CABIN UNITS

QUALITY TEAM

PERIODIC MAINTENANCE AND REPAIR INSTRUCTIONS FOR GALVANIZED PRODUCTS

T-001E / 19.08.2026 / Rev04

GENERAL INFORMATION

Galvanizing is a method that provides extremely high protection and resistance against corrosion and oxidation by coating the surface of steel with a layer of zinc. However, the service life and protective performance of galvanized products are directly dependent on the environmental and microclimatic conditions of the environment in which they are used. Humidity, temperature fluctuations, precipitation amounts, salt accumulation, and various pollutants present in the environment (e.g., oil, wastewater, gasoline, diesel, exhaust fumes, natural gas derivatives, cement dust, and industrial chemicals) lead to significant variations in the rate of oxidation and wear processes. Accordingly, products exhibit very different corrosion behaviors in rural, urban, industrial, and heavily coastal (marina/beach) areas depending on their atmospheric corrosiveness classes.

The main factors that create a risk of corrosion are:

1. The degree of corrosiveness of the area where it is used and atmospheric conditions.
2. The products are in contact with different metal products or containers are in contact with each other.
3. Products remaining constantly damp or wet (especially due to water accumulation resulting from clogged roof gutters and panel drains).
4. Prolonged contact with substances that can undergo an electrochemical reaction (e.g., leaves, grass, soil, etc.).
5. Prolonged contact with chemical pollutants (oil, wastewater, gasoline, diesel, smoke, cement, etc.).
6. pH value6 to 12If it falls outside this range, the galvanized coating will wear down much faster and more severely than normal.
7. Prolonged exposure to salty environments and sea spray.
8. Water accumulating in corners due to the unevenness of the surface where the product is installed, preventing it from draining through the designed channels. Mechanical damage that may occur during installation, transport, or use (scratches, scuff marks, impacts).

Main Objective: To protect the protective and passivation layer of galvanized surfaces before red rust (red corrosion) formation begins, and to maximize the service life of the products by eliminating potential corrosion risks in advance.

OCCUPATIONAL HEALTH AND SAFETY

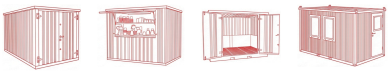
To prevent injuries and chemical exposure during maintenance and repair operations, the following occupational safety and health (OSH) rules must be followed:

1. Protective goggles, nitrile gloves, and a solvent-type dust/gas mask should be used when applying zinc spray, thinner, or WD-40.
2. When cleaning roof gutters, an appropriate ladder or scaffolding should be used, and the product should not be stepped on directly.
3. Spray painting should not be done in enclosed areas; ventilation must be provided.

WHITE RUST OR INITIAL CORROSION CONDITIONS

If the products are to be stored in stacks after delivery, the following storage rules must be followed to prevent the formation of white rust:

1. Free air flow (circulation) must be allowed between galvanized surfaces.
2. Water must be drained from the surface, and waterlogging/ponding must be absolutely prevented.
3. Products that are tightly packed or stacked should be separated from each other immediately after transport.
4. Prolonged contact with wet or damp materials (e.g., soil, wet grass, etc.) should be avoided.
5. The OSB (Oriented Strand Board) used as the base must be protected from getting wet and damp.
6. When slight white rust formation is observed, the surface should be gently rubbed with a synthetic sanding pad or nylon brush, without completely scraping off the underlying galvanized layer. After cleaning, it should be protected with zinc spray.



RECOMMENDED MAINTENANCE AND CLEANING TIMES

The following maintenance schedules are based on minimum cleaning and inspection frequencies aimed at achieving high protection.

Environment	Conditions	Abrasive Zone	Example Environments	Recommended Minimum Cleaning Time
Outdoor Environment	Light	C2 Low & C3 Medium	Arid, urban, inland areas, cities, light industrial and coastal regions	**Once a month**
Outdoor Environment	Severe	C4 High	Quiet seaside	**Every 15 days**
Outdoor Environment	Severe	C5 Very High Industry	Dense industrial areas	**Every 10 days**
Outdoor Environment	Severe	C5 Very High Seas	Wavy seashore	**Every 10 days**
Outdoor Environment	Tropical	tropical	High humidity and monsoon regions	**Every 10 days**

MAINTENANCE OF WELDED OR SPOT WELDED AREAS

Zinc plating loses its protective properties due to high heat in welded areas and poses a corrosion risk. Welded areas on both the inside and outside of the product should be regularly inspected, and zinc plating should be replaced if necessary. The spray should be applied.

In the first applicationThe color tone of the zinc spray may differ from the original color of the product.The color tone may not appear exactly the same as the current product color due to atmospheric effects and sunlight exposure; however, over time, the tones will become closer due to the effects of environmental conditions and natural wear and tear.

Before applying zinc spray, the surface should be degreased with alcohol/thinner and, after it has completely dried, cold galvanizing spray with a zinc content of at least 90-95% should be applied in two coats.

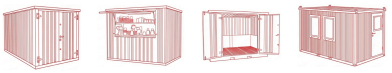
ROOF RAIN GUTTER MAINTENANCE

Rain gutters/rain drains on the roof can become clogged due to environmental factors (especially fallen leaves, dust, and mud). The resulting water accumulation significantly increases the risk of corrosion and can also cause water to leak into the product. Roof rain gutters should be cleaned regularly, and zinc spray should be applied to any areas showing signs of corrosion.

PANEL WATER DRAIN MAINTENANCE

The drainage holes located at the bottom of the panels may become clogged due to environmental conditions. Clogged drainage holes lead to water accumulation, shorten the lifespan of the galvanizing, weaken the seal, and allow water to enter. Panel drains should be cleaned regularly, and touch-up spray paint should be applied if necessary.

When cleaning the drain holes, use hard plastic or wooden sticks instead of sharp metal tools that could scratch the galvanized sheet metal.



MAINTENANCE OF CONNECTING ELEMENTS

Fasteners

Even if the fasteners (bolts, screws, nuts, washers, etc.) used during installation remain inside the product and are not in direct contact with external factors, they can still oxidize due to changes in humidity and temperature. Fasteners should be checked periodically, and zinc spray application should be done if necessary.

Fasteners that are severely corroded should be removed and replaced immediately. It is recommended to apply protective grease or zinc spray to the bolt heads after tightening.

Hinge Maintenance

Hinges used on doors and canopy panels require periodic maintenance to protect them from external environmental conditions (rain, humidity, dust, dirt, and temperature changes), ensure smooth operation without jamming, prevent squeaking, friction-induced mechanical wear and corrosion, and extend the life of the hardware. Regular hinge maintenance preserves the functionality of door and panel mechanisms.

1. It is recommended that hinge maintenance be performed periodically, once a month; this interval should be shortened in cases of heavy use or harsh atmospheric conditions.
2. For lubrication, WD-40, which has rust-dissolving and protective properties, or a suitable machine oil with high penetration capabilities should be preferred.
3. After applying the oil, any excess oil that accumulates on and around the hinge surface should be gently wiped away with a slightly damp, lint-free cloth to prevent dust and dirt buildup.
4. During maintenance, touch-up spray paint should be meticulously applied to any scratches or abrasions detected on the surface to maintain corrosion resistance.

CONTAINER INTERIOR AREA AND STACKING PROTECTION

The interior surfaces and internal structural elements of the product are protected by a zinc (galvanized) coating. However, in welded areas, the zinc layer loses its protective properties due to high heat, creating a risk of corrosion. This corrosion risk increases exponentially, especially in environments with high humidity or inadequate ventilation. Therefore, weld points, joint details, corner joints, and inner edges where the zinc layer thins should be regularly visually inspected. Early detection of corrosion is crucial, and necessary preventive measures should be taken promptly.

Container Interior Maintenance and Important Considerations:

1. Internal welded and spot-welded areas should be regularly inspected, and zinc spray should be applied at the onset of corrosion.
2. The galvanized surfaces on the interior can oxidize due to humidity and temperature differences in enclosed spaces. Cold galvanizing/zinc spray should be applied where necessary.
3. Free airflow (circulation) must be allowed on galvanized and painted surfaces.
4. Water accumulation/pooling on surfaces must be absolutely prevented, and proper drainage of the water must be ensured.
5. Tightly packed containers and products should be quickly separated after transportation.
6. Stacking should be avoided in enclosed, unventilated, and humid environments.
7. Continuous contact with wet/damp materials (soil, grass, mud, etc.) should be avoided.
8. It is absolutely essential to prevent the OSB (Oriented Strand Board) wood panels used in the base structure from getting wet or damp.

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