



Quality Innovative Window Furnishing Solutions

Surface Finish Guide

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Scope

This standard provides guidance on the in-situ inspection of the surface finish of powder coated extrusions for architectural applications. It gives an introduction and guidance on the assessment of significant surfaces with respect to surface defects in the coating system.

Any order provided to Intex Concepts represents acceptance of this document.

Intex Concepts notes that the following needs to be considered when evaluating appearance of finish:

1. Powder coating is a commercial finish, not an automotive or high smooth finish.
2. Powder coating as a process cannot be guaranteed to be defect free, this is due to being a one off application in a non pressurized environment and additionally with limited ability to rework the finish.
3. Finishing of Castings, Re-coated, Anodised or any other pre-treated surface have no warranty to quality or finish.

Referenced Documents

The following documents referred to in this standard:

AS1580.481.0 - 2003	Paints and related materials- method of test Part 481.0: Coatings - Guide to assessing paint systems exposed to weathering conditions.
AS3715 - 2002	Metal Finishing- Thermoset Powder Coatings for architectural applications of aluminum and aluminum alloys

Definitions

As per AS3715- 2002:

Significant Surface:

That part of the surface which is required to be covered by the coating, and which is essential to the appearance and serviceability of the item. The significant surface does not include edges, deep recesses and secondary surfaces.

Architectural Surface:

A controlled finish of sustainability uniform appearance; buffing will not produce a die line-free finish unless a preliminary grinding or sanding operation is employed.

Note: This finish is normally satisfactory for exposed surfaces of any architectural application and is applied to those surfaces of each shape nominated by the purchaser or proprietary systems supplier.

LUX:

A measurement of luminous intensity from a light source equivalent to 500 LUX. Refer to item 7-Appendix.

Significant Defect:

A significant defect is a defect which is visible from 1.0m and has an outside diameter from 1.5mm

Minor Defect:

A minor defect may be visible from 1.0m and has an outside diameter less than 1.5mm.

Viewing:

A minor defect may be visible from 1.0m and has an outside diameter less than 1.5mm.

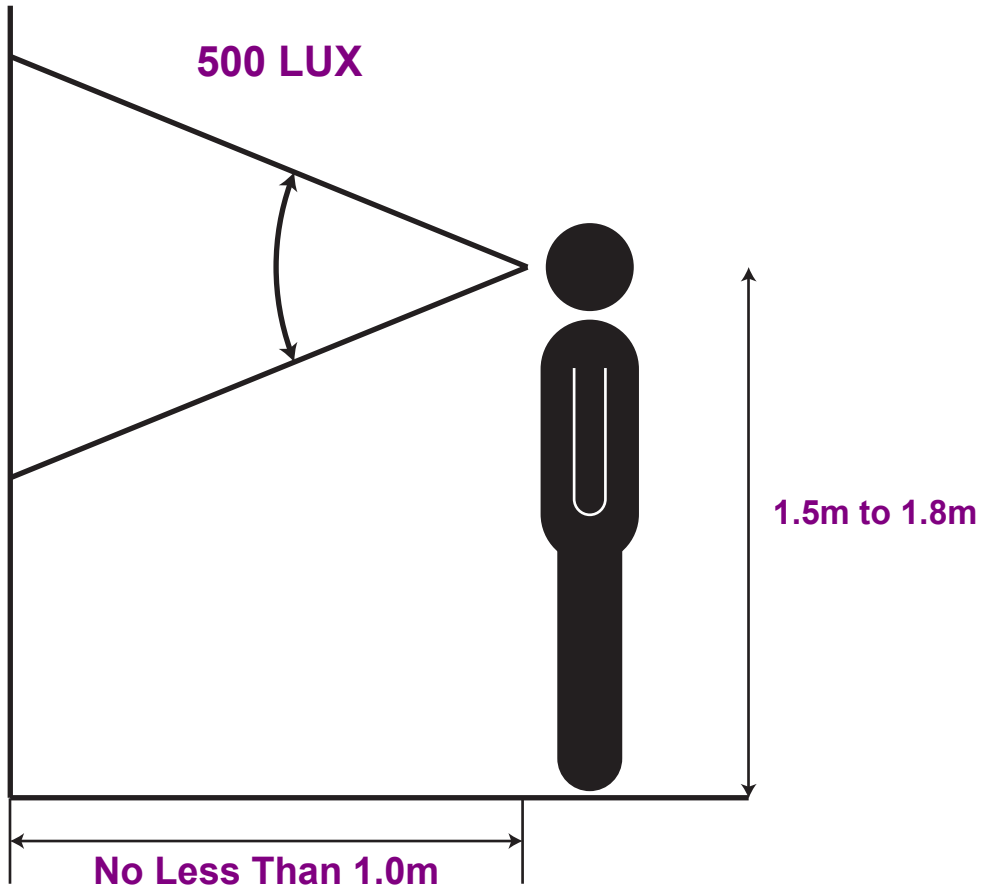
In-situ Location:

Location of sections in installed location relative to defect type.

Possible Defects:

Possible defects that may be seen in-situ include: inclusions (foreign particles in the powder, contamination (difference in powder colour in the surface finish), excessive roughness, craters, dull spots, scratches or any other unacceptable flaws.

Viewing Conditions



For all viewing situations a minimum of 1.0m shall apply provided that further distance be allowed commensurate with the use of the product and its in-situ viewing distances.

Surface Classification

All extruded aluminum profiles shall be classified according to the importance of the visibly seen surfaces.

The **Primary** or **A** surface shall be deemed the significant surface as defined in AS3715-2002.

The **Secondary** or **B** surface shall be defined as surfaces normally only seen when a window or door is open (E.g. Inside the glazing pocket of the window frame when a sash window is open).

The **Non-Visual** or **C** surface shall be defined as surfaces unseen when the window or door is open.

Appearance Standard

When viewed as per conditions listed in section 4.

A Surface: (Primary Surface)

From 1.0m the coating on the primary internal & external surfaces shall be of uniform appearance, colour and texture, and be free from significant defects, but may contain minor defect (As defined in Section 3) for every 1 metre of extrusion.

B Surface: (Secondary Surface)

Secondary surfaces are checked for acceptable powder coat coverage and are free from significant defects but may contain several minor defects. The coating requirement for secondary surfaces is for a light coverage only where possible. It is not possible to specify a required powder thickness in these areas and no guarantee of powder coverage shall be provided.

C Surface: (Non-Visual Surface)

These are non-visual surfaces for which there is no standard or requirements.

Appendix

ILLUMINANCE	EXAMPLE
50 LUX	Family Living Room
80 LUX	Hallway Toilet
100 LUX	Very Dark, Overcast Day
320-500 LUX	Office Lighting
400 LUX	Sunrise or Sunset on Clear day
1000 LUX	Overcast Day
10,000-25,000 LUX	Full Daylight (Not Direct Sunlight)
32,000-130,000 LUX	Direct Sunlight

Powder Coating Finish Variation Note:

All powder coatings gradually change their appearance when exposed to the weather. The changes that take place occur at different rates, the rate depending on the aggressiveness of the environment and on the ability of the powder coating to resist those changes.

Initial loss of gloss is caused by aging which is the result of exposure to ultraviolet light, particularly where the surface is facing North or West. Contamination by atmospheric pollutants, e.g. sulphurous and ammoniacal fumes, and by the collection of dirt can also cause deterioration of gloss.

The rate of impairment of gloss by the collection of dirt is less for exposed surfaces installed vertically than for surfaces installed horizontally.

Loss of gloss usually precedes chalking.

Care & Maintenance

The effects of UV-light, pollution, dirt, grime and salt deposits can all accumulate on powder coated surfaces over time. To extend the effective life of powder coating and protect any warranty requirements that may exist, a very simple regular maintenance program should be implemented for the removal of any residue. As a minimum cleaning should take place every six months. However, in areas where pollutants are more prevalent, such as coastal or industrial regions, a cleaning program should be carried out on a more frequent basis (e.g. every three months).

To clean your powder coated surface:

1. Carefully remove any loose deposits with a wet sponge.
2. Use a soft brush (non-abrasive) or cloth, and a mild household detergent solution to remove dust, salt and other deposits.
3. Rinse off with Fresh Water

Detergents which recommend the use of gloves when handling should be avoided as this is a good indication that the detergent is harsh and therefore, unsuitable for cleaning your powder coating.