

Knarr Polyurethane Varnish

Technical Data Sheet



Product classification

It is a two-component, polyurethane-based, reaction-drying varnish. Creates a smooth appearance and a hard layer. It is resistant to scratches, impacts, yellowing and household chemicals. There are Glossy, Silk Matte and Matte versions.

The sphere of application

It is used as filler varnish on MDF and wooden surfaces.

Physical specifications

Color		Transparent
Volume solids	ASTM D2697-03	45%±2 (by volume)
Density (gr/cm³)	ASTM D1475-13	1.01±0.02
Viscosity (25°C) KU	ASTM D562-10	90±5
Flash point	ISO 3679	35°C±2
Gloss Level		PG 100.10 PU Gloss Varnish PG 100.20 PU Semi Matt Varnish PG 100.30 PU Matt Varnish
Pot life (23°C)		4-5 hours
Mix ratio (by weight)		2 units A Comp., 1 units B Comp (Matt, Semi Matt) 1 units A Comp., 1 units B Comp (Gloss)
Thinner		5-10 % Poliurethane Thinner

All results are mixture (A+B) mixtures and can differ slightly depending on color.

Surface preparation

All surfaces must be clean, dry and free of dirt. Before application, the surface should be scratched with sand paper and the surface should be cleaned.

Application

Mixing

The product is supplied in 2 containers as a unit. Always mix a complete unit in the proportions supplied. Do not mix more material than can be used within the specified pot life.

- Stir the base (Part A) with a clean mechanical mixer.
- Then add the entire contents of Curing Agent (Part B) and mix thoroughly.

Avoid too vigorous mixing as it leads to in air inclusion, which may result in poor application results. If thinner is required, only add after mixing of the two components.

Irrespective of the substrate temperature, the advised minimum temperature of the mixed paint is 15 °C. At lower temperatures, more thinner may be required to obtain a proper application viscosity, which may result in lower sag resistance and slower curing.

The temperature of the substrate should be at least 10°C and at least 3°C above the dew point of the air.

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Temperature and relative humidity should be measured in the vicinity of the substrate.

In general, the maximum recommended surface temperature is 40°C. Higher steel temperatures are acceptable provided dry-spray is avoided by proper spray application and extra thinning if required. In extreme cases it may be necessary to reduce film thickness in order to avoid sagging.

When applying the paint in confined spaces, provide adequate ventilation during application and drying.

Observe local regulations. Please contact Contact "CMT GROUP" for a specific recommendation.

Application methods

Guiding data Airspray

Pressure at nozzle	3 - 5 bar
Nozzle size	1.2 – 1.5 mm
Volume of thinner	0 – 5%

Brush/Roller

Recommended for stripe coating and small areas. Care must be taken into account to achieve the specified dry film thickness.

Thinner

If thinning is necessary, this should be added after mixing of the two components. The recommended level of thinner is dependent on thickness and conditions. In certain circumstances, it may be required to exceed the stated level of thinner.

However, as a general rule do avoid excessive thinning as it will result in lower sag resistance and slower cure. In addition it may cause solvent entrapment, possibly risking blistering, pinholing and/or other coating defects.

Drying and curing time

Drying duration depends on weather conditions, thickness and number of layers. In the table below, approximate drying duration is shown in different temperatures.

- Surface must be good-ventilated (Open air or free air circulation)
- Paint must be applied in recommended thickness
- Thickness must be determined according to the number of layers

Weather temperature	10°C	23°C	40°C
Surface drying	1.5 hours	30-40 min	15-20 min
Top drying	3-4 hours	1.5-2 hours	1 hours
Full drying	36 Hours	24 Hours	16 Hours

Information shows above determined according to rules. Drying time can be increased or decreased depending on film thickness, ventilation, old paint system, applications on paint, mechanical resistance and thinner amount.

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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 our company for specific system recommendation:

Next coat: polyurethane, polyester, acrylic

Storage conditions

Paint must be stored according to territorial conditions in dry, cool, good ventilated places where there is not any risk for high temperature and sparks. It is recommended to mix the paint before usage. Containers must be kept tightly closed. Shelf life is 36 months (at 23°C).

Packaging

Produced 12 Kg and 3KG Component A and 6 Kg and 1.5KG Component B.

Applier paint specialist

This product is for professional use only. The applicators and operators should be trained, experienced and have the capability and equipment to mix and apply the coatings correctly and according to requisition. Applicators and operators must use appropriate personal protection equipment when using this product.

Color of the product

When applicable, products primarily meant for use as primers or antifouling may have slight color variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

Caution

The information above is prepared based on laboratory testing and practical experience. The company cannot guarantee anything but the quality of the product, because products are often used under conditions beyond our control.

Health and safety rules

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 immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

NOTE: "CMT Group" LLC holds right to change information on this Technical Data Sheet without further notice.

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