TECHNICAL DATA SHEET

WEGZINC 401

PRODUCT DESCRIPTION

Two-component inorganic zinc ethyl silicate shop primer. Provides good anticorrosive protection even after heating up to 800°C. Does not interfere with welding or gas cutting.

RECOMMENDED USE

Specially developed for protection of steel during construction and assembly in new works. Used when quick welding processes are required. Indicated to reduce secondary surface preparation.

CERTIFICATIONS AND APPROVALS

Pre-qualified according to NORSOK M-501, Edition 5, System 7.

Pre-qualified according to NORSOK M-501, Edition 5, System 1.

Complies with IMO Resolution MSC.215 (82) for ballast tank coatings, in accordance with certifications by DNV and RMRS.

This product is certified as part of an approved paint scheme in accordance with the MED Directive 2014/90/EU, in compliance with IMO Resolution MSC 307 (88) - Annex 1 - Parts 2 and 5 tests.

Certified by DNV for weldable shop primer testing.

Weldable shop primer, in accordance with certifications by DNV, LLOYD'S and RMRS.

When supplied to comply with the ROHS Directive (Restriction of Certain Hazardous Substances), this product includes the letter R in its nomenclature description.

PACKAGING

Component A	3.6L Package containing 1.44L 20L Package containing 8L
Component B	3.6L Package containing 2.16L 20L Package containing 12L

CHARACTERISTICS

Color	Gray. Green. Red Oxide.
Gloss	Matte
VOC content	1380.10 g/l
Volume Solids	25 ± 2% (ISO 3233)
Shelf Life	6 months
Dry Film Thickness	15 µm - 20 µm
Theoretical Coverage	14,29 m2/l without dilution at a dry film thickness of 18 µm. Loss factors during application are not considered.

DRYING

Drying

	10 °C	25 °C	35 °C
Stickiness	-	3 min	3 min

SURFACE PREPARATION

Standard Surface Preparation

The performance of this product is related to the degree of surface preparation. In case of doubts, for more information, consult WEG's Technical Department.

The surface must be clean, dry, and free of contaminants. Completely remove oils, greases, and fats according to SSPC-SP1.

Remove accumulated dirt using a dry brush, clean dry cloth, compressed air blow, vacuum, or a

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combination of these. Remove soluble salts by washing with plenty of fresh water, preferably under low pressure (up to 5,000 psi), according to SSPC-SP12/NACE No. 5 standard.

Recommended Surface Profile

It is recommended a roughness profile between 40 and 60 micrometers.

Abrasive Blasting

Perform abrasive blasting to near-white metal, Sa 2½ grade, according to ISO 8501-1 visual standard (A Sa 2½, B Sa 2½, C Sa 2½, D Sa 2½), or according to SSPC-SP10/NACE No. 2, visual standard SSPC-VIS 1 (A SP10, B SP10, C SP10, D SP10, G1 SP10, G2 SP10, G3 SP10).

The steel grit used must be angular or a mix of angular 610-991 ¼m and spherical610-1397 ¼m, predominating the angular profile.

Inspect the freshly blasted surface, observing defects that may appear after treatment. Correct them by grinding, filling with welds and/or epoxy putty.

For areas near marine environments, wash with fresh water at low pressure (minimum 3,000 psi) before abrasive blasting. In some cases, repeat washing after blasting to remove soluble contaminants and perform a new abrasive blasting.

If oxidation occurs between the end of abrasive blasting and coating application, the surface must be blasted again until the specified visual standard is achieved.

Carbon Steel Surfaces

Hard surface layers (e.g., layers resulting from flame cutting) must be removed by grinding before starting abrasive blasting.

All welds must be inspected and, if necessary, repaired before completing abrasive blasting. Porosities, cavities, weld splatter, etc., must be repaired with proper mechanical treatment or welding repair. In other areas, round edges and sharp corners (r e 2 mm, ISO 8501-3).

APPLICATION PREPARATION

Mixing	Homogenize the content of each component using mechanical or pneumatic stirring (A and B). Ensure no sediment remains at the bottom of the container. Add component B to component A in the indicated mixing ratio under stirring until completely homogenized, respecting the mixing ratio. Application must only be carried out with equipment that provides mechanical agitation during the entire application. Then pass the mixture through a 30-70 mesh sieve.
Mixing Ratio	By volume: 1 A x 1.5 B.
Thinner	ETHYL SILICATE DILUENT 9002
Dilution	Depending on the application method, dilute to a maximum of 5%.
Notes	The amount of Diluent may vary depending on the type of equipment used and environmental conditions during application. Only add Diluent after complete mixing of the other components. Do not dilute with solvents not allowed by local legislation, and do not exceed the indicated dilution percentage. Excessive dilution may affect film formation, appearance, and make it difficult to achieve the specified thickness. Only add the diluent after completely mixing components A and B.
Pot Life	24 h The shelf life of the mixture is reduced as the ambient temperature increases. The pot-life test of the mixture is carried out according to ABNT NBR 15742; however, different volumes of paint prepared at once, combined with varying ambient and paint temperatures, will affect the mixture's shelf life, potentially resulting in outcomes different from those

		stated in this technical bulletin.
	Induction Time	No induction time required. In very hot locations, we recommend consulting WEG's Technical Department.

APPLICATION METHODS

Conventional Spray Gun	Spray gun: JGA 502/3 Devilbiss or equivalent Fluid nozzle: EX Air cap: 704 Atomization pressure: 50 - 70 psi Tank pressure: 10 - 20 psi.
Airless Spray Gun	Airless: Use minimum pump 60:1 Fluid pressure: 2000 - 3000 psi Hose: 1/4" inner diameter Nozzle: 0.017" - 0.025". Filter: mesh 60.
Roller	Use a short-haired, seamless wool or synthetic roller for epoxy paints. Recommended only for small areas or touch-ups. Use a low-pile seamless wool roller or synthetic roller for epoxy paints.
Brush	Recommended only for small area touch-ups or "stripe coat" (screws, nuts, weld beads, sharp corners, and touch-ups).
Cleaning of the equipments:	ETHYL SILICATE DILUENT 9002
Notes	The data presented serves as a guide and similar equipment may be used. Changes in pressures and nozzle sizes may be necessary to improve spraying characteristics. Purge the compressed air line to avoid paint contamination. Do not allow catalyzed product to remain in contact with application equipment, as at temperatures above the indicated "pot life", the paint will show variation in flow and will harden, making cleaning difficult. Before application, ensure that the equipment and respective components are clean and in optimal condition. After mixing two-component products, if there are application stops and the pot life has been exceeded (paint shows variation in flow), it can no longer be re-thinned for later application. In spray application, overlap each gun pass by 50%, finishing with a cross pass. This technique avoids uncovered or unprotected areas and ensures proper aesthetic finish. Reinforce all sharp corners, gaps, and weld beads with a brush to avoid premature failures in these areas. Clean all equipment immediately after use. It is considered good practice to periodically wash the spraying equipment during the day. The cleaning frequency depends on the amount sprayed, temperature, and elapsed time, including all delays.

APPLICATION PERFORMANCE

Application of film thickness above the recommended value may result in paint film defects such as cracking or fractures, and will lead to loss of weldability.

During application, the paint must remain under constant agitation. Failure to agitate may cause zinc sedimentation, leading to coating defects such as lack of adhesion, cracking, and fissures. The same problems may occur when applying above the recommended thickness.

It is recommended that, before applying the subsequent coat, a curing test be performed with a specific solvent according to ASTM D 4752. A value of 4 indicates a satisfactory degree of cure, allowing reapplication.

For coatings applied in coastal areas exposed to sea spray, it is recommended to wash with fresh water between coats to remove deposited impurities.

Do not apply the product after the pot life has been exceeded.

As this is a primer, color variation between batches of this material may occur.

For optimal application properties, the paint temperature should be between 21°C and 27°C before mixing and application.

Painting is recommended only if surface temperature is at least 3°C above the dew point.

Substrate temperature, climatic and environmental conditions during application and curing, as well as applied film thickness, may affect drying time.

Wegzinc 401 can be repainted for a prolonged period, even beyond six months, provided there is no corrosion. If corrosion exists, treat the area according to the "Surface Treatment" item.

Paintings performed with varying application methods on the same project may result in differences in gloss and final appearance.

Small variations in color, appearance, and gloss (more noticeable in dark colors), as well as delayed curing and performance compromise, may occur during high humidity, rainy days, cold locations, or when parts dry outdoors.

SAFETY PRECAUTIONS

Product developed for industrial use intended for handling by qualified professionals. Carefully read all information contained in the SDS of this product, available at: www.weg.net.

Store in a covered and well-ventilated place. Keep the container tightly closed and away from sources of heat or ignition.

Use only in well-ventilated areas, avoiding the accumulation of flammable vapors. Keep the product away from heat and sources of ignition.

Do not inhale mists/vapors/aerosols generated during handling and/or application. Use protective gloves/protective clothing/eye protection/face protection.

Empty containers and materials with paint residues must be disposed of according to current legislation. Take care of the environment.

NOTE

The information contained in this technical bulletin is based on the experience and knowledge acquired in the field by WEG's technical team.

In the event of using the product without prior consultation with WEG regarding its suitability for the purpose for which the customer intends to use it, the customer acknowledges that the use will be at their own exclusive responsibility, and WEG is not liable for the behavior, safety, suitability, or durability of the product.

Some information mentioned in this bulletin is only an estimate and may vary due to factors beyond the manufacturer's control. Therefore, WEG does not guarantee and assumes no responsibility for performance, efficiency, or any material or personal damages resulting from the incorrect use of the products in question or from the information contained in this Technical Bulletin.

The information contained in this technical bulletin is subject to periodic modifications, without prior notice, due to our policy of continuous improvement and evolution of our products and services, providing quality solutions to meet the needs of our customers.

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