FILON®

Supersedes Data Sheet September 1998

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FILON DSP

GRP Sheeting for Diffused Lighting Applications

Introduction

FILON D.S.P. 'Diffused Sign Panels' are flat opal tinted Glass Reinforced Polyester sheets developed for use in back lit illuminated signs. FILON D.S.P. is also widely used in construction of both travelling and permanent exhibitions, and by architects and designers who need to achieve special lighting effects such as light walls and ceilings.

The opal sheets incorporate special diffusing additives to give maximum 'light scatter' for fluorescent tube back lighting, ensuring even illumination, and providing a cost effective alternative to cast and extruded acrylics.

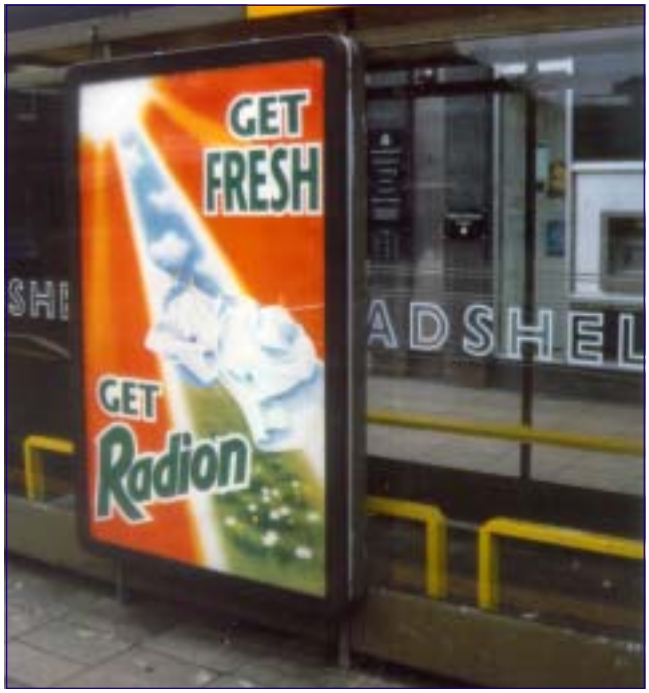
Product Range

FILON D.S.P. is manufactured 2mm thick and 1220mm wide, in lengths of 2440mm and 3050mm.

Other widths and lengths can be supplied (subject to minimum order quantity) against specific customer requests.

Panels are available with either Class 3 or Class 1 fire rating (BS 476 Part 7). It should be noted that there will be slight colour difference between Class 3 and Class 1 panels due to the fire retardant nature of Class 1 resin used in production.

FILON D.S.P. can be screen printed using Apollo colours Nylon Bag or Glass Enamel ink ranges. (Filon Products accept no responsibility as to the light fastness of these inks).



D.S.P. Providing Light Diffusion for Street Signage

D.S.P. Used in Construction of a Light Wall Feature at the Express Rail Link Terminal underneath Heathrow Airport

Benefits of FILON D.S.P.

Maximum Durability
Unaffected by temperature extremes, will not soften at high temperatures or become brittle at low temperatures.

Impact Resistance
Panels are extremely resistant to both deliberate and accidental damage.

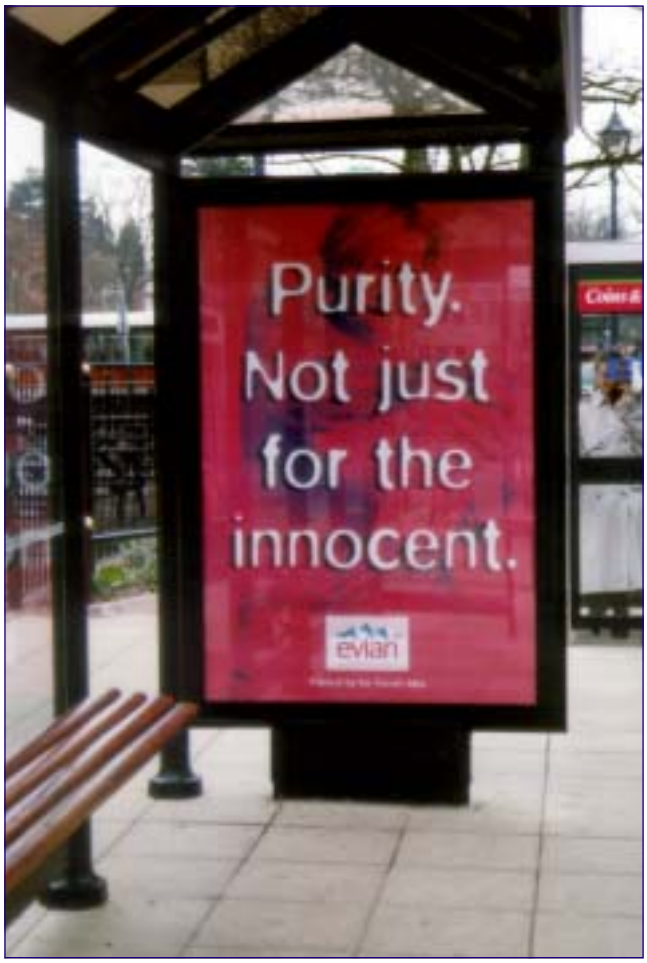
Choice of Fire Grades
FILON D.S.P. is available in 2 Fire Grades, Class 3 or Class 1, as specified in BS 476 Part 7 'Surface Spread of Flame'.

Easy Reworking
Sheets can be cut and drilled using standard equipment without incurring costly breakages.

Performance

Structural and Mechanical - Typical Values

Tensile Strength (BS 2782 Part 3)	60 - 80 N/mm^2
Flexural Strength (BS 2782 Part 3)	120 - 150 N/mm^2
Flexural (Bending) Modulus (BS 2782 Part 3)	3 - 4 KN/mm^2
Thermal Conductivity (K) Lee's Disc	0.14W/m ^{0}C
Thermal Movement Coefficient of Linear Expansion	20 x 10^{-6} per ^{0}C
Operating Temperatures	- 20^{0}C to +120^{0}C
Light Transmission Percentage Natural Daylight	70%
Density	1.45g/cm^3
Panel Thickness	2mm
Panel Weight	2.7kg/m^2
Compatibility	No chemical reaction with other established construction materials.



D.S.P. Used to Give Maximum Light Scatter on Illuminated Signs on a Busy Bus Station

Reworking and Machining

Cutting and Drilling

Cut panels using a hacksaw with 6/8 teeth per centimetre or a power tool with a 40/60 grit diamond blade operating at medium speed.

Drill panels with standard metal bits.

Safety and Welfare

When reworking in confined space, wear a suitable dust mask and goggles. In occasional cases GRP dust can cause slight transient irritation. Should effects be prolonged or any signs of a rash occur, obtain medical advice.

Technical Services

Technical and advisory services are available from Filon Technical Services Department.

FILON®

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