

Technical Data Sheet

EN

PRIMER ZN-N

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Product description

Two-component epoxy primer hardened with polyamid. The product is protected with anticorrosive pigment by zink phosphate.

- possible to apply on steel, galvanized and aluminium surfaces
- great surface adhesion
- provides high mechanical resistance and flexibility of the layers
- high anticorrosive resistance in urban and industrial environment
- possible to be used in dry temperature of +160°C
- for primer layers or between the layers in epoxy and PU-epoxy systems in aggressive environments
- steel constructions protection
- as a "misty-coat" layer of galvanized cell with 20-30% dilution
- as 1-component system for external constructions protection

| Two components: | Component A | Component B |
|--------------------------------------|---------------|------------------|
| Component name | PRIMER ZN-N A | PRIMER ZN-N B |
| State of aggregation | liquid | liquid |
| Colour | grey | yellow to orange |
| Density at 20°C [g/cm ³] | 1,45 ± 0,04 | 0,95 ± 0,04 |

Application method recommended

Primer needs to be thoroughly mixed with a mechanic paddle before adding the hardener preserving right proportions. The mixture needs to be mixed again afterwards and left in a vessel for 15-30 min to start the reaction process of the contents. After mixing again the product is ready to be applied.

Surface preparation: Before spraying the surface should be cleaned of grease, oils, etc. (PN-EN ISO 12944-4).

Steel: The surface Leeds to be cleaned as per PN-ISO 8501-1 Sa 2 1/2 while in use in aggressive conditions.

Galvanizing: The surface needs to be free from any grease using a detergent and washed down with pressurized water. For better adhesion of the surface it is advised to use an abrasive. While the cell is partially galvanized it should be covered with a "misty-coat" layer diluted by 20-30%.

Application methods: Airless spray, pneumatic spray, brush. In case of manual application the products needs to be diluted as per one's needs.

Polyurea and hybrid coatings on Primer ZN-N

Application should start after „next layer time“. The longest time between priming and spraying is 48 hours. It is essential to keep primer clean during this time. After 48 hours is necessary to apply next layer of primer ZN-N. If first layer is dirty, must be cleaned by high pressure water or by abrasive. Then after drying second layer of primer can be applied. Before every application adhesion test should be done.

Dew point temperature:

During the application of the insulation coating pay special attention to the weather condition and particularly in relation to the dew point temperature - the temperature of condensation/water condensation. The substrate temperature during the application must be at least 3°C higher than the dew point temperature. Dew point temperature can be determined using a measuring instrument or from the table as per the following scheme:

Air temperature= 21°C

Relative humidity of air = 75%

Dew point temperature from the table = 16,4°C

The hereinabove scheme should not be applied if the shell surface temperature is less than 19,4°C (16,4°C+3°C=19,4°C)

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The dependency table of the dew point temperature and the relative humidity of the air located at the end this technical data sheet.

| | | |
|--|----------------|--|
| Ambient temperature [°C] | 5 - 40 | |
| Substrate temperature [°C] | 5 - 35 | |
| Optimum humidity | ≤ 85% | |
| Pot life at 20°C | ≈ 4h | |
| The thickness of the sprayed coating - Dry layer thickness while using | | |
| Dry layer [µm] | Wet layer [µm] | Theoretical efficiency [m ² /l] |
| 60 | 110 | 9,0 |
| 100 | 185 | 5,5 |

Technological properties*

| | |
|--|----------|
| Component A:B ratio - by weight | 100 : 16 |
| Component A:B ratio - by volume | 4 : 1 |
| Dry content (by volume) | 55% ± 2% |
| Dry content (by weight) | 68% ± 2% |
| Layer curing time: dry 60 µm / wet 110 µm - temperature 5°C | |
| Dust dry [h] | 2 |
| Tack free time [h] | 8 |
| Next layer time [h] | 8 |
| Total drying time (possibility of mechanical loading) [days] | 12 |
| Layer curing time: dry 60 µm / wet 110 µm - temperature 10°C | |
| Dust dry [h] | 1 |
| Tack free time [h] | 4 |
| Next layer time [h] | 5 |
| Total drying time (possibility of mechanical loading) [days] | 6 |
| Layer curing time: dry 60 µm / wet 110 µm - temperature 23°C | |
| Dust dry [min] | 30 |
| Tack free time [h] | 2,5 |
| Next layer time [h] | 2 |
| Total drying time (possibility of mechanical loading) [days] | 3 |
| Layer curing time: dry 60 µm / wet 110 µm - temperature 35°C | |
| Dust dry [min] | 15 |
| Tack free time [h] | 1 |
| Next layer time [h] | 1 |
| Total drying time (possibility of mechanical loading) [days] | 2 |

Transport and storage

Store in dry, well ventilated room, in tightly closed containers. Protect against moisture access and direct exposure to sunrays. Store away from heat sources, in the container originally packaged in a vertical position.

Containers opened before should be tightly closed and stored in position making out-flow impossible.

| | |
|---|---------|
| Permissible temperature during transport [°C] | 5 - 30 |
| Recommended storage temperature [°C] | 15 - 30 |

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Storage life from manufacture date, if stored in recommended conditions and in original containers:

12 months

Application safety

It is obliged to follow the recommendations included in The Safety Data Sheet of the product and to use it in accordance with the security requirements wearing proper working cloths, gloves and glasses. It is advised not to inhale the fumes and to avoid direct contact with the skin and the eyes.

While working in closed area, as well as during the drying/hardening process it is obliged to provide proper ventilation. Completely hardened layer remains neutral to health and the environment.

*Notes

Data presented in this information have been obtained during the system foaming in model conditions. The results obtained when foaming in other conditions can be slightly different from published.

The user is obligated to have a valid technical data sheet and safety data sheet of the product, which is provided by the manufacturer during the sale and every time on the customer's request.

The information in this data sheet corresponds to our knowledge and experiences at the present time. The information does not constitute legally binding assurance of properties. Before you use the product, check this on its suitability. Since the processing are beyond our control, it is subject solely to user.

Prior to processing the user must carefully read aforementioned documentation and follow the rules of procedure for product use.

Annex
DEW POINT TEMPERATURE AT RELATIVE AIR MOISTURE

| Air temperature | RELATIVE AIR HUMIDITY | | | | | | | | | | | Air temperature |
|-----------------|-----------------------|------|------|------|------|------|------|------|------|------|------|-----------------|
| | 45% | 50% | 55% | 60% | 65% | 70% | 75% | 80% | 85% | 90% | 95% | |
| 2°C | -7,7 | -6,6 | -5,4 | -4,4 | -3,2 | -2,5 | -1,8 | -1,0 | -0,3 | 0,5 | 1,2 | 2°C |
| 4°C | -6,1 | -4,9 | -3,7 | -2,6 | -1,8 | 0,9 | -0,1 | 0,8 | 1,6 | 2,4 | 3,2 | 4°C |
| 6°C | -4,5 | -3,1 | -2,1 | -1,1 | -0,1 | 0,8 | 1,9 | 2,7 | 3,6 | 4,5 | 5,4 | 6°C |
| 8°C | -2,7 | -1,6 | -0,4 | 0,7 | 1,8 | 2,8 | 3,8 | 4,8 | 5,7 | 6,5 | 7,3 | 8°C |
| 10°C | -1,3 | 0,0 | 1,3 | 2,5 | 3,7 | 4,8 | 5,8 | 6,8 | 7,7 | 8,5 | 9,3 | 10°C |
| 12°C | 0,4 | 1,8 | 3,2 | 4,5 | 5,6 | 6,7 | 7,8 | 8,7 | 9,6 | 10,5 | 11,3 | 12°C |
| 14°C | 2,2 | 3,8 | 5,1 | 6,4 | 7,6 | 8,7 | 9,7 | 10,7 | 11,6 | 12,6 | 13,4 | 14°C |
| 15°C | 3,1 | 4,7 | 6,1 | 7,4 | 8,5 | 9,6 | 10,7 | 11,7 | 12,6 | 13,5 | 14,4 | 15°C |
| 16°C | 4,1 | 5,6 | 7,0 | 8,3 | 9,5 | 10,6 | 11,7 | 12,7 | 13,6 | 14,6 | 15,5 | 16°C |
| 17°C | 5,0 | 6,5 | 7,9 | 9,2 | 10,4 | 11,5 | 12,5 | 13,6 | 14,5 | 15,6 | 16,2 | 17°C |
| 18°C | 5,9 | 7,4 | 8,8 | 10,1 | 11,3 | 12,4 | 13,5 | 14,6 | 15,4 | 16,3 | 17,3 | 18°C |
| 19°C | 6,8 | 8,3 | 9,8 | 11,1 | 12,3 | 13,4 | 14,5 | 15,5 | 16,4 | 17,4 | 18,2 | 19°C |
| 20°C | 7,7 | 9,3 | 10,7 | 12,0 | 13,2 | 14,4 | 15,5 | 16,5 | 17,4 | 18,4 | 19,2 | 20°C |
| 21°C | 8,6 | 10,2 | 11,6 | 12,9 | 14,2 | 15,4 | 16,4 | 17,4 | 18,4 | 19,3 | 20,2 | 21°C |
| 22°C | 9,5 | 11,2 | 12,5 | 13,9 | 15,2 | 16,3 | 17,4 | 18,4 | 19,4 | 20,3 | 21,2 | 22°C |
| 23°C | 10,4 | 12,0 | 13,5 | 14,9 | 16,0 | 17,3 | 18,4 | 19,4 | 20,4 | 21,3 | 22,2 | 23°C |
| 24°C | 11,3 | 12,9 | 14,4 | 15,7 | 17,1 | 18,2 | 19,2 | 20,3 | 21,4 | 22,3 | 23,2 | 24°C |
| 25°C | 12,2 | 13,8 | 15,4 | 16,7 | 18,0 | 19,1 | 20,2 | 21,6 | 22,8 | 23,3 | 24,2 | 25°C |
| 26°C | 13,2 | 14,8 | 16,3 | 17,7 | 18,9 | 20,1 | 21,3 | 22,3 | 23,3 | 24,3 | 25,2 | 26°C |
| 27°C | 14,1 | 15,7 | 17,2 | 18,6 | 19,8 | 21,1 | 22,2 | 23,3 | 24,3 | 25,2 | 26,1 | 27°C |
| 28°C | 15,0 | 16,6 | 18,1 | 19,4 | 20,9 | 22,1 | 23,2 | 24,3 | 25,3 | 26,2 | 27,2 | 28°C |
| 29°C | 15,9 | 17,6 | 19,0 | 20,5 | 21,8 | 23,0 | 24,2 | 25,2 | 26,2 | 27,3 | 28,2 | 29°C |
| 30°C | 16,8 | 18,4 | 20,0 | 21,4 | 23,7 | 23,9 | 25,1 | 26,1 | 27,2 | 28,2 | 29,1 | 30°C |
| 32°C | 18,6 | 20,3 | 21,9 | 23,3 | 24,7 | 25,8 | 27,1 | 28,2 | 29,2 | 30,2 | 31,2 | 32°C |
| 34°C | 20,4 | 22,2 | 23,8 | 25,2 | 26,5 | 27,9 | 28,9 | 30,1 | 31,2 | 32,1 | 33,1 | 34°C |
| 36°C | 22,2 | 24,1 | 25,5 | 27,0 | 28,4 | 29,7 | 30,9 | 32,0 | 33,0 | 34,2 | 35,1 | 36°C |
| 38°C | 24,0 | 25,7 | 27,4 | 28,9 | 30,3 | 31,6 | 32,8 | 34,0 | 35,0 | 36,1 | 37,0 | 38°C |
| 40°C | 25,8 | 27,7 | 29,2 | 30,8 | 32,2 | 33,5 | 34,7 | 35,9 | 37,0 | 38,1 | 39,1 | 40°C |
| 45°C | 30,3 | 32,2 | 33,9 | 35,4 | 36,9 | 38,2 | 39,5 | 40,7 | 41,9 | 43,0 | 44,0 | 45°C |
| 50°C | 34,8 | 36,6 | 34,5 | 40,1 | 41,6 | 43,0 | 44,3 | 45,6 | 46,8 | 47,9 | 49,0 | 50°C |

From the table you can see at which surface temperature condensation occurs.