Ceramic Polymer NK C5-1 is a 2-component zinc rich epoxy primer, which provides excellent corrosion protection in compliance with NORSOK M-501. This innovative product shows high mechanical strength without visibly cracking or common zinc rich primer related defects. Short curing times enbles efficient treatment.

APPLICATION RANGE

External coating for

- Offshore and onshore constructions
- Tanks and vessels
- Tubes, pipes and valves
- All steel structures in contact with sea atmosphere

FEATURES AND BENEFITS

- Extreme barrier properties
- Extreme corrosion resistance
- High build zinc rich primer, no mud craking
- Excellent build-on on sharp edges
- Fast curing
- Highly flexible
- Temperature resitance up to 150 °C (dry load)
- Alternative for galvanising and zinc silicate
- Certified according to NORSOK M-501, Edition 6, System 1 (non-splash zone)

TECHNICAL INFORMATION

Color	Greenish grey
Gloss	Matt
Volume solids	± 58 volume %
VOC	≤ 395 gr/ltr.
Zinc content	89 w%
Sea water resistance	NORSOK M-501, Edition 6, System 1
Saltspray	>1440 hours (Saltspray: ISO 9227-NSS / ASTM B 117)
Corrosion Resistance (TNO Electochemical Impedance Spectroscopy)	R_c 3.7*10^9 (21 days)
Outdoor Exposure	1.5 years (ISO 2810)
Immersion	2 days distilled water; 5 days sea water (ISO 2812-2/ 1 ASTM D543X)
Adhesion	4.2 MPa (ISO 4624) / 3.8 MPa (ASTM D4541)
Specific Gravity (Mix)	~ 2.30 g/cm³ (at 20 °C)

APPLICATION DATA

Application methods	Preferably by means of airless or airmix spray equipment. Brush application is only advised for touch up purposes.
Airless spray	Quantity: 0-5 vol. % / Nozzle: min 0.015" / Flow pressure: 140-160 bar
Airmix	Quantity: 0-5 vol. % / Nozzle: min 0.015" / Flow pressure: 70-100 bar
Mixing ratio	11.2 : 1 by weight / 4 : 1 by volume
Mixing instructions	Mix Part A and Part B intensively, preferably using a mechanical mixing device. The temperature of the mixed product should at least be 15°C during application.
Potlife	6 hours at 20 °C material temperature - waiting time under continuous pressure may reduce pot life!
Thinner	The paint can be applied without thinning when using airless spray equipment. The necessary amount of the **Ceramic-Polymer NK C5-1 Thinner** depends on used equipment, application method and temperature of the mixed product. The Thinner should also be used to clean and flush equipment immediately after application.
Application	One coat. Standard DFT 60-125 µm, depends on specification.

Theoretical Consumption	film thickness per coat: dry	film thickness per coat: wet	kg/m²	m²/kg
Please contact Chesterton International technical services for specific system and application advice.	60 µm	103 µm	0.24	4.20
	125 µm	216 µm	0.50	2.00
Practical coverage	The performance in practice depends on various circumstances. As a guideline for airless spraying: For large dimensions: 70% of the theoretical coverage. For small dimensions: 50% of the theoaretical coverage.			

All above values are approximate and may be used as a guideline for specifications. Consumptions vary according to conditions.

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SURFACE PREPARATION

Preliminary treatment, steel untreated	The surface needs to be pretreated according ISO12944 part 4 § 6.2.3. Remove grease, oil, dirt etc. using an appropriate cleansing agent and a high pressure spraying pistol. Grit blasting to purity degree Sa 2½ in accordance with ISO 8501-1 to a roughness profile of R_z 40-70 µm. After blasting remove all dust from the entire surface with compressed air which is free of moisture and grease. Apply first coating layer within 6 hours. In case the final coating layer is applied on the construction site, extra precautions need to be taken.
Preliminary treatment, hot dip galvanised surface	The surface needs to be pretreated according ISO12944 part 4 §6.2.3.4.1 (sweep blast, with inert grit). Remove grease, oil, dirt etc. using an appropriate cleansing agent. Lightly blast the entire zinc surface with an inert blasting agent (grain size: 0.3 - 0.5 mm, blasting pressure: 2.0 - 2.5 bar, nozzle opening: 6 mm minimum). After blasting, the entire surface must have a uniform flat appearance. Depending on the zinc layer thickness, max. 5 - 10 µm of zinc can be removed. After blasting remove all dust from the entire surface with compressed air which is free of moisture and grease. Apply first coating layer within 2 hours.
Touch up	Touching up of damages or untreated parts at the construction site. Remove grease, oil, dirt etc. using an appropriate cleansing agent. Remove the rust from all mechanical damage with rotating steel wire brushes, sanding discs or steel wire brushes and coarse sandpaper to purity degree St3, in accordance with ISO 8501-1. Smooth the transition of cleansed parts to parts with intact coats of paint by sanding and scraping. After sanding, remove all dust from the entire surface with compressed air which is free of moisture and grease. Then touch up the object with the entire paint system, as described in this paint advice. Touch up light surface damages only with the product of the top coat, as described in the paint advice.

CONDITION DURING APPLICATION

The temperature of the substrate should be at least 3° C above dew point. Keep application area well ventilated during application and drying, in order to reduce evaporated solvents.

CURING TIMES

Substrate temperature	Dust free	Manageable	Recoatable
10 °C	45 min	6 hrs.	6 hrs.
20 °C	25 min	3 hrs.	3 hrs.

Dry times: at a standard dry film thickness of 75 µm. Maximum interval unlimited provided the surface is clean and free of grease and/or oil. At a higher dry film thickness longer drying times should be taken in account. During drying and curing the relative humidity should remain under 80%. Furthermore, any contact with moisture must be avoided during this period.

STORAGE AND PACKING

Preferred storage conditions are to keep the containers in a dry and cool area between 5°C and 40°C provided with adequate ventilation. The containers should be sealed tightly.

Packing	12.2 kg kit (11.2 kg Part A + 1 kg Part B) + 24.4 kg kit (22.4 kg Part A + 2 kg Part B)
Shelf life:	12 months (in original unopend can)

QUALITY ASSURANCE AND INSPECTION

To ensure a continuous quality of the product, the quality assurance and inspection plan of Chesterton International GmbH has to be considered. Recommendations for qualified test control units are also available.

HEALTH AND SAFETY

Observe the precationary notices on the container label, and read the Material Safety Data Sheet before use. The product is intended for use by properly qualified professional applicators in industrial conditions. The product is flammable and should be kept away from sparks, open flames, and other sources of ignition. Smoking is prohibited in the application area. Wear suitable respiratory equipment and apply in well ventilated areas. Avoid contact with skin and eyes.

DISCLAIMER

All technical information in this Product Data Sheet is signified as material description and based on laboratory tests and practical experiences under normal conditions. During individual use, actual measured data may vary due to circumstances beyond our control. In particular, the recommendations regarding the application and use require the proper storage and treatment of our products. Due to differences in materials, substrates and real site conditions Chesterton International GmbH does not assume any warranty or liability for application results or fitness for a particular purpose, of any legal relationship whatsoever, neither from this information, nor from any given recommendations, or from any other oral advice. The user of the product must check the product's suitability for the intended application and purpose. Chesterton International GmbH reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our general terms and conditions of sale and delivery. The most recent issue of the Product Data Sheet has to be considered, please ask always for the current version.

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