



Spécialiste en Galvanisation / Galvanizing Specialist
 Distributeur exclusif en Amérique du Nord, au Mexique, en Nouvelle-Zélande et en Australie
 Canadian exclusive master distributor for North America, Mexico, New Zealand and Australia

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RUST-ANODE®

TECHNICAL DATA SHEET
PRODUCT #300018B

RE-GALVANIZING OF EXISTING ELECTRICAL OR TELECOMMUNICATIONS TOWERS

GENERAL INFORMATION

Unique industrial galvanizing technology rich in organic zinc by electro-chemical bonding with 96% (±2%) of zinc in the dry layer
 Especially suitable for the refurbishment and repairs of hot-dip galvanized electrical transmission and telecommunication towers
 Provides effective galvanic protection similar to hot-dip galvanizing
 Offers a life span equal to hot-dip galvanizing under the same exposure conditions
 Good UV resistance
 Evaluation by EPRI (Electric Power Research Institute) Aging performance, service life and evaluation of field applications
 Hydro-Québec approval - TET-LIA- N-SUP0012 (Towers maintenance)
 Hydro-Québec approval - SN31.101 (maintenance of electrical substations)
 CFIA approval (The Canadian Food Inspection Agency)
 High immersion resistance in fresh, salt, waste and saline environments (ASTM G44-99 (2013))
 Single component designed to provide excellent performance in a single system
 Applicable to a surface with non-friable rust
 VOCs in accordance with California standards
 Ease of application on site (Mitt,Roller,Brush,Gun)
 Does not distort metals
 Ability to be welded
 Recoatable by itself at all times without abrasion

RECOMMENDED USE

Existing Transmissions and Telecommunication Towers
 Hot-Dip Galvanized Refurbishment
 Distribution Substation and Substation Infrastructure
 Concrete Reinforcement Rebars*
 Tower Legs and Anchors*

* Contact our technical support for an adapted procedure 1-888-743-2046

STORAGE	HOMOLOGATIONS ET APPROBATIONS
Keep in a dry area, between 5°C and 20°C (41°F to 68°F) Keep away from direct sun exposure Unopened pail shelf life: 48 months Opened pail: Few months in standard storage conditions	Hydro-Québec approval - SN31.101 (maintenance of electrical substations) Hydro-Québec approval - TET-LIA- N-SUP0012 (Towers maintenance) CFIA approval (The Canadian Food Inspection Agency) Zinc-Rich Compound approved by the Canadian General Standards Board (CGSB)
PACKAGING FORMAT	SAFETY
12 kg (Format 5 liters / 1.3 US gallons) (Solvent Suspension Fluide 5 liters)	Make sure that you understand and respect this technical data sheet, contact our customer service if necessary. Also consult the safety data sheet before use, contact us for the updated version Use adequate personal protective equipment in accordance with local regulations

PERFORMANCE CHARACTERISTICS

Drying and curing times Application of 7.0 mils (175 µm) wet					Characteristics	
	35°F (1.7°C)	77°F (25°C)	100°F (38°C)		Zinc Quantity	96% (±2%) in the dry layer
	50% relative humidity (RH)				Zinc Purity	±99,995% purity
Touch dry	30 minutes	20 minutes	15 minutes		Ready for use	Single component
Dry to handle	40 minutes	30 minutes	20 minutes		Colour	Matt gray RAL # 7001 (not colorable)
To recoat	Minimum	1 hour	1 hour	1 hour	Weight	3,15 Kg/dm ³ ± 0,1
	Maximum	unlimited	unlimited	unlimited	VOC (solvents)	340 grams / liter (± 10)
The drying process varies depending on temperature and humidity					Flash point	29°C (84,2°F)
Relative humidity during the application and drying: maximum 90%					Solvent	Suspension Fluide Orange® (#300025)
See below for other performance characteristics						

Minimum zinc thickness references	Between 6 and 10 mils (150µm and 250µm) wet depending on substrate condition. Contact our technical support before use to obtain our adapted procedure.	Test name	Standard	Rust-Anode®	Hot-dip Galvanized
		Evaluated by ASTM D 610 (rust) and ASTM D714 (blister)			
Performances in hot and cold weather	From -62°C to +120°C (-80°F to +250°F)	Cyclic Corrosion 10,000 hours	ASTM D5894-10 (cold periods)	Rust: Few Blister: None	Rust: None Blister: None
Application temperature (substrate)	From -5 ° C to + 37 ° C (23 ° F to + 98 ° F) The curing time may vary depending on the ambient temperature. The temperature of the substrate to be treated must be a minimum of 3°C (5°F) above the dew point.	Immersion corrosion (salt water) Results at 90 days	ASTM G44-99 (2013) Sodium chloride 3.5%	Rust: <0,01% Blister: None	Rust: 33% Blister: None
Estimated performance	With the same benefits as hot-dip galvanizing when properly applied. Reference -EPRI Report	Test name	Standard	Rust-Anode®	
Resistance in salt water and fresh water immersion	High level of resistance See performance tests ASTM G44-99(2013)	Organic zinc rich	ONGC -1,181/CAN/CGSB-1.181-92	Conform	
		Adhesion	ASTM D3359	5B	
Resistance to Acids / Bases	PH of 5,5 to 9	Flexibility - Folding - Plasticity	ASTM D522, tapered mandrel 1/4, 180°	No Craks No blistering	
		UV	ASTM G154-12a	Little effect	
High plasticity	No cracking – Allows the dilatation of the metallic support when bent. See tests performances ASTM D522, tapered mandrel 1/4, 180°	Salt Spray	ASTM B117/ ISO 12944-6/7253	No Craks No blistering	
		Cathodic detachment	ASTM G8-96(2010)	Pass	
THEORETICAL COVERAGE		Cathodic protection	ASTM G215-17	Same as hot-dip galvanized	
At 1 mil (25µm) dry «899 Pi² / 12Kg or 84m² / 12kg» ASTM D2697 - Dry extract by volume 54,8% Consult our calculation of required pails (for information only) Consult our theoretical coverage guide (for information only)		Weldability	A thin layer can be welded without contaminating the welds (X-ray) (40µm or 1.5 mils dry)		
		Conductivity	The wet film has excellent conductivity		
GENERAL CONDITIONS FOR SURFACE PREPARATION					
The surface must be clean; free of brittle material and / or rust, flash rust, corrosion (black iron oxide), grease, cutting fluids or other visible and non-visible contaminants					
The sharp edges as well as the drill holes should be chamfered. Prioritize continuous weld beads					
If traces of black iron oxide (corrosion) are present, they must clean to bare metal					
When cleaning surfaces, do not use Suspension Fluid, Varsol, Turpentine and/or other products that leave a residual factor on the surfaces. Acetone or MEK are approved					
Then perform the recommended surface preparation					
Surface preparation methods are not limited to our recommendations					
VISIBLE AND NON-VISIBLE CONTAMINANTS DECONTAMINATION					
In the presence of a potentially and geographically saline environment, tests must be carried out and the salts must be removed					
The presence of salts must be less than 7µg/cm²					
If necessary, the CHLOR-RID or HOLDTIGH product must be used and all other products must be approved in writing by Galvatech 2000.					
Observe the manufacturer's recommendations for dilution					
Contaminants shall be eliminated before the surface preparation. Then perform the recommended surface preparation					
Surface preparation methods are not limited to our recommendations					
NEW AND EXISTING STEEL					
(SSPC-SP2) Hand tool, friable material and millscale must be removed completely.					
(SSPC-SP3) Power tool cleaning - Shall be free of all loose materials. Counter to this specification all mill scale shall be removed					
(SSPC-SP6 / NACE 3) Commercial blast cleaning					
NEW HOT-DIP GALVANIZING					
(SSPC-SP1) Solvent degreasing to remove all traces of oil, grease or any other contaminant					
(SSPC-SP2) Cleaning with non-mechanical tools. (Stainless steel brush)					
(SSPC-SP3) Cleaning with power tools					
(SSPC-SP16) The surface must be free of oil, grease, passivating treatment or other contamination.					
For freshly galvanized surfaces (0-1 year) check for the presence of passivating treatments during galvanization (e.g. chromate): «Chromium plating» refers to the treatment of galvanized parts to prevent the appearance of wet storage stains. The presence of chromates or other passivating treatments is detected using a copper sulphate solution. (SSPC-SP16)					
Surface preparation methods are not limited to our recommendations					
Contact our technical support before application for an adapted procedure 1-888-743-2046					
PREPARATION ON AN EXISTING HOT-DIP GALVANIZING OR METALLIZING					
The surface shall be free of rust dust, friable material, oils, grease or other contaminants, including surface salts and the presence of zinc oxide in white powder or crust					
(SSPC-SP1) Solvent degreasing to remove all traces of oil, grease or any other contaminant					
(SSPC-SP2) Cleaning with non-mechanical tools. (Stainless steel brush)					
(SSPC-SP3) Cleaning with power tools					
(SSPC-SP16) The surface must be free of oil, grease, passivating treatment or other contamination.					
Surface preparation methods are not limited to our recommendations					
Contact our technical support before application for an adapted procedure 1-888-743-2046					
PREPARATION OF A SURFACE WITH AN EXISTING PAINT					
The surface must be free of rust dust, friable material, oil, grease or other contaminants					
Adhesion testing shall be performed on the paint remaining after cleaning. (ASTM D6677)					
Perform an application on a small area to ensure product compatibility					
Never apply on bituminous coatings and aluminium paints					
We recommend removing at least 50% of the existing paint to obtain adequate protection					
Surface preparation methods are not limited to our recommendations					
Contact our technical support before application for an adapted procedure 1-888-743-2046					

APPLICATION METHODS - GENERAL INFORMATION

The product is ready to use for application, open the pail and mix at low speed until completely homogenized, do not use an automatic paint shaker.

Apply a stripe coat with a paintbrush on the welds, bolts, edges, hard to reach areas, and around of the interface plates, etc.

Brush, mitt or spray application between 6 and 10 mils (150µm and 250µm) wet depending on substrate condition.

Rough surfaces, caused by surface preparation to remove corrosion, may require a compensating thicker layer.

No dilution is necessary, however it can be diluted with Suspension FluidE to ease the application. (20% maximum dilution)

The use of a wet film thickness gauge is required.

Excess thickness could increase drying time and is not recommended.



TOUCH-UP (facilities or/and on site)

At all times, if touch-ups are necessary, remove the contaminants then apply a generous coat with a paintbrush or a roller and/or a paint gun to, at least, reaching the same thickness as the surrounding layer

NOTE

In the case of project or particular conditions, these data can be adapted, contact our technical support 1 888 743-2046 or by e-mail at info@galvatech2000.com

AVERTISSEMENTS

It is imperative that only Orange® Suspension Fluid (#300025) be used as a diluent. Any other product used may cause an adverse effect on the chemical composition of the product. On the other hand, painting equipment can be cleaned with a paint solvent, as long as it does not leave greasy substances and as long as it is well drained.

The information contained in this document is not exhaustive. Ensure to also consult the material safety data sheet of the product as well as to follow any application protocol or other specific instructions that may be issued by Galvatech. Anyone using the product in a manner other than that recommended (without prior written confirmation from Galvatech as to the suitability of the intended method of use), is being exposed to damage to properties or persons and does so at his own risk. All our recommendations or product statements are correct to the best of our knowledge, but Galvatech cannot guarantee neither the quality or condition of the application surface nor the other factors in the use and application of this product that may affect its performance. Accordingly, unless confirmed in writing by Galvatech, any warranty as to the performance of the product or the achievement of specific results is expressly excluded. Galvatech will not be liable for any loss or damage incurred in connection with storage or use of the product not in accordance with the instructions issued by Galvatech. All other warranties or representations, express or implied, by law or otherwise, including, without limitation, any implied warranties of merchantability or fitness for a particular purpose, are hereby expressly excluded. The information contained in this document is subject to change based on the evolving knowledge of the product and any improvement thereof. It is the responsibility of the user to check with a representative of Galvatech that it has the current version of this technical data sheet and of the material safety data sheet before using the product. All sales are subject to our terms and conditions of sale, available on our website at galvatech2000.com.