

Mirrors – Visual quality standard for installed mirrors

4.8.1 FEBRUARY 2000

1 Introduction

This Data Sheet is designed to be used in conjunction with Data Sheet 4.8. (Recommendations for Fixing Mirrors), and will deal specifically with the Visual Quality Standard for Installed Mirrors.

2 Scope

This Data Sheet relates to the Visual Fault Characteristics which can be found in, and the relevant quality standards expected of, Finished Mirrors.

3 Mirror Standard

The standard will apply in full only to mirrors made of flat, annealed float glass, clear or coloured, supplied in 2 to 6mm thickness in all sizes, having the rear surface coated with a reflective silver deposit which is protected by a layer of metallic copper or another material, and one or more protective coatings, e.g. paint, lacquer, etc..., for use inside normally occupied domestic or commercial buildings.

NB: An uncut stock size Mirror cannot be expected to conform to the same standards as a finished mirror.

4 Method for observing mirrors

General Aspect

The Mirror is observed in a vertical position, with the naked eye and under normal diffused daylight conditions (maximum 600 Lux at the mirror) from a distance of 1 metre. The use of an additional spotlight source is not allowed.

5 Mirror Faults

The quality of a Mirror can be affected by

faults altering the appearance of the image of reflected objects.

Alternation of images can result from ageing, optical faults in the glass and faults in the reflective coating.

5.1 Appearance Faults

The visual Quality can be altered by the presence of spot and/or linear and/or enlarged area of faults.

5.1.1 Surface and Body Faults

Solid or gaseous inclusions, deposits, scratches, etc, are admissible as defined in

the following table.

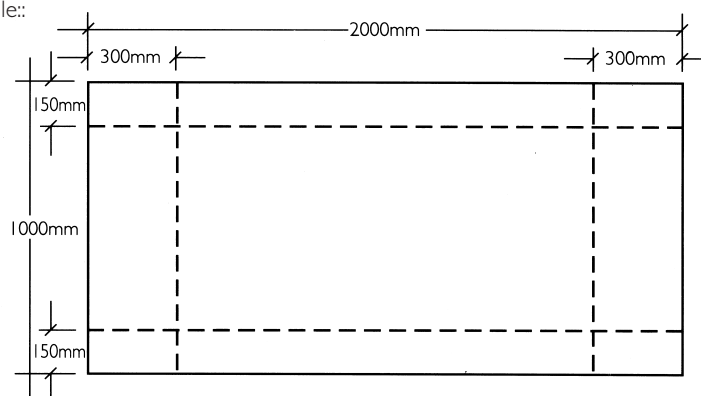
5.1.2 Optical Faults

A mirror shall be examined in areas of 500 × 500mm at a time. The observer is located at a distance of 2 metres at right angle to the area being examined. Behind the observer must be a non uniform background. The reflected image must not be optically disturbed by another mirror or window, for instance. The mirror or window, for instance. The mirror meets the requirements if it does not exhibit optical variation outside the allowed tolerances.

	Area	Spot Faults			Surface Faults	
		$\geq 0.2\text{mm}$ $\leq 0.3\text{mm}$	$\geq 0.3\text{mm}$ $\leq 0.4\text{mm}$	Border Zone* $\geq 0.2\text{mm}$ $\leq 0.8\text{mm}$	Hairline Scratches $\leq 50\text{mm}$ –	Scratches
Mirror Tiles etc.	$\leq 0.3\text{m}^2$	2	1	–	2	–
Cut Sizes	$\leq 1.0\text{m}^2$	1	1	–	2	–
	$\leq 1.5\text{m}^2$	2	1	–	2	–
	$> 1.5\text{m}^2$	3	2	1	3	–

• The width of the border zone is determined as 15% of the edge length, as illustrated below.

Example::



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Optical faults are directly associated with the distortion of the reflected image.

5.1.2.1 Spots Faults

Spot faults consist of nucleus (solid or gaseous inclusions), deposits, crush marks etc. In certain instances spot faults are accompanied by a distortion zone call 'Halo'.

5.1.2.2. Linear Faults

Linear faults can be in the form of scratches, extended spot faults etc.

5.1.2.3. Enlarged Area Faults

Enlarged area faults can be as the result of tin deposits, glass surface erosion etc.

5.1.2.4. Edge Faults

Edge faults are entrant/emergent faults in the form of chips, shells, corners on/off, vents etc.

5.1.3 Reflected Silver Coating Faults

5.1.3.1. Scratches

Surface defects of various width, length and depth.

5.1.3.2. Stain

An alteration to the reflective coating where the reflective surface exhibits zones with various degrees of discoloration.

5.1.3.3. Colour Spots

Any visible coloured spots.

5.1.3.4. Edge Deterioration

Discoloration of the reflective silver at the edge of the mirror.

This Data Sheet is not intended to deal with the relevant methods or test criteria, to which mirrors should conform.