

## Waterstain

### UNDERSTANDING MOISTURE'S EFFECTS AND DEALING WITH STAINS

#### CAUSE

Waterstain, also known as corrosion or white rust, is caused by the entrapment of moisture between adjacent surfaces of metal or other mated surfaces where air circulation is impeded.



#### EFFECTS

A variety of stains can appear as a result of moisture

- Appearance varies from iridescent to white, gray or black in more severe cases.
- The appearance is dependent on the severity of the stain and also the alloy.
- High purity alloys are somewhat more resistant to waterstain while the stain tends to appear more pronounced on alloys with high magnesium content.

#### **Mechanical Properties are not affected**

Waterstain is a superficial condition and the mechanical properties of the stained material are not affected.

#### REMOVAL

Waterstain can only be effectively removed through mechanical abrasion such as buffing or grinding.

#### PREVENTION

##### **Careful handling of aluminum protects it from moisture**

Protect aluminum from all sources of moisture by ensuring that adequate packaging, transportation and storage is used at every stage of your operations.

##### **Understanding Condensation**

- It is perhaps the most difficult source of moisture to prevent.
- It can be prevented by avoiding conditions where the temperature of the metal drops below the dew point of the surrounding air; or, conversely, conditions where the moisture of the air increases enough to carry the dew point above the metal temperature.
- It is therefore important to ensure that a sudden fall in temperature or increase in humidity will not occur in the metal storage area.



#### **Please Note:**

- *Coils should remain in our packaging until processing.*
- *There is a 90 day mill return policy on returns for waterstain.*
- *Aleris Rolled Products will not accept waterstain claims on products that have been shipped by customers from the original ship to location.*

*If we can be of any further assistance, please call us at 1-866-266-2586.*