Technical Datasheet

Litamastic 190

Description

This is a two-component polyamine cured epoxy mastic coating. It is a surface tolerant, abrasion resistant, high solid, high build product. This product is tintable in a wide range of colors in Litum's Multicolor Industry (MCI) system. Specially designed for areas where optimum surface preparation is not possible or required. Provides long lasting protection in environments with high corrosivity. Can be used as primer, mid coat, finish coat or as single coat system in atmospheric and immersed environments. Suitable for properly prepared carbon steel, galvanized steel, stainless steel, aluminium and a range of aged coating surfaces. It can be applied at subzero surface temperatures.

Typical use

General: Primarily designed for maintenance and repair.

Outside hulls, exterior and interior areas, including as an internal coating for tanks, reservoirs and pipelines with drinking water. Suitable for steel constructions exposed in corrosivity categories from C2 to C5 and Immersed service Im 1-3 (ISO 12944-2)

Colors

Aluminium, red and grey and limited range of colors according MCI system

Product data

Standard version

Solids by volume	80±2%
Gloss level (GU 60°) (ISO 2813)	Semi gloss (35-70)
Flash point (ISO 3679 Method 1)	35°C
Density	1.4±0.05 kg/l
Volatile organic compounds (VOC)	208 g/l

Winter grade version

Solids by volume	80±2%
Flash point (ISO 3679 Method 1)	36°C
Density	1.4±0.05 kg/l
Volatile organic compounds (VOC)	208 g/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.

Small color variations may occur when changing between the two curing agents. If exposed to weathering without topcoat, the Wintergrade (WG) version will yellow at a faster rate than the same color in Standard grade.

Film thickness per coat

Typical recommended specification range

Standard version

Dry film thickness	100-300 µm
Wet film thickness	125-375 µm
Theoretical spreading range	8.0-2.7 m²/l

Winter grade version

Dry film thickness	100-300 µm

This Technical Datasheet supersedes those previously issued.
The Technical Datasheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS).

Wet film thickness	125-375 µm
Theoretical spreading range	8.0-2.7 m²/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

Minimum	St 2 (ISO 8501-1)
Recommended	Sa 2½ (ISO 8501-1)

Stainless steel

Minimum	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.
Recommended	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media that is suitable to achieve a sharp and angular surface profile.

Aluminium

Minimum	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.
Recommended	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media that is suitable to achieve a sharp and angular surface profile.

Galvanized steel

Minimum	The surface shall be clean, dry and appear with a rough and dull profile.
Recommended	Sweep blast-cleaning using nonmetallic abrasive leaving a clean, rough and even pattern.

Shop primed steel

Minimum	Clean, dry and undamaged approved shop primer (ISO 12944-4 5.4).
Recommended	Sa 2 (ISO 8501-1).

Coated surfaces

Minimum	Clean, dry and undamaged compatible coating
Recommended	Clean, dry and undamaged compatible coating

Optimum performance, including adhesion, corrosion protection, heat resistance and chemical resistance is achieved with recommended surface preparation.

This Technical Datasheet supersedes those previously issued.
The Technical Datasheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS).

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.

Roller:
May be used for small areas but is not recommended for first primer coat. However, when using roller application care must be taken to apply sufficient material in order to achieve the specified dry film thickness.

Mixing ratio

Standard version	3,5:1 (by volume)
Winter grade version	3,5:1 (by volume)

Independent on substrate temperature the minimum temperature of the mixed base and curing agent is 10 °C. Lower temperature may require additional thinner to reach correct application viscosity. Additional thinner gives lower sag resistance and slower curing. If addition of thinner is required, this shall be done after mixing of the two components.

Thinner

Litum Thinner № 17

Thinning is not normally required. Consult the local Litum representative for advice during application in extreme conditions.

Induction and pot life

Standard version	Pot life 2 hours (23°C)
Winter grade version	Pot life 45 minutes (23°C)

Airless application

Nozzle tips range (inch/1000):	19-25
Pressure nozzle outlet (minimum):	150 bar/2100 psi

Drying

Surface temperature	**-5°C**	**0°C**	**5°C**	**10°C**	**23°C**	**40°C**
Standard version						
Touch dry			20h	12h	4h	1,5h
Handle (hard) dry			40h	20h	6h	3h
Overcoat minimum			30h	10h	3h	1,5h
Service dry			28d	14d	7d	2d
Winter grade version						
Touch dry	24h	18h	12h	8h	3,5h	
Handle (hard) dry	72h	30h	20h	12h	4h	
Overcoat minimum	54h	26h	10h	6h	2h	
Service dry	21d	14d	10d	5d	3d	

This Technical Datasheet supersedes those previously issued.
The Technical Datasheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS).

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.

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

High temperature resistance

Dry, atmospheric 90°C (120°C for Winter grade version) (continuous)

Immersed, sea water 50°C (continuous)

Immersed, sea water 60°C (peak)

Immersed, crude oil 80°C (continuous)

Immersed, crude oil 90°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.

Previous coat: epoxy shop primer, inorganic zinc silicate shop primer, zinc epoxy, epoxy, epoxy mastic, inorganic zinc silicate

Next coat: polyurethane, epoxy, acrylic, vinyl epoxy

Packing size

	Volume (L)	Container (L)
Litamastic 190 comp. A	3.5/15.6	5/20
Litamastic 90 comp. B	1/4.4	1/5
Litamastic 90 Nord comp. B	1/4.4	1/5

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.

Litamastic 190 comp. A	48 months
Litamastic 90 comp. B	24 months
Litamastic 90 Nord comp. B	24 months

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

This Technical Datasheet supersedes those previously issued.
The Technical Datasheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS).

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 for approval before commencing the work. Please observe the 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 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.

This Technical Datasheet supersedes those previously issued.
The Technical Datasheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS).