

TECHNICAL
BULLETIN

AAF

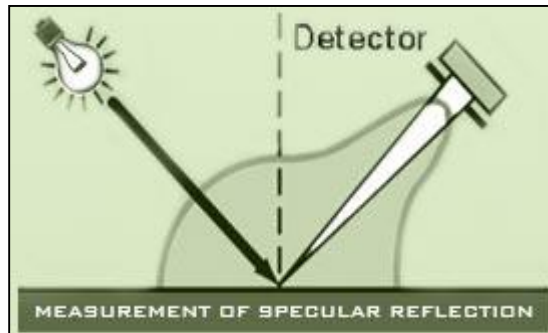
AUSTRALIAN ALUMINIUM FINISHING

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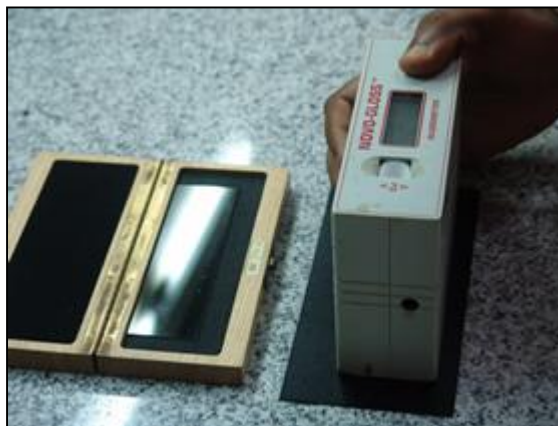
GLOSS

Simply put, Gloss (or Lustre) is a measure of how well a surface functions as a mirror.

We quantify the Gloss a surface as a percentage of light reflected from a sample compared to that reflected from a black glass standard (with a defined refractive index). The measurement value for this defined standard is equal to 100 gloss units.



Gloss of a surface is not a unique physical property. It varies with the angle of measurement; it is not independent of the apparatus being used. The 60° geometry is the “universal measurement angle”. Due to its medium gloss coverage, it is widely used and applicable for surfaces with Gloss values of between 10 & 70 Gloss Units (GU).



As an example, this means that a measurement of “40 GU” means that the sample reflects 40% as much light as the black glass standard. That is not to say that it reflects 40% of incident light. It also means that sample measurements of >100 GU are possible, implying that the sample is more reflective than the black glass standard.

GLOSS OF ANODISE FINISHED ALUMINIUM

Listed below are typical results achieved from AAF internal testing on Anodise finished aluminium.

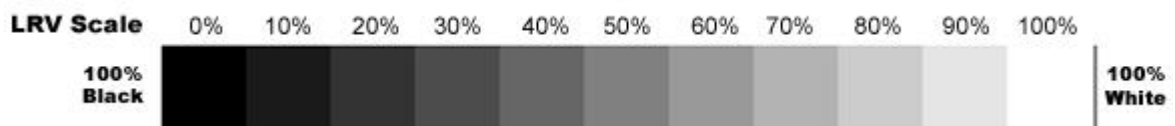
Method	BS EN 12373-11: 2001
Means	Make: Novo Gloss, Model: Rhopoint, (60° incident light geometry)
Procedure	The surface, at the measurement area was cleaned, if necessary, and, when dry, with a cleaning pad to remove any surface residue or superficial marks. The area was polished with a soft clean cloth. Gloss is measured with light incident at 60° along the extrusion direction. Results are expressed in Gloss Units (GU) which is calibrated scaling based on the refractive index of a black glass having a specular reflectance of 100 Gloss Units (GU) at the specific angle.
Result	Typical 60° Gloss Unit (GU) values for Standard “Matt Etched” Aluminium Extrusion and Sheet which is subsequently anodised: <u>Extrusion:</u> 13 ±3 GU (Alloys, 6060, 6063 & average surface condition) <u>Sheet:</u> 11 ±3 GU (Alloys, 5005 & average surface condition)

Note: The above represents typical average results, other alloys, surface conditions and metal quality may result in gloss values out of this range.

LRV (Light Reflectance Value) or Luminance

The LRV is a measure of the perceived “luminance” of a colour. It indicates the lightness or darkness of a colour on a scale from 0% absolute black to 100% perfect white. (Refer to scale below)

It is most commonly used by design professionals like architectural colour consultants, architects and interior designers, in their need for certain surfaces and features to “visually contrast” with their surroundings for the benefit of the visually impaired. To achieve a sufficiently contrasting object, an ideal guideline is for the LRV of a foreground surface and the LRV of a background surface, to have a minimum “luminance contrast” of 30% or more.



Light Reflectivity

As a preventative measure against distraction or hindrance to passing traffic and pedestrians, it is becoming increasingly more common, that external façade elements on a building development are being specified to have a maximum light reflectivity value. Essentially, Light reflectivity is the same as “Gloss” as described above. Failing any detailed specification of a measurement procedure, it would be practical to use 60° geometry, as it suits surfaces with gloss values of between 10% & 70% gloss.

In recent years, Sydney City Council has adopted a limit to the reflectivity of the exterior surface of a building to be 20% or less. This is defined as the percentage solar reflection when light strikes and reflects normal (perpendicular) to the façade element. This same measure has in turn been adopted by most local authorities in the Sydney metropolitan region & Melbourne CBD.

NOTE

Details contained herewith do not constitute specific advice, merely they are provided as a matter of courtesy and as general information only. You should seek your specialist’s advice, to ensure that any information or suggestion meet your specific requirements. Reference should be made to the respective standards for the finish concerned as well as Australian Aluminium Finishing Pty Ltd (AAF) Terms and Conditions of Sale. Latest releases of Australian Standards are available for purchase via the following website; www.standards.com.au

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