Established 1913 Lenoir Employee Owned

Mirror Company

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Stock Sheet Mirror Quality Specification

When a fabricator or installer of mirrors discovers a defect in the mirror, it is a problem. It is especially frustrating for them when they have already invested time/work into the mirror. To the mirror manufacturer, defects can have one of a number of causes. The fabricator/installer doesn't care about the causes, they just don't want to deal with defects.

ASTM C1503-01 is the quality specification that is standard for the domestic U.S. mirror industry. Lenoir Mirror adheres to the standards set by C1503-01. This specification allows for a small number of defects in "stock sheet" mirrors. These mirrors are sold to be cut down to smaller sizes, not used as full sheets. Fewer defects are allowable in cut size quality mirrors.

Lenoir Mirror's Stock Sheet Mirror Quality Specifications are as follows:

Metal Defects – Stone, Bubble or Tin Deposit

Defects allowed: One defect over 1/16" in size per lite. Defects smaller than 1/16" allowed one every 24" apart. These are defects in the glass itself , but are often confused with other defects.

Surface Defects – Scratches and Abrasions

Defects allowed: One defect over 1/16" in size per lite. Defects smaller than 1/16" allowed one every 24" apart.

Mirror Backing Defects – Pinholes

Defects allowed: One defect over 1/32" in size per lite. Defects smaller than 1/32" allowed one every 24" apart.

Black Spots

Defects allowed: One defect allowed per lite 3" or less from edge. No more than 3 lites per case.

Mirror Edges

Defects allowed: one chip, up to 1/2" on one edge per lite

These allowable defects are the maximum we will pass through our inspection. Lenoir Mirror, working with our Flat Glass Suppliers, strives to produce a defect free product. When problems are encountered in the field, it is always helpful for our customers to provide as much detailed information as possible. The most important piece of information needed aside from the nature of the defect itself is the case

tag. The case tag enables us to track the date of manufacture, the glass supplier, etc. This information can enable us to more quickly diagnose the problem.

There are a variety of reasons for these various defects. Some are controllable; some are not. Our goal is to understand them and limit them to a minimum. We want to provide our customers with the most defect free stock sheet mirror possible.

Metal Defects – these are defects in the glass. They usually relate to some type of upset in the primary glass float tank. We reject mirrors that have too many of them. We keep our glass suppliers informed when they occur.

Surface Defects – these are defects that occur from handling; primarily impacting the face surface of the mirror. They can occur in the float glass plant, in our operation or even at the customer location. We can occasionally identify where they occur if they are repetitive.

Mirror Backing Defects – these can occur as a result of air bubbles in the paint, gaps in our application or physical abrasion. The first surface viewed in our mirror inspection process is the back side. We look carefully for any lapse in paint coverage. The paint backing protects the metals that make up a mirror.

Black Spots – to our customers, a black spot is a black spot. To the mirror manufacturer, it can be one of a number of problems. The most common occurrence that is labeled a black spot is actually a cut through. Due to some form of physical abrasion, the paint and metals are chipped away. The gap appears black from the face side of the mirrors. Another cause of black spots is a gap in the silver plating. This occurs when an impurity on the glass blocks the silver from setting up. Such impurities come from a variety of sources.

Mirror Edges – these typically come from the glass manufacturer. They are rough or flared edges and do not affect the performance of the mirror. Again, stock sheet mirrors are not intended to be used in full sheets. They are “stock to cut.”

Many of the potential defects that occur in stock sheet mirrors relate to handling. They can occur in our production, in transit as well as in the customer's handling processes. We can minimize the amount of handling defects if everyone in the chain remembers that mirrors are a glass product. They have to be handled like glass. Even though mirrors are building materials, they cannot be handled in the same fashion as lumber, metals or other more durable items.