

Technical Data Sheet

AQUA ROVAL Cold Galvanizing Compound



Description

AQUA ROVAL Cold Galvanizing Compound contains 95% zinc powder in its dry film. Equivalent anti-corrosion performance to hot-dip galvanizing. It is an environmentally friendly water-based type while keeping the outstanding anti-corrosion ability of ROVAL Cold Galvanizing Compound.

Liquid product

Components (Packed separately)	Zinc powder Paint solution
Specific Gravity (Mixed state)	3.10kg/L (± 0.10kg/L)
Dilution	Water
Theoretical coverage	For 40µm DFT: 4m ² /kg or 0.25kg/m ² For 80µm DFT: 2m ² /kg or 0.5kg/m ²
Application Conditions	Temperature 5-40°C, Humidity < 85% The metal substrate temperature < 50°C
Shelf life (Not mixed)	1 years
Pot life (Mixed state)	Within 8 hours
Storage	Store in a cool, well-ventilated place at 5°C to 25°C.

Dry film

Color	Gray
Gloss	Matt
Zinc content	95% (± 1%) by weight, use zinc ingot with a purity of 99.995%. AQUA ROVAL conforms to the standard ASTM A780 in regard of its use as repair coating for hot-dip galvanizing.
Dry film thickness	80µm (40µm x 2 coat)
Drying time	For 40µm DFT at 20°C, humidity 50% condition >> Touch dry and overcoating: 30 min >> Fully cured: 24 hours

Surface Preparation

AQUA ROVAL requires direct contact between the zinc dust in the film and the metal substrate for optimum performance. Since the surface must be dry and free of any other paint and contaminants, employ adequate methods to remove them thoroughly.

- (1) Salt: Use high pressure washing to remove salt deposits.
- (2) Oil: Wipe off perfectly with solvent rags.

	Steel surface		Galvanized surface	
Purpose	Hot-dip-galvanizing alternative	Long-term rust prevention	Improved anti-corrosion performance of new galvanized surfaces. Renovation of old galvanized surfaces.	
Surface condition	Mill scale, Red rust, Old paint film, Welded part		Red rust, Old paint film, Welded part	No red rust (Only white rust)
Surface preparation	ISO8501 Sa2 1/2 *1 Remove all the rust and mill scale by sandblasting	ISO8501 St3 Use a power tool to expose a clean metal surface.	ISO8501 St2 Use a hand tool to remove white rust.	

*1 Confirmation method: Compare the surface with standard photograph by visual observation.

Adequate agitation of products

AQUA ROVAL pots are sold with their zinc powder and paint solution packaged separately. Just before use, stir the paint solution, then add the zinc powder little by little. After that, stir the mixture well with a **power paint mixer** until the lumps disappear.

Powder : liquid = 4 : 1

Pot-life: The mixture should be used up within **8 hours**.

Coating method

Brush / Roller	Dilution by water: 0~2%
Conventional spray	Use Gravity feed spray gun. Nozzle size: 2.0~3.0 mm, Pressure: 0.3MPa Dilution by water: 0~5%
Air-less spray	Tip size: above 0.017inches (e.g.517) Pressure: above 20MPa, Gun filter: #50~60 Dilution by water: 0~2%

Coating Specifications

AQUA ROVAL + AQUA ROVAL

	Theoretical Coverage (g/m ²)	Practical Coverage *1		Coating Interval (min)	Dry film Thickness (μm)
		BRUSH (g/m ²)	SPRAY (g/m ²)		
Surface Preparation	Refer to [Surface preparation]				
(1 st coat) AQUA ROVAL	250	300	325	> 30 *2	40
(2 nd coat) AQUA ROVAL	250	300	325		40
Total	500	600	650		80

*1 Practical coverage includes 20% of loss for brush application, and 30% for spray application

*2 Depends on temperature and humidity

Properties

Test item	Method used	Result
Hardness	JIS K5600-5-4:1999 (ISO/DIS15184:1996) Pencil scratching	Pencil HB
Adhesion	JIS K5600-5-6:1999 (ISO2409:1992) Peel off a sticky tape on 25 cells check pattern (square: 2mm x 25)	No abnormality
Heat resistance	Electrical constant temp. drier 170°C, 24 hours	No abnormality
Cold resistance	Low temp. cycle test for 72 cycles <1 cycle> Left at -30°C for 5 hours and Left at +10°C for 1 hour	No abnormality

Anti-corrosion performance

Test item	Testing method	Duration	Result
Water immersion	Immersed in ion exchanged water	10 days	No abnormality other than white rust
Salt spray	JIS K5600-7-1:1999 (ISO7253:1984) 5%NaCl (pH6.5~7.2) Temp of spray chamber: 35±1°C	2256 hours	No abnormality other than white rust

Packaging & Painting area

1 kg set (Powder 800g : Liquid 200g)	2 m ² / set *	4 sets / case
5 kg set (Powder 4kg : Liquid 1kg)	10 m ² / set *	1 set
20 kg set (Powder 16kg : Liquid 4kg)	40 m ² / set *	1 set

* The theoretical coating area is displayed. For practical coverage, consider a 20% loss with brush application, 30% loss with spray application.

Refer to

✓ AQUA ROVAL Safety Data Sheet



<https://rovalworld.com/>