

# SALGRAVE ENGRAVING LAMINATE – DATA SHEET

SALGRAVE Engraving Laminate is a tough, rigid, PVC product designed for the more technical applications of engraved signage. In addition to excellent chemical resistance, the sheet has high tensile strength, good impact strength and dimensional stability, low thermal conductivity and good electrical properties. It excels in outdoor applications where it is resistant to salt water corrosion and other environmental factors.

Fabrication is easy with SALGRAVE sheet, which can be sawn, drilled, formed, bent, milled and welded and it comes in a range of colour options to suit the user's needs.

SALGRAVE has a much lower specific gravity than other chemically resistant materials such as high duty alloys, is easily machined using standard joinery equipment, and is free from electrolytic effects when used in combination with other substrates.

## Physical Properties

Property	Value	Method
Specific gravity	1.34	DIN 53479
Vicat Softening Point	83 +/- 1°C	DIN EN ISO 306 (5kg; air)
Tensile strength	42-50 N/mm <sup>2</sup>	DIN EN ISO 527 / 1-3
Elongation at Break	50-100 %	DIN EN ISO 527 / 1-3
Izod impact strength	160 J/m	ASTM D256
Coefficient of thermal linear expansion.	8 x 10 <sup>-5</sup> per unit of length per °C	
Maximum service temperature	60°C	
Volume resistivity	10 <sup>15</sup> ohm/cm	BS2782:1983 Method 230A
Surface resistivity	10 <sup>14</sup> ohm	BS2782:1983 Method 231A
Dielectric strength	14 kV/mm	BS2782:1983 Method 220 and 221

## Chemical Resistance Organic Compounds

Salgrave is unaffected by aliphatic hydrocarbons (most oils and greases), as well as aliphatic alcohols. It is attacked by aromatic and chlorinated hydrocarbons, ketones, ethers, esters and amines. Usually these organic compounds will cause swelling of the PVC by solvent action.

## Inorganic Compounds

At temperatures of up to 60°C, Salgrave is resistant to attack by most inorganic liquids including moderately concentrated acids, all alkalis and aqueous salt solutions at all

*The information contained in this document is correct to the best of our knowledge but results may vary depending on the conditions under which the material is used and consequently recommendations are made without warranty or guarantee.*

concentrations. Powerful oxidising agents including oxidising acids will attack it in certain conditions. A more comprehensive chemical resistance datasheet can be obtained on request from Sallu Plastics.

## **Engraving**

Salgrave is a thermoplastic laminate and so to avoid common features such as burring or fusing we would recommend observing the following guidelines:

1. It is essential that the engraving tool starts sharp and is regularly sharpened to maintain performance.
2. Flat head tools work better than those with a needle point.
3. Slow down the engraving tool speed (rpm). This will reduce frictional temperature and reduce the likelihood of burring.
4. Slow down tracking speed (speed of tool over the surface). This also reduces any temperature build up. As mentioned above Salgrave is thermoplastic and so excessive temperatures will soften the material.

There is a small loss in overall cycle time when compared to other types of engraving laminate, but it is the other properties such as formability, easy fabrication and excellent chemical and weathering resistance which separates Salgrave engraving laminate from other engraving products.

## **Cleaning**

Cleaning is best carried out with dilute soap or detergent solution before being rinsed thoroughly using fresh water. Proprietary cleaners should be avoided as they may contain solvents or abrasives which could damage the material surface.

## **Shelf Life**

Material should be stored in a cool, dry environment between 5-25°C.