United States Steel

Technical Bulletin Construction:

Storage and Handling of ACRYZINC® Coated Sheet

For further assistance on the use of steel building panels or related topics, contact U. S. Steel Construction Sales

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Product Description

ACRYZINC®1 Coated Sheet is U. S. Steel-produced hot-dip-galvanized sheet steel with a thin acrylic-based polymer coating. ACRYZINC® Coated Sheet is supplied with a zinc coating weight that is consistent with the anticipated use of the material, typically G30, G60, or G90 per ASTM Specification. The amount of zinc coating determines the overall service lifetime of the material. The acrylic coating provides a transparent protective film on the surface of the galvanized steel, which enables ACRYZINC® Coated Sheet to be formed without oil and improves fingerprint resistance during handling and installation. However, the acrylic coating is extremely thin, approximately 1/25 of a mil (1 mil = 0.001 inch) or 1 micrometer, and can be damaged by improper handling. ACRYZINC® product should be properly handled during transit, storage, fabrication, and on the job site, similar to the handling procedure for “bare” galvanized steel.

Storage and Handling

Corrosive environments and constant moisture may affect the corrosion resistance of ACRYZINC® Coated Sheet. The following conditions should be avoided for ACRYZINC® Coated Sheet application.

- Marine atmospheres with constant spraying of salt or fresh water.
- Corrosive chemical fallout including, but not limited to, chemicals, fumes, and ash.
- Corrosive fumes or condensates generated or released in the vicinity of the material.
- Mechanical damage to acrylic coating or metallic coating during shipping, handling, and fabrication.
- Failure to provide free drainage of water, including condensation.
- Failure to remove debris from the surface of the material.
- Contact with green or wet lumber.
- Presence of damp or wet insulation materials.

Storage and Handling of ACRYZINC® Coated Sheet

The ACRYZINC® Coated Sheet will give the best performance when the following issues are considered:

1. Fabrication, Storage and Handling Issues

- Coils should be used within 90 days of receipt at the buyer's facility.
- Coils should be kept in a dry-temperature controlled environment during storage.
- Roll forming should be performed without oil or water-based lubricants.
- The bundles should be kept in a dry-temperature controlled environment.
- The bundles must be protected from moisture, using covers during shipping.
- The bundles must be rigidly packed for shipping to minimize the potential transit abrasion.

2. Construction Job Site Issues

- When it is possible, the bundles should be stored under roof and always away from openings to the outside.
- Where the bundles have to be stored outside, the following precautions are essential.
- Bundles should be covered with a waterproof tarpaulin or canvas and the bottom should be left open for adequate air movement. Leave space between the bundles and the cover to allow air to circulate.
- Store the bundles off the ground and on a slope so that if rain should penetrate the covering, water will drain away.
- Inspect the storage site regularly to ensure that moisture has not penetrated the bundle stack.
- The bundles must also be protected from exposure to corrosive chemicals and fumes.

The acrylic coating provides many benefits to hot-dip-galvanized steel sheet products, but the coating is not impervious to damage. Improper storage and handling can have a negative impact on the excellent corrosion resistance of the coating.

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