55% Aluminum-Zinc Alloy Coated Steel
TECHNICAL BULLETIN #5

Sealants Guide

5.0 Introduction.
This bulletin provides background information relating to sealants and their application when used in conjunction with the range of exterior 55% Aluminum-Zinc Alloy Coated Steel products supplied by Cascadia Metals. The sealant industry in the US produces a wide variety of building sealants which together embrace a multitude of end user applications and an even greater range of specific conditions.

5.1 Sealant Selection.
The decision on which sealant is the most effective for 55% Aluminum-Zinc Alloy Coated Steel products in a specific application should be based on several performance characteristics.

Physical Property of Sealant	Performance Characteristic
1. Adhesion	Good adhesion to bare and pre-painted 55% Aluminum-Zinc Alloy Coated steel, without pre-priming except in extreme service conditions.
2. Flexibility	No cracking or loss of adhesion during required bending at specified service temps.
3. Weatherability	No cracking, chalking, bleeding or loss of rubber characteristics after exposure to the damaging effects of ultra-violet rays (sunlight) and humidity.
4. Water Resistance	Adhesion to metal surface will not deteriorate after immersion in water.
5. Chemical Resistance	Good resistance to water, ozone, water vapor, and other chemicals that may be exposed to the sealant in service.
6. Non Corrosive*	Will not deteriorate, darken, etch or salt deposit bare or pre-painted 55% Aluminum-Zinc Alloy Coated steel.
7. Staining	No contact or migratory staining of the bare or pre-painted 55% Aluminum-Zinc Alloy Coated steel surface.
8. Non Sagging	Will retain original shape within the joint at specified service temperatures w/o sagging.
9. Printability	Over paintable if required.

***Note:** Sealants containing acetic acid or amines should not be used on 55% Aluminum-Zinc Alloy Coated Steel; wet conditions during early stages of sealant cure can liberate by-products potentially corrosive towards protective coatings. These often smell of vinegar or ammonia.*

Cascadia Metals considers neutral cure silicone rubber sealants will typically meet the performance characteristics outlined above for most applications. Other generic types of sealant such as polyurethane and butyl elastomers are readily available in tape, hot melt and cartridge forms. Once again the performance of these systems should be evaluated with your sealant supplier based on service condition and performance characteristics. The use of sealants means fastening, whether by integral forming or by individual fasteners is necessary where metal to metal joining is involved. For more information on fasteners and 55% Aluminum-Zinc Alloy Coated Steel, please refer to “55% Aluminum-Zinc Alloy Coated Technical Bulletin #3 - Fastener Selection for Roof and Siding Applications.”