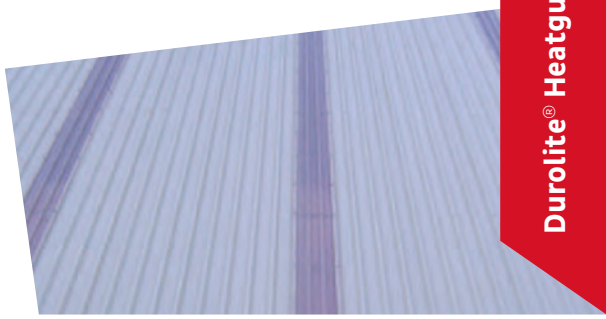
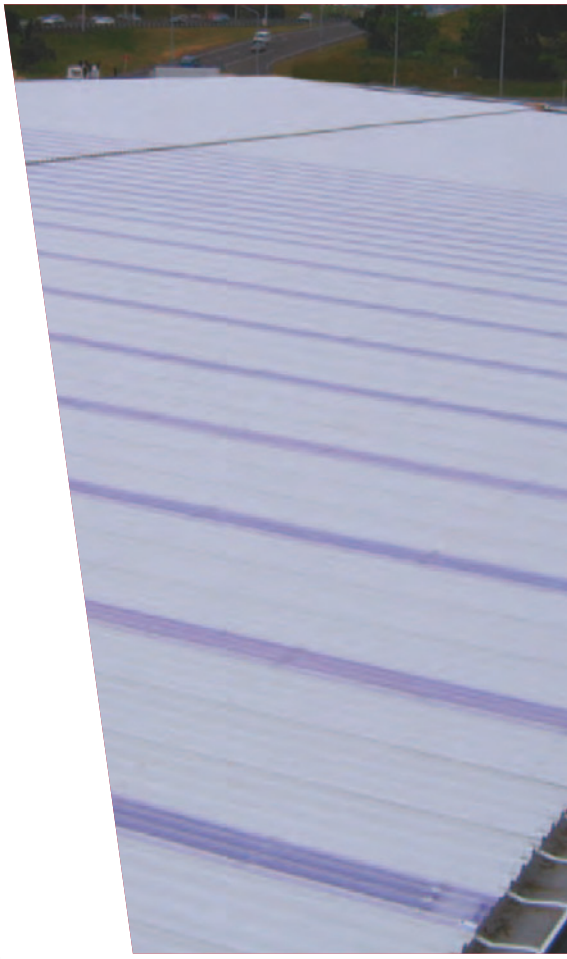
Durolite® HEATGUARD





Durolite® HeatGuard (available in two levels: HeatGuard 4 and HeatGuard 8) reduces interior heat build up while maintaining the highest level of light transmission, controlling heat and allowing for a high level of light to help save on energy costs.

Durolite® HeatGuard is premium grade sheeting with the highly UV resistant gel coated surface. Now you can control the most powerful light source in the universe providing the most effective, low cost, low temperature workplace lighting.

What you need to know about light

The three parts of electromagnetic spectrum that are of interest to us are the ultra violet rays that are harmful to our skin, the visible light waves, the light we use to see with and the infra-red waves or thermal waves that carry a large percentage of the sun's heat.

How Durolite® HeatGuard works

Current glazing systems generally cannot select between light and heat, allowing nearly the same amount of heat into a building as light. Durolite® HeatGuard filters out 99% of the harmful ultra violet radiation and allows a high level of the visible light spectrum to be transmitted into your building so colours appear brighter and clearer, while at the same time reflecting out a large percentage of the infra-red waves reducing heat so your building stays cooler.

Selectivity index

	Visible Light	Total Solar Transmission	Selectivity Index
Durolite Clear	63%	63%	1.00
Durolite HeatGuard 4	64%	50%	1.28
Durolite HeatGuard 8	49%	36%	1.36
Durolite Opal	36%	40%	0.90

Durolite® HeatGuard 4 is recommended for factories and warehouses where a high level of light transmission is required and would be used instead of clear sheeting, whereas Durolite® HeatGuard 8 is recommended for distribution and retail outlets where high heat levels are an issue and would replace opal sheeting.

Energy savings benefit

	Solar Heat Gain Total Heat in (W/m^2)	Total Heat in (%)	Shading Coefficient
Durolite® HeatGuard 4	419	53.58	0.64
Durolite® HeatGuard 8	316	40.40	0.46

Note 1: Solar heat gain (ASHRAE F27.17) is the total admission of incoming solar radiation, including heat, ultra-violet, visible and infra-red components (based on an average summer day solar radiation of 782 w/m^2).

Note 2: The shading co-efficient is the ratio of solar heat gain of test sample to standard 3 mm thick glass.

Physical properties

Tensile strength	80MPa (min requirements 55 MPa)
Impact strength	8 joules
Shear strength	90 MPa
Modulus of elasticity	5500 MPa
Compressive strength	135 MPa
Flexural strength	150 MPa
Specific gravity	1.45
Thermal expansion	3.0 x 10^{-5} cm/ºC
Thermal conductivity	158 watt/mºC
Water absorption	.2% in 24 hrs/26ºC
Service temperature	range -20ºC to +95ºC

Specification

Easy to specify - callup Durolite® HG4, HG8 manufactured to comply with AS/NZS4256.3-1994, part 2. The gauge/weight of the sheet shall be ____mm/gsm and shall be manufactured to conform with the nominated profile and colour. The sheeting shall be installed in accordance with Dimond fixing instructions, NZMRM Code of Practice and comply with NZS1562.3.

Internal purlin span for 1.5 kPa U.L.S (mm)

Series	1.1mm (1800 g/m^2)	1.4mm (2400 g/m^2)	1.7mm (3050 g/m^2)
Corrugate	1000	1200	1300
LT7	1400	1700	1800
Brownbuilt 900	1400	1700	1900
Styleline/Veedek	1200	1500	1700
DP955	1000	1300	1600
Dimondek 400	1200	1400	N/A

U.L.S = Ultimate limit state capacity

Durolite® HeatGuard is available to suit the commonly manufactured profiles in New Zealand and is manufactured to comply with AS/NZS4256.3-1994, part 2. Durolite® HeatGuard is suitable for curved roof applications. Curved roof radius to suit 1800g/m^2 corrugated and Styleline minimum radius 3.8 m. 2400 g/m^2 corrugated and Styleline minimum radius 4.0 m.

Warranty

25 year warranty under conditions. For further information, please refer to Dimond's website or give us a call.

Installation

1. Pre-drill oversize fixing holes to allow for expansion and contraction of sheet.
2. Apply the Durolite® purlin protection strip between the safety mesh and Fiberglass sheet at each purlin.
3. For endlaps, apply a self adhesive closed cell foam strip directly over the purlin between the overlapping sheets.
4. Store sheets in a dry and fire safe area. Do not store heavy materials on sheets as they may fracture.
5. Pan fixing is recommended for cladding. Fixing shall occur in every pan at ends and every other at intermediate.

Durolite® sheeting matching clip-fixed deck profiles should be side lapped with overlaps on both sides. Refer to Dimond's website for more fixing information.

Important: Durolite® sheeting should be installed by pre-drilling over size holes to allow for expansion and contraction. The basic calculation shall be 0.75mm per lineal metre, plus the shank diameter of the fastener. Example: 10 mt sheet - 10 x 0.75 + 4mm (fastener) = 11.5mm per drilled hole.

Note: All installation should comply with the design loading requirements of NZ4203-1992 and NZ3604-1990.

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Dimond Roofing

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