Technical Data Sheet

Hardtop Clear

Product description

This is a two component chemically curing aliphatic acrylic polyurethane coating. It has a high gloss finish with excellent gloss retention. It has good chemical resistance. To be used as a clearcoat (topcoat) in atmospheric environments.

Typical use

As a clear coat in a polyurethane system, or on epoxy/epoxy mastic systems.

Approvals and certificates

Certified in accordance with IMO 2010 FTP code – Low Flame Spread

Additional certificates and approvals may be available on request.

Colours

clear

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	46 ± 2 %
Gloss level (GU 60 °)	ISO 2813	gloss (70-85)
Flash point	ISO 3679 Method 1	26 °C
Density	calculated	1 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	Calculated	467 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	Calculated	467 g/l
EU	European Paint Directive 2004/42/CE	Calculated	467 g/l
EU IED	Industrial Emission Directive 2010/75/EU	Calculated	467 g/l
Korea	Korea Clean Air Conservation Act	Calculated	467 g/l
China	GB 30981-2020 Limit of harmful substances of industrial protective coatings	GB/T 23985-2009 8.3	449 g/l

This Technical Data Sheet supersedes those previously issued.

The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. For your nearest local Jotun office, please visit our website at www.jotun.com

The provided data is typical for factory produced products, subject to slight variation depending on colour.

Gloss description: According to Jotun Performance Coatings' definition.

Film thickness per coat

Typical recommended specification range

Dry film thickness	10	-	20	µm
Wet film thickness	24	-	45	µm
Theoretical spreading rate	46	-	23	m²/l

Can on horizontal areas be applied up to 75 µm wet film thickness.

Surface preparation

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Coated surfaces	Clean, dry and undamaged compatible coating	Clean, dry and undamaged compatible coating

Application

Application methods

The product can be applied by

Spray:	Use air spray or airless spray.
Brush:	Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.
Roller:	Use 2 mm nap foam rollers or 5 mm nap natural hair rollers.

This Technical Data Sheet supersedes those previously issued.
The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. For your nearest local Jotun office, please visit our website at www.jotun.com

Product mixing ratio (by volume)

Hardtop Clear Comp A	3 part(s)
Hardtop Clear Comp B	1 part(s)

Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 10

Guiding data for airless spray

Nozzle tip (inch/1000): 11-17

Pressure at nozzle (minimum): 150 bar / 2100 psi

Guiding data for air spray

Refer to the Application Guide (AG) for additional information.

Drying and Curing time

Substrate temperature	5 °C	10 °C	23 °C	40 °C
Surface (touch) dry	4 h	4 h	1.5 h	1 h
Walk-on-dry	12 h	8 h	2 h	2 h
Dry to over coat, minimum	12 h	8 h	2 h	2 h
Dried/cured for service	21 d	14 d	7 d	4 d

For maximum overcoating intervals, refer to the Application Guide (AG) for this product.

Drying and curing times are determined under controlled temperatures and relative humidity below 85 %, and at average of the DFT range for the product.

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.

Walk-on-dry: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage.

Dry to over coat, minimum: The recommended shortest time before the next coat can be applied.

Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

This Technical Data Sheet supersedes those previously issued.
The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. For your nearest local Jotun office, please visit our website at www.jotun.com

Induction time and Pot life

Paint temperature	23 °C
Induction time	10 min
Pot life	3 h

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	120 °C	140 °C

Peak temperature duration max. 1 hour.

The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures.

Product 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 Jotun for specific system recommendation.

Previous coat: epoxy, zinc epoxy, epoxy mastic, polyurethane

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Hardtop Clear Comp A	15	20
Hardtop Clear Comp B	5	5

The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, shaded, cool, well-ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Shelf life at 23 °C

Hardtop Clear Comp A	48 month(s)
Hardtop Clear Comp B	48 month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

This Technical Data Sheet supersedes those previously issued.

The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. For your nearest local Jotun office, please visit our website at www.jotun.com

Caution

This product is for professional use only. The applicator and operator shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Jotun's technical documentation. Applicators and operators should 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 Jotun representative for approval before commencing the work.

Health and safety

Please observe the precautionary notices displayed in the container. Use under well-ventilated conditions. Do not inhale spray 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 sought medical attention immediately.

Colour variation

When applicable, products primarily meant for use as primers or antifoulings may have slight colour variations from batch to batch. Such products and epoxy-based products used as a finish coat may chalk when exposed to sunlight and weathering.

Colour and gloss retention on topcoats/finish coats may vary depending on type of colour, exposure environment such as temperature, UV intensity etc., application quality and generic type of paint. Contact your local Jotun office for further information.

Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the data given without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.

This Technical Data Sheet supersedes those previously issued.
The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. For your nearest local Jotun office, please visit our website at www.jotun.com