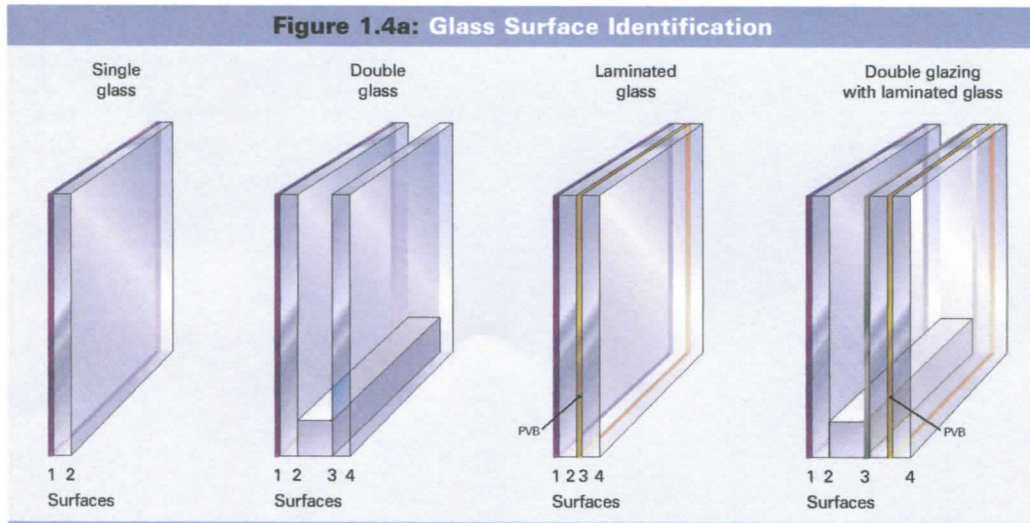




## 1.4 Glass Surface Numbers

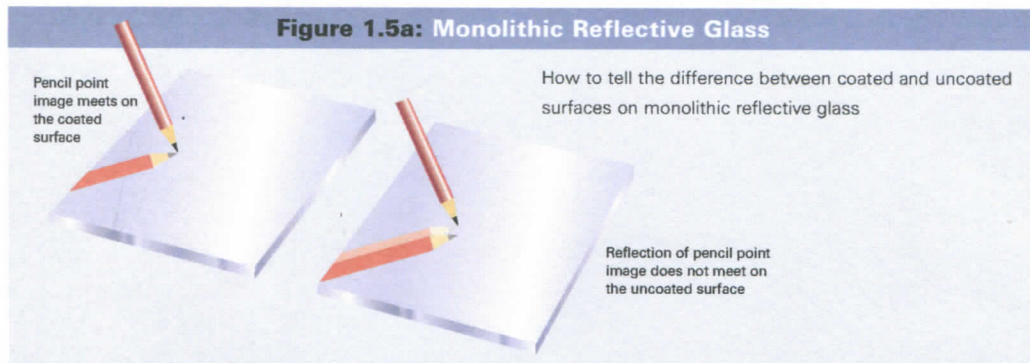
**Figure 1.4a: Glass Surface Identification**



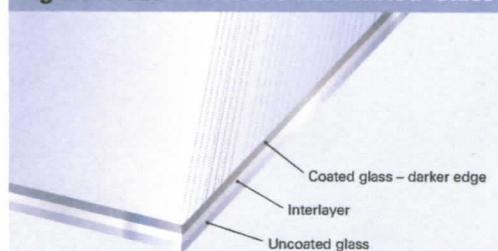
NB: Surface 1 = Exterior Surface

## 1.5 Identifying the Coated Surface

**Figure 1.5a: Monolithic Reflective Glass**



**Figure 1.5b: Reflective Laminated Glass**



### How to tell the difference between glazing surfaces on reflective laminated glass.

Subject to certain exceptions, tinted PVB interlayered laminated glass (i.e. 6.38mm SS22 green laminated) has the reflective coating on surface position (3). The effect of the tinted PVB interlayer is to dampen the reflectivity and allow a building to exhibit a specific colour. This makes identification of 'outside' and 'inside' surfaces easier. However, with clear PVB interlayered laminated glass it may be difficult to determine the coated surface (i.e. 6.38mm TS21 clear laminated). The coated surface can usually be identified by the darker of the two glass edges (identification may be difficult after edge work e.g. flat grinding).

## 1.6 Glass Staining and Cleaning

### Staining

Glass is generally resistant to chemical attack and other degradation. It is inert to most acids, except hydrofluoric and phosphoric.

Typical glass problems on buildings would be:

- Alkalis leaching from concrete, mortar, plaster and gravel onto glass can cause staining and etching
- Hard water, high in calcium concentrates, which are allowed to continually run on the glass
- Deterioration of labels and protective films when left on the glass for prolonged periods
- Pitting of the glass, mainly due to weld splatter (in the form of black specs on the glass), improper sandblasting on site or wind blown debris

- Abrasions to the glass surface by using harsh, powder based cleaning products
- Scratches or spalling caused by the improper removal of plaster, paint, varnish or mortar splash
- A white staining effect which occurs when condensation repeatedly forms and dries on the glass, which in turn can cause surface decomposition
- Iridescence or the oil-stain image is a direct result of the wet-dry action of condensation or water on, or between the glass(es)

The only practical remedy for glass that is badly damaged by scratches, weld splatter, sandblasting, etching and even damaged edges is full replacement.

**Cleaning**

For cleaning purposes use a soft, clean grit-free cloth and water with a mild detergent. Thoroughly wash off any detergent residue with clean water. Do not under any circumstances use any form of abrasive cleaner as this may cause damage to the glass. Do not allow any metal or hard parts of squeegees or other cleaning equipment to contact the glass surface. Metal scrapers should not be used. Special care should be taken when cleaning coated reflective surfaces. For stubborn stains contact the G.James Technical Advisory Service on 1800 452 637.

**1.7 Care and Storage**

Glass quality can be maintained and risk of damage minimised by following some simple guidelines in storing and handling. Storage areas should be clean and dry with a good circulation of cool dry air, particularly after periods of high humidity to avoid wet-dry staining. Interleaving material should be used at all times, if possible with 'lucite' or 'colacryl', which contains adipic acid which acts as a stain inhibitor.

Store glass on even surfaces in areas not subject to heavy traffic or overhead debris. Where glass has been received in a wet condition, it should be unpacked, dried and re-stacked with separators that allow airflow between the panels.

Glass should always be stacked at an incline of 4 degrees from the vertical. Thick glass, tinted glass, insulated glass (IG) units and reflective glass should be stored out of direct sunlight to avoid any risk of thermal breakage. IG units must not be rotated or 'cartwheeled' over their corners.

Always use clean dry suction cups and do not use glass with severely vented or damaged edges.

**Figure 1.7a: Handling and Storage**

