EPP Rapid Research
1402 Third Avenue , Suite 1420
Seattle, Washington 98104
Tel 206-352-2050
Fax 206-352-2049
www.pprc.org

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Outdoor Paint/Covering for Galvanized Steel
Washington Department of Ecology

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Request:
Terry Whittmeier, Storm Water Inspector for the Washington Department of Ecology is interested in finding a paint that can be used on bridges, roofs and other outdoor structures that are made of galvanized steel. Most paints won't stick. When galvanized steel roofs or other structures corrode, zinc washes off into storm water. The zinc levels in Washington have exceeded limits in many areas and the culprit is often galvanized roofs. (509-574-3991) twit461@ecy.wa.gov)

Key Findings:

The only compatible paint for galvanized steel according to the American Galvanizers Association's list that is also environmentally preferable is Latex Acrylics:
"Latex-Acrylics
Fast drying and water-based, latex-acrylics have great adhesion, durability and weathering characteristics. This system is often top coated with itself and is suitable for new and weathered galvanized steel. These paints have the added benefit of being environmentally friendly."
(http://www.galvanizeit.org/showContent,291,335.cfm)

There are two types of galvanized steel. The type affects how well a coating will adhere. A discussion about these types can be found at http://www.ronjoseph.com/Q&A/paint_apps_MISC_q12.htm.

Additional Resources
EPA's Toxicological Review of Zinc and other Compounds
http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=56932

Problem Solving: Peeling from Galvanized Metals
http://www.sherwin-williams.com/pro/problem/problems/sw_pro_ps_int_ext_layout_28_7807_4181.jsp

Role of Pollution Prevention in Stormwater Management, University of Alabama
http://rpitt.eng.ua.edu/Publications/StormwaterTreatability/pollution%20prevention%20and%20stormwater.pdf

Criteria for Purchasing Decision Making:
- Ability to cover and adhere to galvanized metal
- Endurance
- Low toxicity
- Cost