3M™ Diamond Grade™

DG³ Reflective Sheeting

Product Description

Introduced in 2006, 3M Diamond Grade DG³ reflective sheeting is a microprismatic that gives outstanding performance at every viewing angle and every viewing distance. Diamond Grade DG³ uses revolutionary full cube corner technology to greatly improve retroreflection accommodating all motorists and vehicle types. Indeed, the sheeting meets or exceeds the minimum recommended luminance index in many of the driving scenarios set out in the British Standard for Microprismatic Sheeting BS 8408:2005.

Application/Suitability

This sheeting is designed for durable road traffic signs, including gantries, motorways and trunk road signs as well as where the x-height is less than 150mm. DG³ is certified in European Technical Approval (07/0272), meets all reflective performance classes including R2, 3A &3B and is CE marked.

Effective Performance Life

Diamond Grade DG³ reflective sheeting, when used on vertically mounted traffic signs that have been made and maintained following 3M recommendations will provide a twelve year effective performance life, with a brightness retention after that period as shown in the table below.

Minimum coefficient of retroreflection after 12 years (cd/m2/lx)

Entrance angle	Observation Angle	White	Yellow	Red	Blue	Interstate Green
-5°	0.2°	400	300	80	25	40

Benefits

- Exceptional performance in short, medium and long viewing distances
- Innovative full cube corner technology giving outstanding performance at every angle and every viewing distance
- Meets or exceeds many of the minimum recommended performance indices in BS 8408:2005.
- Diamond Grade DG³ may enable lighting to be dropped in certain urban situations according to BS 8408 (when a microprismatic signface material that has a performance index of ≥ 3.0 is used)
- Optimum performance in daylight and darkness
- Brighter signs assists disadvantaged drivers, such as the elderly and drivers of heavy goods vehicles
- Product designed to minimise environmental impact from manufacturing to disposal
- 12 year Performance Guarantee
- Is CE marked with approval as Class 3A ad 3B

Environmental/Energy Advantage

DG³ is constructed by lamination of layers with minimal solvent use or emissions. Long service life minimizes sign replacement costs. DG³ may also eliminate the need for external sign illumination.

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Product Construction/Specification

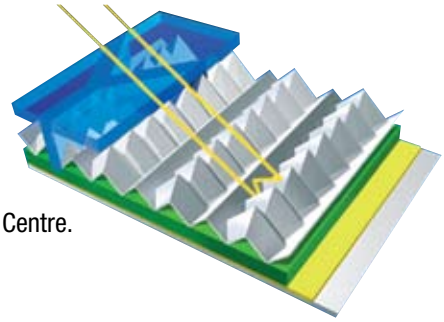
A wide angle retroreflective sheeting comprising full cube microprismatic optics formed in a transparent resin with a smooth topcoat and an interlocking diamond seal pattern, it is pre-coated with a pressure sensitive adhesive, protected by a removable liner.

Initial minimum coefficients of retroreflection shall not be less than the values as set out in the table below:

Entrance Angle*	Observation Angle*	Minimum Coefficient of retroreflection (cd/m²/lx)				
		White	Yellow	Red	Blue	Interstate Green
-5°	20'	570	425	114	26	57
	50'	400	300	80	18	40
	1°	120	90	24	5.4	12
15°	20'	360	275	110	15	36
	50'	240	188	57	12	27
	1°	80	60	15	4	8
40°	20'	100	75	20	4.5	10
	50'	50	37	10	1.5	5
	1°	25	19	5	0.8	3

Colours

Diamond Grade DG³ reflective sheeting is available in the following colours: White, Yellow, Red, Blue, Interstate Green.



Availability

For full product information please refer to the website or Customer Service Centre.

Application Surface

Diamond Grade DG³ reflective sheeting is recommended for use on properly prepared flat Aluminium and British Steel HP200 substrates. For recommended substrate preparation please request Instruction Bulletin 5.1. Users are urged to carefully evaluate all other substrates for adhesion and sheeting durability. Sheeting failures caused by the substrate or improper surface preparation are not the responsibility of 3M.

Product Information

For more detailed technical information please request the relevant product bulletin or download it from the website.

For further information or samples, please contact:
3M Customer Service Centre on: 0161 237 6394
Or if within Republic of Ireland on: 01 280 3555

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