

Flat Glass Inspection Criteria per ASTM C 1036-06 – (abridged)

Terminology:

crush, - lightly pitted condition with dull grey appearance.

dig, - deep, short scratch.

dirt, - small particle of foreign matter embedded in the surface of the glass.

gaseous inclusion, - round or elongated bubble in the glass.

linear blemish, - scratches, rubs, digs, and other similar imperfections.

rub, - abrasion of a glass surface producing a frosted appearance.

scratch, - damage on a glass surface in the form of a line caused by the movement of an object across and in contact with the glass surface.

Inspection:

Visual inspection should be done with the naked eye.

The inspection shall be done with the glass in a vertical position with light transmission.

The inspection shall view the glass at an angle of 90°.

The lighting should be daylight level (**without direct sunlight**) or other uniform backlight that simulates sunlight.

View at the distance specified by defect type.

Quality Criteria:

Allowable Point Blemish, (viewing distance 39")

Blemish size <1.2mm (0.05") allowed without restriction

Blemish size >1.2mm (0.05") <2.0mm (0.10") allowed with a minimum separation 600mm (24").

Blemish size >2.0mm (0.10") none allowed.

To determine point blemish size, measure width and height of blemish and average. Only the point of the blemish is to be measured, and not any distortion that may be present.

Allowable Linear Blemish, (viewing distance starting at 160")

Faint or light scratch <75mm (3") allowed.

Medium scratch ≤75mm (3") allowed with a minimum separation of 600mm (24").

Medium or heavy scratch >75mm (3") are not allowed.

To determine scratch intensity start at 160" and move closer until scratch becomes visible, (refer to table).

<u>Detection Distance</u>	<u>Blemish Intensity</u>
Over 3.3m (132")	Heavy
3.3m to 1.01m (132" to 40")	Medium
1m to 0.2m (39" to 8")	Light
Less than 0.2m (8")	Faint

Coated Vision Glass Inspection Criteria per ASTM C 1376-03 – (abridged)

Terminology:

coating rub, - a surface abrasion of appreciable width that has partial, or complete, removal of the coating producing a hazy appearance.

coating scratch, - partial, or complete, removal of the coating along a thin straight or curved line.

corrosion, - change in the color or level of reflected or transmitted light over all or part of the glass surface as a result of degradation of the coating from external sources.

crazing, - a random conglomeration of fine lines or cracks in the coating.

mark/contaminant, - a deposit of foreign material on the glass surface.

pinhole, - small area in which the coating is entirely or partially absent.

Inspection:

Visual inspection should be done with the naked eye.

The inspection shall be done with the glass in a vertical position with light transmission.

The inspection shall view the glass at an angle of 90° from a distance of 10 feet.

The lighting should be daylight level (**without direct sunlight**) or other uniform backlight that simulates sunlight.

If a defect is readily apparent under these conditions apply the following criteria.

<u>Blemish</u>	<u>Central Area, sq. mm (sq. in.)</u>	<u>Outer Area, sq. mm (sq. in.)</u>
Pinhole	1.6mm (1/16") maximum	2.4mm (3/32") maximum
Spot	1.6mm (1/16") maximum	2.4mm (3/32") maximum
Coating Scratch	50mm (2") maximum	75mm (3") maximum
Mark/Contaminant	50mm (2") maximum	75mm (3") maximum
Coating Rub	none allowed	length + width not to exceed 19mm (3/4")
Crazing	none allowed	none allowed
Corrosion	none allowed	none allowed

The central area is considered to form a square or rectangle defined by the center 80% of the width and 80% height dimensions centered on a lite of glass. The remaining area is considered the outer area