



## Ductile Iron Gratings and the Patina Process

### DATA SHEET

Ductile iron gratings naturally undergo a surface transformation known as patina development (or patination). This process results in a thin, protective oxide layer that forms on the metal surface over time.

Patina should not be confused with rust. Unlike deep, corrosive rust, patina is beneficial, it acts as a barrier that helps to prevent or slow down corrosion, enhancing the product's long-term durability. This is a standard and expected characteristic of uncoated ductile iron products used in drainage and landscape applications. .

### What to Expect

- **Initial Appearance:** When first installed, gratings may appear black with a slight sheen due to a temporary protective coating. This coating helps reduce early oxidation during storage, handling, and delivery.
- **Natural Colour Change:** With exposure to air and moisture, the coating will wear off and a rust-coloured patina will gradually develop.
- **Protective Layer:** This surface oxidation forms a stable patina that shields the iron from deeper corrosion, protecting the structural performance of the product.
- **Variation is Normal:** Surface colour may vary depending on environmental conditions (humidity, pollutants, foot traffic, etc.), creating the unique shades of protective patina that iron can provide.

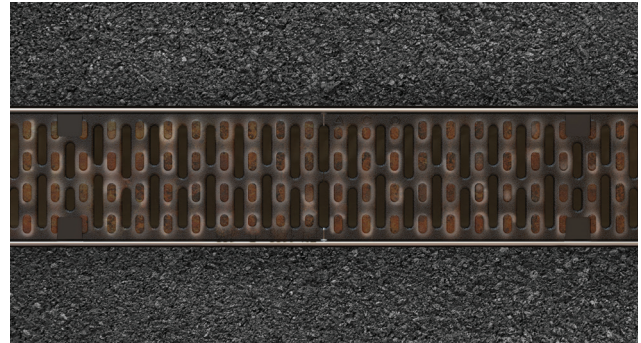


## The Patina Process



### 1. Initial Exposure

The iron surface is exposed to oxygen and moisture in the environment.



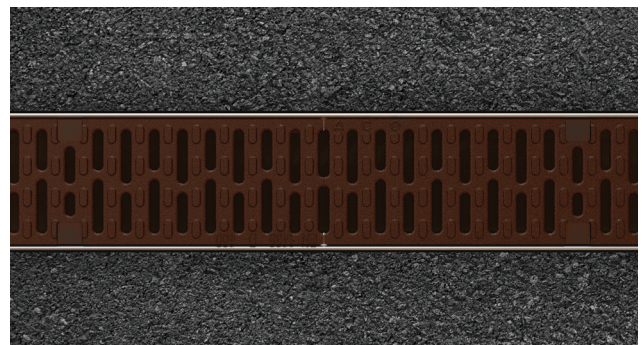
### 2. Surface Oxidation

A mild reddish-brown oxide begins to appear.



### 3. Patina Formation

The oxidation is more visible across the grating as the patination process develops.



### 4. Long-Term Protection

The oxidation stabilises into a consistent, dark protective layer. The patina acts as a natural barrier, reducing the need for future maintenance or coating.

## Summary and Further Support

The formation of patina on ductile iron gratings is entirely natural and cosmetic and does not compromise the performance or lifespan of the product. It is part of the material's natural lifecycle.

We recommend informing clients and site teams in advance to avoid concerns upon delivery or during early site installation.

Should you require alternative surface finishes for architectural or aesthetic purposes, please contact us at [technical@aco.co.uk](mailto:technical@aco.co.uk) to discuss alternative options.



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