum representative for approval before commencing the work.

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

## Color variation

When applicable, products primarily meant for use as primers may have slight color variations from batch to batch. Such products and epoxy-based products used as a finish coat may chalk when exposed to sunlight and weathering. Color and gloss retention on topcoats/finish coats may vary depending on type of color, exposure environment such as temperature, UV intensity etc., application quality and generic type of paint. Contact your local Litum office for further information.

## Disclaimer

The information in this document is given to the best of Litum's knowledge, based on laboratory testing and practical experience. Litum's products are considered as semi-finished goods and as such, products are often used under conditions beyond Litum's control. Litum cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Litum reserves the right to change the given data without further notice. Users should always consult Litum for specific guidance on the general suitability of this product for their needs and specific application practices. In case of any inconsistencies between two languages of this document, the Russian version will prevail.