

Rapid Topcoat

Technical Information Page



Product presentation

It is one-component oxidatively drying urethane modified alkyd coating. It has a gloss finish with good gloss retention. It is fast drying. To be used as topcoat in atmospheric environments.

Surfaces to be used

It is especially recommended as a topcoat in materials such as parts of industrial equipments, parts of agricultural and garden equipment, in electrical appliances, cask and in metal products (doors, tables, cupboards) and ext.

Film thickness and theoretical diffusion area

	Minimum	Maximum
Film thickness, dry (μm)	30	60
Film thickness, wet (μm)	65	127
Theoretical diffusion area (m^2/l)	16	8

Physical properties

Color		Ral colours
Solid content	ASTM D2697-03	47%±2 (by volume)
Density (gr/sm^3)	ASTM D1475-13	1.19±0.02
Viscosity (25°C) KU	ASTM D562-10	100±5
Flash point	ISO 3679	25°C±2
Gloss level (GU 60°C)	ASTM D523-14	Gloss (70-100)
Thinner		Must be thinned with 5-10% Knarr Cellulosic Thinner. Must be thinned with 5-10% Knarr Rapid Thinner (in winter)

Paint consumption

Depending on the surface smoothness and the method of application, a single layer of 1 kg can be painted on an area of 7-9 m^2 . The consumption is affected by the roughness and porosity of the surface to be painted, as well as the method and conditions of painting.

Surface preparation

Steel - Blast Cleaning

All surfaces should be clean, dry and free from contamination. Surfaces should be treated in accordance with ISO 8504:2000.

All edges shall be ground to a minimum radius of 2 mm. Remove weld spatter and smooth weld seams by using disc grinders, chipping hammers or other suitable power tools. Sharp edges, weld seams, corners and other areas that are likely to receive less dry film thickness than specified, should be stripe coated. The surfaces shall be blast-cleaned to min. Sa 2½ (ISO 8501-1:2007). The surface profile and the anchor pattern shall be between 40 μm and 70 μm .

"CMT Group" LLC

Address: Badamdar Highway 27, Baku, Azerbaijan

Phone: (+994 12) 502 45 50

Fax: (+994 12) 502 45 51

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Coated substrates

All surfaces should be clean, dry and free from contamination. Surfaces should be treated in accordance with ISO 8504:2000.

Ensure compatibility of the coated substrates with the selected paint system. If the remaining part of the existing coating system needs to be sweep-blasted, fine abrasive shall be used to avoid damage to the coating system.

When recoating aged coated substrates, damaged areas must be removed back to a firm edge. Light abrade or sweep-blast the surface in order to provide a physical key for adhesion.

Contact "CMT GROUP" for more information.

Knarr Rapid Topcoat depending on application requirements, dilute 5-10% with a thinner Knarr Cellulosic Thinner and apply in two layers with a spray gun. Between the layers must wait at least 2 hours.

Application

Mixing

The product is supplied in 1 containers.

- Stir the product with a clean mechanical mixer.

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 component.

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.

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" LLC for a specific recommendation.

Application methods

Guiding data Airless spray

Pressure at nozzle	120 – 180 bar
Nozzle size	0.38 - 0.58 mm
Spray angle	40 – 80 degrees
Volume of thinner	0 – 3%

Guiding data Airspray

Pressure at nozzle	3 - 5 bar
Nozzle size	1.2 – 1.5 mm
Volume of thinner	5-10%

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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.

Film thickness

The paint must be applied as a continuous layer and as close to the specified wet film thickness as possible. Use a wet film thickness gauge to verify that the correct wet film thickness is applied.

Over application, excessive thinning, wrong application techniques etc. may lead to runs and sagging of the paint. When the paint is still wet, such effects can be rectified by brushing out the defected areas.

When the defect is noticed after curing of the paint, repair the affected areas by disc sanding to an even smooth surface and apply an additional coat of paint.

Stripe Coating

Stripe coating may be required to achieve the specified film thickness on specific areas such as edges, corners, weld seams etc. Use a round brush and ensure proper wetting of all areas. Avoid excessive application as it will lead to brush marks and may also result in air entrapment, which is detrimental to the paint's performance.

Additional usage instructions

Note to metallic colourshades.

The appearance of metallic colourshades in general will be dependent on application method, conditions, thickness, substrate type etc. For this reason, metallic shades cannot be made exactly according to colour code standards such as RAL, BS.

Drying time

Drying time mainly depends on the weather conditions, the thickness of the applied layer and the number of coats applied. The table below shows the approximate drying time of the paint depending on the air temperature.

- The room to be painted must be well ventilated (open air or free air circulation).
- Paint should be applied at the recommended thickness.
- The thickness must be applied taking into account the number of applied layers.

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Air temperature	10°C	23°C	40°C
Touch drying	1 hour	30 min	15 min
Hard drying	3-4 hours	1-2 hour	40 min
Applying the second layer, at least	4 hours	2 hours	1 hour

The above information was obtained in accordance with the rules. Drying time may increase or decrease depending on film thickness, ventilation, surface painting system, painting operations, mechanical stability and amount of thinner added.

Typical paint system

Knarr Rapid Primer	2 x 60 µm
Knarr Rapid Topcoat	1 x 50 µm

Other systems may be determined by the scope.

Storage conditions

The paint should be stored in dry, cool, well-ventilated warehouses without direct sunlight, between +5°C and +35°C without opening the lid. It should be mixed well before use. Shelf life is 36 months in unopened packaging.

Packing types

Paint is produced in 16 KG metal containers.

The implementing operator

This product is intended for professional use. The applicator or operator must be experienced and knowledgeable about the product. The person in question shall mix and apply the paint according to the specification. Employees participating in the application must be provided with safety equipment.

Attention

The above information is based on results obtained from laboratory tests and field applications. In applications outside the company's control, the company is solely responsible for the quality of the paint. It is not responsible for problems that may arise from implementation and application errors.

Health and safety regulations

Follow the instructions on the container. Store in warehouses where there is no possibility of high temperatures and sparks. Use in well-ventilated areas. In case of contact with the skin during use, it should be washed with a suitable solvent and then with soap and water. In case of eye contact, wash with plenty of water and seek medical attention if necessary.

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- S 2 : Keep out of the reach of children.
- S 3/7/9 : Keep container tightly closed in a cool, well-ventilated place.
- S 16 : Keep away from sources of ignition - No smoking!
- S 24/25 : Avoid contact with skin and eye.
- S 29 : Do not empty into drains.
- S 46 : If swallowed, seek medical advice immediately and show this container or label.
- S 51 : Use only in well-ventilated areas.

Note: "CMT GROUP" LLC reserves the right to change the information on the technical data page without notice.

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