# Zinkomastik Primer

Technical Data Sheet

## Product classification

Knarr Zinkomastic Primer is a two-component, anticorrosive amine-cured epoxy primer designed for metal surfaces. It contains zinc phosphate. Dries quickly and next coat also can be applied quickly . The amount of volatile organic compounds (VOC) is lower than legal for primers.

## The sphere of application

It can be used on steel structres and metal surfaces where anticorrosive resistance is required according to C4 (ISO 12944-2) standard. It is recommended to paint especially metal construction of production plant, storages, bridges and buildings. It can also be used on plastered or concrete surfaces.

## Film thickness and theoretical spreading rate

| | Minimum | Maximum |
|---|---|---|
| **Film thickness, dry (µm)** | 100 | 150 |
| **Film thickness, wet (µm)** | 166 | 250 |
| **Theoretical spreading ($m^2$/l)** | 6 | 4 |

## Physical specifications

| | | |
|---|---|---|
| **Color** | | Grey (Can be colored with RAL colors) |
| **Volume solids** | ASTM D2697-03 | 60%±2 |
| **Density (gr/$cm^3$)** | ASTM D1475-13 | 1.40±0.02 |
| **Viscosity (25°C) KU** | ASTM D562-10 | 115±5 |
| **Flash point** | ISO 3679 | 35°C±2 |
| **Gloss level (GU 60°C)** | ASTM D523-14 | Matt (0-10) |
| **Pot life (23°C)** | | 3-4 hours |
| **Mix ratio (by weight)** | | 4 units A Comp., 1 unit B Comp. |
| **Thinner** | | 5-10 % Epoxy Thinner |
| **Heat resistance** | | Up to 120°C (1 hour at Max. 140°C) |

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

## 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.

**Coated substrates**

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

**"CMT Group" LLC**
Address: Badamdar hwy. 27, Baku, Azerbaijan
Tel: (+994 12) 502 45 50
Fax: (+994 12) 502 45 51
E-mail: office@cmt.com.az
Web-site: www.cmt.com.az

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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.
When recoating zinc primed products, ensure the primer has been fully cured. Zinc salts products shall be removed by high pressure fresh water cleaning.
Contact “CMT GROUP” for more information.

## 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. 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 Airless spray** | Pressure at nozzle | 120 – 180 bar |
| | Nozzle size | 0.38 - 0.58 mm |
| | Spray angle | 40 – 80 degress |
| | Volume of thinner | 0 – 3% |
| **Guiding data Airspray** | Pressure at nozzle | 3 - 5 bar |
| | Nozzle size | 1.2 – 1.5 mm |
| | Spray angle | 40 – 80 degress |
| | Volume of thinner | 5-10% |
| **Brush/Roller** | Recommended for stripe coating and small areas. Care must be taken into account to achieve the specified dry film thickness. | |

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**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.

## 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** | 2 hours | 1 hour | 30 min |
| **Top drying** | 5 hours | 3 hours | 1 hour |
| **Full drying** | 7 days | 4 days | 3 days |
| **Second layer, minimum** | 5 hours | 3 hours | 1 hour |

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:

Previous coat: inorganic zinc silicate shop primer, epoxy, epoxy plaster, zinc-epoxy, zinc-silicate, organic shop primer
Next coat: acrylic, epoxy, polyurethane, polysiloxane

## Typical paint system

| | |
|---|---|
| **Knarr Zinkomastik Primer** | 1 x 100 µm |
| **Knarr Zinkomastik HB Araqat** | 1 x 75µm |
| **Knarr Zinkomastik Topcoat** | 1 x 60 µm |

Other system can be determined depending on surface.

## 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$^{o}$C).

## Packaging

Produced as 16 KG A Component and 4 KG B Component.

## 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 antifoulings may have slight color variations from batcg 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.

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## Health and safety rules

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do no inhale spray mist. Avoid skin contact. Splillage on the skin should immediately removed with suitable cleanser, soap and water. Eyes should well flushed with water and medical attention shought immediately.

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


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