

## Product Evaluation

### RE: Review of Zinga Galvanic Protection System

#### **PRODUCT**

Zinga is zinc rich coating which can be applied by spray or brush methods and is suitable for application on ferrous substrates. Zinga is made by ZINGAMETALL located in Belgium and distributed by Merlin Coatings Inc. located in Edmonton, Alberta.

#### **VENDOR CLAIMS AND INFORMATION**

##### **CLAIMS**

Zinga offers the same result as hot-dip galvanization; however it can be applied on site and re-coated without sandblasting. Zinga contains more than 92% pure zinc in its dry form. Zinga acts as a sacrificial anode in an electrolyte solution protecting steel surfaces until the zinc is ultimately dissipated. Product web link: <http://www.zinga-uk.com/> or <http://www.zingacanada.com/pdf/zinga-technical-data-sheet.pdf>.

##### **DESCRIPTION**

Zinga contains, in its liquid form, 80% zinc powder and about 20% liquids (ZINGASOLV). The zinc powder is a natural product which is non-toxic and the solvent contains less than 100 ppm benzenes which are also considered non toxic (by European standards).

##### **POTENTIAL USAGE**

Zinga is a high quality cold galvanizing coating for optimal, long lasting cathodic protection. Zinga can be used on its own as an alternative to hot dip galvanizing, it can also be used as a primer under compatible epoxies, vinyl, polyurethanes, tars and water based paints.

##### **STANDARDS**

SSPC	Steel Structures Painting Council
CGSB	Canadian Government Standards Board
CPCA	Canadian Painting Contractors Association

#### **ALBERTA TRANSPORTATION COMMENTS**

##### **EXPERIENCE**

Alberta Transportation has no experience with this product. Alberta Transportation experience with metallic coating is referenced in the Specifications for Bridge Construction as per the following:

- Structural steel galvanizing repair Section 6, Structural Steel, shall be in compliance with ASTM A780, Method A3, repair using sprayed zinc (Metallizing).
- CSP and SPCSP damaged zinc coating Section 18, CSP & SPCSP Structures, shall be repaired by application of a zinc-rich coating in accordance with CSA G401.
- Bridgerail galvanizing repair Section 12, Bridgerail, shall be in compliance with ASTM A780, Method A3, repair using sprayed zinc (Metallizing).

##### **APPLICABLE STANDARDS**

Repair of galvanizing is specified in the following Bridge Construction Specifications:

- Section 6, Structural Steel
- Section 12, Bridge rail
- Section 18, CSP and SPCSP Structures
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##### **RECOMMENDATIONS:**

Zinga be listed as a Proven Product under Alberta Transportation Products List, Corrosion Protection, Galvanic – Proprietary with the caveats as mentioned in the following section.

**REQUIREMENTS FOR PROJECT USE:**

- The use of this product requires the prior written approval of the Bridge Engineering Section of Technical Services Branch.
- It should only be considered for bridge/culvert rehabilitation projects where the design service life is less than 20 years, in a field application, and where metallizing in accordance with ASTM A780 method A3 is not specified. It should be not be used for the repair of newly galvanized components.

**TRIAL PROJECTS**

Bridge File 13472

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