

AQUAZINGA

AQUAZINGA is a two-component, high performance, 100% water-based anti-corrosion coating based on inorganic zinc silicates. With 94% zinc in the dry film, it provides true cathodic protection to ferrous metals, comparable to hot-dip galvanising or metallisation, but with the flexibility of on-site application.

AQUAZINGA offers self-healing properties that actively protect exposed steel, even after mechanical damage, ensuring long-term integrity and lowering maintenance needs and total cost of ownership. Designed for durability in aggressive environments, AQUAZINGA resists abrasion, chemicals, high temperatures (up to 600°C) and severe industrial or marine conditions. Its versatile application methods suit both new constructions and maintenance projects.

The included additive AD-AZ, improves surface wetting, increases surface tolerance and reduces the risk of cracking at higher film builds.

Used as a stand-alone system or in duplex coating systems, AQUAZINGA delivers long-lasting protection, reduced maintenance costs and sustainable corrosion control for infrastructure, energy, marine and heavy industry applications.

PHYSICAL DATA AND TECHNICAL INFORMATION

WET PRODUCT

Type	Water-based inorganic zinc silicate
Density	3,13 kg/dm ³ (± 0,05 kg/dm ³)
Solid content	84% by weight (±1%) 75% by volume (±1%)
Type of thinner	No thinner required.
Flash point	N/A – water-based
VOC	0 g/L

DRY FILM

Colour	Grey
Gloss	Matt
Typical dry layer thickness	25 – 100 µm DFT (microns) (See clause Recommended Systems)
Zinc content	94% (±1%) by weight, zinc purity of 99,995% (ASTM D520 – Type III).
Temperature resistance	From -90°C to +450°C, with peaks up to +600°C
pH resistance	Atmospheric: 3.5 to 12.5 pH Immersion: 3.5 to 10.5 pH
UV resistance	Excellent
Abrasion resistance	Excellent
Solvent resistance	Excellent

CONSERVATION

Shelf life	Minimum 12 months in the original, unopened packaging.
Storage	Store in a dry storage area between +5°C and +30°C.
Pot life	3 hours at 20°C

APPLICATION METHODS

Brush – Roller – Spray (air assisted and airless)

APPLICATION CONDITIONS

Ambient temperature	+5°C – +35°C Do not apply AQUAZINGA under bright, hot sunshine
Relative humidity	Minimum 35% RH Maximum 95% RH Do NOT apply on a damp or wet surface
Surface temperature	Minimum 3°C above dewpoint Maximum 30°C No visual presence of water or ice
Product temperature	+5°C – +30°C

COVERAGE AND CONSUMPTION

Theoretical	Coverage	Consumption
60 µm DFT	3,99 m ² /kg or 12,5 m ² /L	0,25 kg/m ²
80 µm DFT	3,00 m ² /kg or 9,38 m ² /L	0,33 kg/m ²
<i>Practical</i> : Depends on the roughness profile of the substrate and the application method.		

PACKAGING

10 kg	Available
20 kg	Available

SURFACE PREPARATION

GENERAL

AQUAZINGA is to be applied on a clean, rough and dry surface so that the active zinc particles are in **direct contact with the steel or zinc substrate**. The prepared surface shall be free from oil, grease, dirt, dust, rust, mill scale, paint, oxides, corrosion products and other foreign matter.

SURFACE PRE-CLEANING

The surface shall first be cleaned to remove oil, grease, dirt and other contamination in accordance with **ISO 8504-2, ISO 8504-3 or SSPC-SP 1**. Recommended cleaning methods are:

- Steam cleaning at min. 140 bar and 80°C
- High-pressure waterjetting at min. 700 bars
- Freshwater pressure washing with a cleaner or detergent at min. 150 bar

Any remaining residue from the pre-cleaning process shall be removed by a final rinse with clean water and blown dry with clean dry compressed air.

Consult a ZINGAMETALL representative / distributor for maximum allowable surface salt concentration.

SURFACE PREPARATION

It is strongly recommended that all surfaces shall be in compliance with **ISO 8501-3 Table 1, minimum P2** and that all sharp edges shall have a radius of minimum of 2 - 3 mm prior to any surface preparation work.

Steel

Surface cleanliness	Minimum
Abrasive grit blasting	Sa 2.5 (ISO 8501-1) / SSPC-SP 10 / NACE No. 2
Hand / Power tool cleaning	SSPC-SP 11
UHP waterjetting	SSPC-SP WJ-1 / NACE WJ-1 / Wa 3 (ISO 8501-4)
Laser cleaning	PLA-TA (AMPP SP21511-1)
Surface profile	Minimum - 25 – 50 µm Rz / ISO 8503-1 - Fine (G)

Hot-Dip Galvanised steel (HDG), ZAM (zinc, aluminium, magnesium) and Metallised Steel (TSZ or TSZA)

Surface cleanliness	HDG or ZAM	TSZ or TSZA
New	Sweep blasting: SSPC-SP 16 / ASTM D 6386 Hand and/or power tool cleaning: Controlled roughening of the surface	Newly metallised surfaces have a porous structure that ensures good adhesion of AQUAZINGA. Remove any zinc corrosion products before application.
Weathered and intact – <i>Removing white rust (zinc corrosion products)</i>	Steam cleaning or high pressure waterjetting Sweep blasting: SSPC-SP 16 / ASTM D 6386 Hand and/or power tool cleaning	
Surface profile	Minimum 20 µm Rz	

De-dusting	Prior to the application of AQUAZINGA the surface shall be properly de-dusted with non-contaminated compressed air. Maximum allowed dust contamination: Class 2 - ISO 8502-3
Maximum time to application	Apply the AQUAZINGA layer as quickly as possible on the prepared metal substrate to prevent any potential contamination or corrosion prior to coating. Otherwise, the surface will need to be cleaned again following the previously outlined procedure.

For more information, please consult a ZINGAMETALL representative / distributor.

APPLICATION INSTRUCTIONS

GENERAL

Mixing	Stir the binder in the original can and pour the zinc powder progressively into the binder while mixing until a homogeneous mixture is obtained. The optional additive AD-AZ is added to the binder before addition of the zinc powder. Insufficient mixing or incorrect mixing ration will weaken the properties of the coating. AQUAZINGA should be stirred continuously during application.
Filtering	It is strongly recommended to filter the AQUAZINGA through a 180 - 400 µm (40 - 80 mesh) sieve after mixing. If not filtered, the spray equipment may clog, resulting in inconsistent spraying.
Thinning	No thinning of AQUAZINGA required. For air-assisted spraying, AQUAZINGA can be diluted up to 2% with fresh tap water.
Stripe coat	It is always recommended to treat corners, edges, nuts, bolts and bolted joints by brush before applying a uniform coat.
Cleaning	Immediately after using the spraying equipment, it shall be rinsed with fresh water. Brushes and rollers shall also be rinsed with water. Do not wait longer than 10 minutes before rinsing the spraying equipment if you have stopped spraying AQUAZINGA.
Curing	Adequate air circulation is necessary for proper curing of AQUAZINGA. However, excessive airflow that causes very rapid water evaporation can negatively affect the curing process. During curing, AQUAZINGA must be protected from rainfall.

BRUSH AND ROLLER

Dilution	AQUAZINGA is ready for use.
Type of brush or roller	- Industrial brush - Short hair roller (mohair)

AIR-ASSISTED SPRAYING

Dilution	0 – 2%
Air pressure	2,0 – 4,0 bar (conventional) 1,0 – 2,0 bar (HVLPI)
Pot pressure	0,8 – 1,5 bar
Nozzle orifice size	1,8 - 2,5 mm
Notes:	- Remove all filters from the pistol to avoid blockages. - Use short feeding lines in a pressure-pot setup (<5m).

AIRLESS SPRAYING

Dilution	AQUAZINGA is ready for use.
Pump ratio	Minimum 45/1
Fluid pressure	Min. 230 bar
Nozzle orifice size	0,017 – 0,021 inch
Notes:	- A 60 mesh tip filter and pump filter is advised to avoid blockage of the spray gun. - Continuous stirring during application is advised. - Avoid standstill of AQUAZINGA in the pump and feeding lines.

DRYING TIME (80 µm DFT in a well-ventilated environment)

Air Temp.	10°C	20°C	30°C
Touch dry	90 minutes	30 minutes	15 minutes
Dry to handle	4 hours	90 minutes	60 minutes
Fully cured	36 hours	24 hours	16 hours
Drying time is strongly dependent on relative humidity values. Avoid direct contact with water for at least 24 hours. The drying time before immersion should be at least 7 days, preferably 14 days.			

OVERCOATING (80 µm DFT at a relative humidity of 75%)

Overcoating AQUAZINGA with a compatible paint

AQUAZINGA can be overcoated with various compatible paints. **Use the mist/full coat method.** First a thin continuous mist coat is applied to allow air passage and degas the porosities of the surface. The full coat can be applied 15 – 30 minutes after the mist coat application.

Air Temp.	10°C	20°C	30°C
Minimum*	6 hours	2 hours	90 min.

**after touch-dry*

For more details, refer to our overcoating guideline or contact a ZINGAMETALL representative / distributor.

Maximum overcoating time

Maximum overcoat time is limited and depends on the environmental conditions. Zinc corrosion products may already form 48 hours after application, preventing good adhesion of the subsequent coat. If zinc corrosion products have formed on the surface, they shall first be removed.

For surface preparation on old AQUAZINGA surfaces, contact a ZINGAMETALL representative / distributor.

RECOMMENDED COATING SYSTEMS

AQUAZINGA STAND-ALONE

- AQUAZINGA can be used as a stand-alone system, applied in maximum 1 layer to obtain a total DFT of 25 up to 100 μm .
- The AQUAZINGA stand-alone system has been tested according to ISO 12944-6:
 - **AQUAZINGA 75 μm DFT – C4 Very High ; C5 High**
- When applied in a DFT **higher than 120 μm the coating can start to crack**. Excessive thickness should be avoided as it will reduce the effectiveness of the system. The use of the included **additive AD-AZ allows applications up to 250 μm DFT** without cracking.

AQUAZINGA DUPLEX OR TRIPLEX SYSTEM

- In a duplex or triplex system, AQUAZINGA should be applied in one layer of 40 – 100 μm DFT.
 - The surface of the AQUAZINGA should be free from zinc salts and other contaminations prior to application of a topcoat.
 - AQUAZINGA can be top coated with a wide range of compatible sealers and topcoats.
- For application of water-based topcoats or for more information, please consult a ZINGAMETALL representative / distributor or the ZINGAMETALL website (www.zinga.eu).

HEALTH & SAFETY

Always wear appropriate personal protective equipment (PPE) such as safety gloves and goggles.
For detailed information about the health and safety hazards and precautions for use, refer to the AQUAZINGA safety data sheet.

For more specific and detailed recommendations concerning the use and application of AQUAZINGA, please contact the Zingametall representative / distributor.

The information on this sheet is merely indicative and is given to the best of our knowledge based on practical experience and testing. The conditions or methods of handling, storage, use or disposal of the product cannot be controlled by us and are therefore outside our responsibility. For these and other reasons we retain no liability in case of loss, damage or costs that are caused by or that are linked in any way to the handling, storage, use or disposal of the product. Any claim concerning deficiencies must be made within 15 days upon reception of the goods quoting the relevant batch number. We retain the right to change the formula if properties of the raw material are changed. This data sheet replaces all former specimens.