



martini

Environmental Product Declaration



CSR



Programme:	The Australasian EPD Programme www.epd-australasia.com
Programme operator:	Australasian EPD Programme
EPD registration number:	S-P-01004
Approval date:	2018-08-09
Valid until:	2023-08-09
Revision date:	N/A
Geographical scope:	Australia

Life Cycle Assessment and Environmental Product Declarations of decorative acoustic, acoustic and thermal insulation products manufactured by CSR Martini Pty Ltd.

In accordance with ISO 14025 for:

Absorb	dECO E Fabric	dECO Quiet Panel Export	Polymax Thermal Ceiling
Blanket	dECO Embrace Fabric	dECO Screen	Polymax Thermal Wall
dECO 3D Tile	dECO Flat	dECO Stick It	Prime
dECO Baffle	dECO Flex	Easy Baffle	
dECO Board	dECO M Fabric	Flexible Ducting	
dECO Ceiling Tile	dECO Miniflex	HVAC	
dECO Cloud	dECO Panel	MAB	
dECO Deluxe	dECO Quiet Board	MSB	
dECO Deluxe EP	dECO Quiet Panel	Polymax Acoustic	



Contents

Introduction	4	Generation of Waste - Acoustic insulation products	33
Manufacturing Process	5	Generation of Waste - Thermal insulation products	34
Stewardship Program	5	Interpretation of results	35
Project Methodology	6	Sustainability	36
Product Properties	7	Recycled	36
Content Declaration	11	Green Tag	36
Product Life-cycle Overview	12	Environmental credentials	36
System Boundary and scope of study	12	Ecospecifier	37
Life Cycle Assessment Methodology	13	Environmental Benefits	37
Details of the LIFE Cycle Assessment	13	Fire Hazard Properties	37
Declared Unit	14	Programme-related information and verification	38
Core Data Collection	15	Mandatory Statements	39
Potential Environmental Impact - Decorative acoustic products	16	EPD Owner, Author and Programme Operator Details	39
Potential Environmental Impact - Acoustic insulation products	21		
Potential Environmental Impact - Thermal insulation products	22		
Use of resources - Decorative acoustic products	23		
Use of resources - Acoustic insulation products	27		
Use of resources - Thermal insulation products	28		
Generation of Waste - Decorative acoustic products	29		



Introduction

CSR Martini Pty Ltd is an Australian owned and operated business with over 20 years' experience manufacturing environmentally sustainable, high-quality polyester fibre products for various industries worldwide. CSR Martini has expanded its capabilities to produce high performance products engineered to control noise in buildings.

The CSR Martini's acoustic product portfolio has been specifically designed to provide acoustic solutions for a variety of interior applications. Our products have excelled in some of the most challenging acoustic applications including recording studios, concert halls, auditoriums, theatres, convention centres and flexible learning spaces. CSR Martini is committed to sustainable practices throughout its business including manufacturing.

Edge Environment was commissioned by CSR Martini to conduct a life cycle assessment (LCA) study of its product range.

Studies were conducted for 80 product varieties, which differ primarily in raw material polyethylene terephthalate fibre blends, density and manufacture method.



Manufacturing

CSR Martini produce a range of densities, colours and finishes for a variety of applications including wall and ceiling panels, screens and room dividers, hanging baffles and suspended clouds. Recognised by the Green Building Council of Australia (GBCA) and Green Building Council of New Zealand (NZGBC), CSR Martini products can contribute to points available in the rating tools that assess the environmental sustainability of building projects at the design, construction and as built phases: Green Star® – Design and As Built, and the interior fit-out phase: Green Star® – Interiors.

Martini products in this EPD achieves Global Green Tag Level A certification which provides credits towards Green Star rated buildings.

A select number of CSR Martini products are made using recycled PET fibres sourced from recycled bottles. The image adjacent shows the manufacturing process of these products.

Product Stewardship Program

We understand the environmental lifecycle of our products. This lies at the heart of our sustainability goals and is now a growing consideration in product decision-making. Our Product Stewardship Program allows our customers to return clean off cuts and any uncontaminated insulation to us for recycling. We also educate our contractors in the high reusability potential on CSR Martini products.

Recycled PET



PET bottles collection



Transformed into flakes

Virgin PET



Polyester



Flakes placed into hoppers

Extruded into soft fibres



Crimped and cut to size



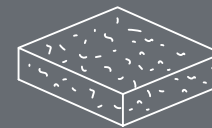
Carding to open and orientate fibres



Cross-lapping process



Finished product



Formed into rolls or sheets



Project Methodology

The methodology and report format has been developed to comply with:

- ISO 14040:2006 and ISO14044:2006 which describe the principles, framework, requirements and provides guidelines for life cycle assessment (LCA) (ISO, 2006; ISO, 2006).
- ISO 14025:2006 Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures, which establishes the principles and specifies the procedures for developing Type III environmental declaration programmes and Type III environmental declarations (ISO, 2006).
- EN 15804, Sustainability of construction works — Environmental product declarations which provides core product category rules (PCR) for Type III environmental product declarations (EPD) for any construction product and construction service (European Standards, 2012).
- PCR for Construction Products and Construction Services (CPC 54, Version 2.2, dated 2017-05-30) which serves as the main implementation of EN 15804 (EPD International, 2017).
- Sub-PCR for thermal insulation products (EPD International, 2018) which refers to EN 16783:2017 Thermal insulation Products – Product category rules (PCR) for factory made and in-situ formed products for preparing environmental product declarations which complements PCR 2012:01 with additional rules and methodological instructions (European Standards, 2017).

The following steps provide an overview of the process followed in this study.

CSR Martini Products

Product Properties

This EPD covers all CSR Martini decorative acoustic, acoustic insulation and thermal insulation products (Table 1). As this EPD provides analyses per 1 kg of CSR Martini product.



Table 1 – Range of products manufactured by CSR Martini included in this study.

Product type	Product range	Product names
Decorative acoustic	Martini dECO series	dECO 3D Tile, dECO Baffle, dECO Board, dECO Ceiling Tile, dECO Cloud, dECO Deluxe, dECO Deluxe EP, dECO E Fabric, dECO Embrace Fabric, dECO Flat, dECO Flex, dECO M Fabric, dECO Miniflex, dECO Panel, dECO Quiet Board, dECO Quiet Panel, dECO Quiet Panel Export, dECO Screen, dECO Stick It
Acoustic insulation	Martini Absorb	Absorb, Prime, Easy Baffle, MAB, MSB, HVAC, Blanket
	Polymax acoustic	Polymax acoustic
Thermal insulation	Polymax thermal	Polymax thermal wall, Polymax thermal ceiling, Flexible ducting

Product Properties

Below allows customers to quantify the impacts of a specific product per meter squared, using the density conversions provided.

Table 2 – Product properties.

Product name	Thickness (mm)	Mass (kg/m ²)	Density (kg/m ³)	Colour/s	R-value (kWh/m ²)	NRC/STC
Decorative acoustic						
dECO Baffle Platform 26mm Black	26	3.84	147.7	Black core/ Colour Face	NA	0.65
dECO Baffle Platform 26mm White	26	3.84	147.7	White core/Colour Face	NA	0.65
dECO Baffle Rise 26mm Black	26	3.84	147.7	Black core/ Colour Face	NA	0.65
dECO Baffle Rise 26mm White	26	3.84	147.7	White core/Colour Face	NA	0.65
dECO Board 7mm Black	7	1.2	171.4	Black core	NA	0.30 - 0.45
dECO Board 7mm White	7	1.2	171.4	White core	NA	0.30 - 0.45
dECO Board 12mm Black	12	2.4	200	Black core	NA	0.50 - 0.65
dECO Board 12mm White	12	2.4	200	White core	NA	0.50 - 0.65
dECO Deluxe 7mm	7	1.4	200	Colour	NA	NA
dECO Deluxe 12mm	12	2.4	200	Colour	NA	0.65 - 0.90
dECO Deluxe 24mm	24	3	125	Black core / White core	NA	0.65 - 0.90
dECO Deluxe 48mm	48	6	125	Black core / White core	NA	0.65 - 0.90
dECO Deluxe EP 7mm	7	1.4	200	Various core colour	NA	0.65 - 0.90
dECO Deluxe EP 7mm Black	7	1.4	200	Black	NA	NA

Product name	Thickness (mm)	Mass (kg/m ²)	Density (kg/m ³)	Colour/s	R-value (kWh/m ²)	NRC/STC
dECO Deluxe EP 7mm White	7	1.4	200	White	NA	NA
dECO Deluxe EP 12mm	12	2.4	200	Various core colour	NA	0.65 - 0.90
dECO Deluxe EP 12mm Black	12	2.4	200	Black	NA	0.65 - 0.90
dECO Deluxe EP 12mm White	12	2.4	200	White	NA	0.65 - 0.90
dECO Deluxe EP 24mm	24	3	125	Various core colour	NA	0.65 - 0.90
dECO Deluxe EP 24mm Black	24	3	125	Black	NA	0.65 - 0.90
dECO Deluxe EP 24mm White	24	3	125	White	NA	0.65 - 0.90
dECO E Felt	1	0.35	350	Colour	NA	0.04
dECO Embrace Fabric	1	0.35	350	Colour	NA	0.04
dECO Flat H Ceiling 13mm	13	2.83	217.7	White core/Colour Face	NA	0.8
dECO Flat H Ceiling 25mm	25	2.8	112	White core/Colour Face	NA	0.9
dECO Flex	10 - 12	1.6	133.3	White core/Colour Face	NA	0.4
dECO Hanging Cloud - Black	25	3.42	136.8	Black core/ Colour Face	NA	0.65
dECO Hanging Cloud - White	25	3.42	136.8	White core/Colour Face	NA	0.65
dECO M Felt	1.9	0.35	350	Colour	NA	0.04
dECO Miniflex	8	2.04	255	Black core/ Colour Face	NA	NA
dECO Panel 8mm Black	8	1.62	202.5	Black core/ Colour Face	NA	0.4
dECO Panel 8mm White	8	1.62	202.5	White core/Colour Face	NA	0.4

Product name	Thickness (mm)	Mass (kg/m ²)	Density (kg/m ³)	Colour/s	R-value (kWh/m ²)	NRC/STC
dECO Panel 13.5mm Black	13.5	2.82	208.9	Black core/ Colour Face	NA	0.4
dECO Panel 13.5mm White	13.5	2.82	208.9	White core/Colour Face	NA	0.4
dECO Panel 25mm Black	25	1.92	76.8	Black core/ Colour Face	NA	0.4
dECO Panel 25mm White	25	1.92	76.8	White core/Colour Face	NA	0.4
dECO Panel 50mm Black	50	3.42	68.4	Black core/ Colour Face	NA	0.4
dECO Panel 50mm White	50	3.42	68.4	White core/Colour Face	NA	0.4
dECO Quiet Board 25mm Black	25	2.37	94.8	Black core	NA	1
dECO Quiet Board 25mm White	25	2.37	94.8	White core	NA	1
dECO Quiet Board 50mm Black	50	3.87	77.4	Black core	NA	0.85 - 1.00
dECO Quiet Board 50mm White	50	3.87	77.4	White core	NA	0.85 - 1.00
dECO Quiet Panel 25mm Black	25	2.79	111.6	Black core/ Colour Face	NA	0.85 - 1.00
dECO Quiet Panel 25mm White	25	2.79	111.6	White core/Colour Face	NA	0.85 - 1.00
dECO Quiet Panel 50mm Black	50	4.29	85.8	Black core/ Colour Face	NA	0.85 - 1.00
dECO Quiet Panel 50mm White	50	4.29	85.8	White core/Colour Face	NA	0.85 - 1.00
dECO Quiet Panel Export 25mm White	25	2.79	111.6	White core/Colour Face	NA	0.85 - 1.00
dECO Quiet Panel Export 50mm White	50	4.29	85.8	White core/Colour Face	NA	0.85 - 1.00
dECO Screen 12mm Black	12	2.84	236.7	Black core/ Colour Face	NA	0.5
dECO Screen 12mm White	12	2.84	236.7	White core/Colour Face	NA	0.5

Product name	Thickness (mm)	Mass (kg/m ²)	Density (kg/m ³)	Colour/s	R-value (kWh/m ²)	NRC/STC
dECO Stick It	13	3	230.8	Black core/ Colour Face	NA	0.5
dECO Tile - 3D H Ceiling	8	1.62	202.5	White core/Colour Face	NA	TBA
dECO Tile - 3D H Wall	4	1.22	305	White core/Colour Face	NA	TBA
dECO Tile - 3D WW Ceiling	8	1.62	202.5	White core/Colour Face	NA	0.75
dECO Tile - 3D WW Wall	4	1.22	305	White core/Colour Face	NA	0.55 - 0.9
dECO Tile 3D ET Wall	4	1.37	342.5	White core/Colour Face	NA	0.55 - 0.9
Acoustic insulation						
Absorb Black	25/50/75/100	0.5 - 6	20,25,32,48,60	Black	R0.55 - R3.0	0.65 - 1.1
Absorb White	25/50/75/100	0.5 - 6	20,25,32,48,60	White	R0.55 - R3.0	0.65 - 1.1
Blanket	90 -200	0.75	8.3	White	R1.5 - R3.5	NA
Easy Baffle Black	100	1	10	Black	NA	0.9
Easy Baffle White	100	1	10	White	NA	0.9
MAB Black	11/14/20/25/50/75/100	.275 - 6	11,14,20,25,32,48,60	Black	NA	NA
MAB White	11/14/20/25/50/75/100	.275 - 6	11,14,20,25,32,48,60	White	NA	NA
MSB Black	50/65/75/85/100	.35/.5/.65/.85/1	7-10	Black	R0.8 - R1.7	NA
MSB White	50/65/75/85/100	.35/.5/.65/.85/1	7-10	White	R0.8 - R1.7	NA
Prime Black	30/50/65/75/100	.42 - 1400	14	Black	R0.7 - R2.2	NA
Prime White	30/50/65/75/100	.42 - 1400	14	White	R0.7 - R2.2	NA

Product name	Thickness (mm)	Mass (kg/m ²)	Density (kg/m ³)	Colour/s	R-value (kWh/m ²)	NRC/STC
Thermal insulation						
Flexible Ducting	75	0.429	5.7	Black	R1.0	NA
Polymax Acoustic R1.5	75	0.9	12	Black / White	R1.5	NA
Polymax Acoustic R2.0 75mm	75	2.05	27.3	Black / White	R2.0	NA
Polymax Acoustic R2.0 90mm	90	1.35	15	Black / White	R2.0	NA
Polymax Acoustic R2.5	90	2.5	27.8	Black / White	R2.5	NA
Polymax Thermal R2.0 Ceiling Batt	120	1.05	8.8	Black / White	R2.0	NA
Polymax Thermal R2.5 Ceiling Batt	140	1.35	9.6	Black / White	R2.5	NA
Polymax Thermal R3.0 Ceiling Batt	180	1.65	9.2	Black / White	R3.0	NA
Polymax Thermal R3.5 Ceiling Batt	200	1.9	9.5	Black / White	R3.5	NA
Polymax Thermal R4.0 Ceiling Batt	220	2.4	10.9	Black / White	R4.5	NA
Polymax Thermal Wall R1.5	90	0.75	8.3	Black / White	R1.5	NA
Polymax Thermal Wall R2.0	90	1.35	15	Black / White	R2.0	NA
Polymax Thermal Wall R2.5	90	2.5	27.8	Black / White	R2.5	NA

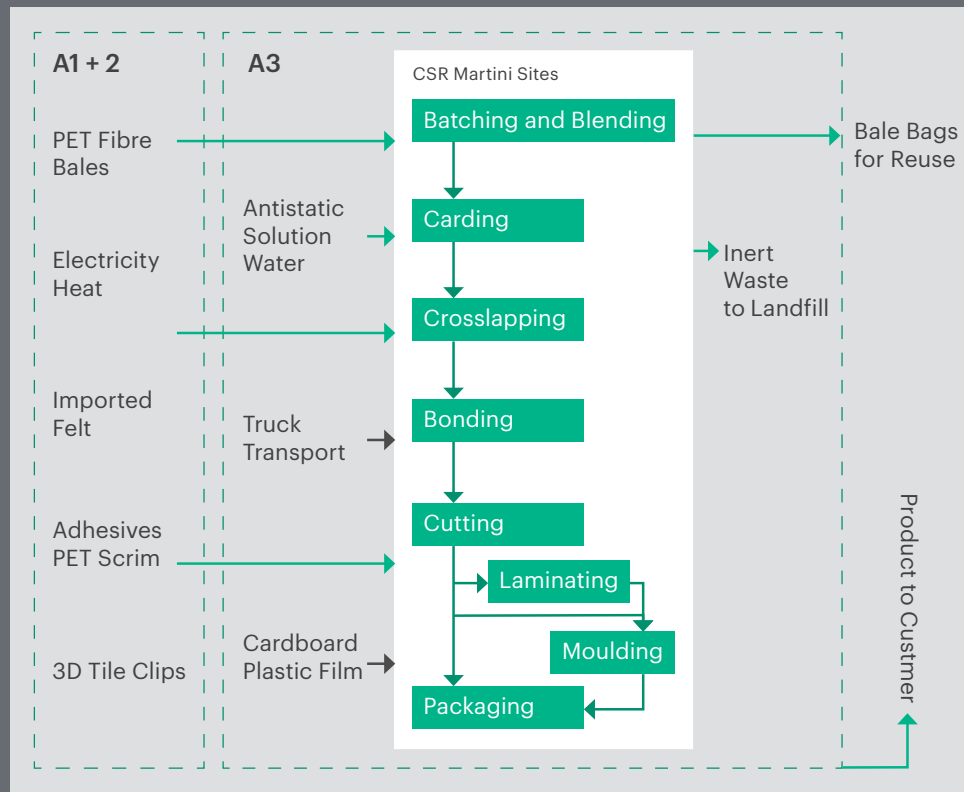
Content Declaration

Content declaration, including information about content of recycled materials, up to 99%, as per table below:

Substance	Content (%)	CAS-Number
Polyethylene Terephthalate	99%	25038-59-9

Product Life Cycle Overview

The life cycle of a building product is divided into three process modules according to the General Program Instructions (GPI) of the Australasian EPD Programme (AEPDP, 2015) and four information modules according to ISO 21930 and EN 15804. The scope of the EPD is "cradle to gate" as defined by EN 15804 – the specific system boundary is shown in Figure 1.



▲ Figure 1 - Life cycle diagram of CSR Martini products

The intent of the EPD is to cover all significant environmental impact over the product lifecycle. As the scope of the EPD is "cradle to gate" no downstream modules are included. Below shows the modules which have been assessed in the EPD. Please see further sections for additional information on life cycle stage.

Product Stage			Construction Stage		Use Stage							End of Life Stage				Benefits and Loads for the next Product system	
Raw Material Supply			Transport		Use							De-Construction and Demolition				Reuse, Recovery Recycling Potential	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	D
																	MND

▲ Figure 2 - System boundary and scope of the study. X = module included in EPD. MND = module not declared (does not indicate zero impact result).

Life Cycle Assessment Methodology

This section includes the main details of the LCA study as well as assumptions and methods of the assessment. A summary of the life cycle assessment parameters is given in Table 4.

Table 3 – Details of the LCA

Declared unit	1 kg of CSR Martini decorative acoustic, acoustic insulation and thermal insulation product
Geographical coverage	Australia
LCA scope	Cradle to gate



Declared Unit

The declared unit is 1 kg of product, and the EPD-type is cradle-to-gate as described in Table 5 and Figure 1. The declared unit in accordance to PCR for Construction products is adopted. The declared unit is used instead of the functional unit because the precise function of the product or scenarios at the building level is not considered for in the EPD (EPD International, 2017). The area density provided in Table 2 can be used to convert the LCA results to a functional unit of m².

The product configurations assessed in this report should not be compared as they all vary in type and/or scope. However, the results can be used for comparative assertions between products with comparable function and assessment scope.

LCA requires a compilation of the inputs, outputs and environmental impacts of a product system throughout its life cycle. LCA can enable businesses to identify resource flows, waste generation and contribution to environmental impacts (such as climate change) associated with the provision of products and services.

Life cycle thinking is a core concept in sustainable consumption and production for policy and business. Upstream and downstream consequences of decisions must be taken into account to help avoid the shifting of burdens from one type of environmental impact to another, from one political region to another, or from one stage to another in a product's life cycle from the cradle to the grave.

According to EN 15804, EPDs of construction products may not be comparable if they do not comply with this standard, particularly if hailing from different programmes or if different functional units are used.



Core Data Collection

Life cycle data has been sourced from first hand sources from CSR Martini and its suppliers. Table 4 summarises data sources per life cycle stage.

Table 4 – Data sources and quality.

	Product Data	Module A1	Module A2	Module A3
Data	Range and physical properties	Raw material inputs Energy inputs	Transportation from overseas suppliers to Australia	Water inputs Consumable inputs Waste outputs Internal transport distances
Source	Collected by CSR Martini staff	Collected by CSR Martini staff	Supplier locations provided by CSR Martini staff. Distances calculated with online tool. Transport specifications assumed from Ecoinvent 3.3 processes	Collected by CSR Martini staff
Quality	Good	Good	Good	Good

Background Data

Generic background data was sourced for raw materials in the upstream module, transportation and end of life. Background data was adapted to represent CSR Martini products as accurately as possible. Data were primarily modelled with the ecoinvent 3.3 (Ecoinvent Centre, 2016) and AusLCI database (AusLCI, 2016) all background data used was less than 10 years old.

Cut Off Criteria

Environmental impacts relating to personnel, infrastructure, and production equipment not directly consumed in the process are excluded from the system boundary as per the PCR CPC 54, Version 2.1, dated 2017-01-04 (EPD International, 2017). All other reported data were incorporated and modelled using the best available life cycle inventory data.

Allocation

Allocation was carried out in accordance with the PCR (EPD International, 2017). No-allocation between co-products was made in the core module as there were no co-products created during manufacturing.

Environmental Performance

This section presents the potential environmental impacts, use of resources and waste production and output flows of CSR Martini decorative acoustic, acoustic insulation and thermal insulation products.

Potential Environmental Impact

Table 5 – Potential environmental impacts per 1 DU decorative acoustic products.

GWP = Global Warming Potential,
ODP = Ozone Depletion Potential,
AP = Acidification Potential,
EP = Eutrophication Potential,
POCP = Photochemical Oxidant Formation Potential,
ADPE = Abiotic Resource Depletion Potential – Elements,
ADPF = Abiotic Resource Depletion Potential – Fossil Fuel

Product name	GWP (kgCO ₂ eq)	ODP (kgCFC11 eq)	POCP (kgC ₂ H ₂ eq)	AP (kgSO ₂ eq)	EP (kgPO ₄ - eq)	ADPE (kgSb eq)	ADPF (MJ)
dECO Baffle Platform 26mm Black	3.76E+00	2.16E-07	7.51E-04	1.63E-02	2.02E-03	9.56E-06	6.72E+01
dECO Baffle Platform 26mm White	4.53E+00	2.62E-07	1.00E-03	2.00E-02	2.28E-03	1.48E-05	8.72E+01
dECO Baffle Rise 26mm Black	3.75E+00	2.15E-07	7.47E-04	1.62E-02	2.00E-03	9.54E-06	6.70E+01
dECO Baffle Rise 26mm White	4.52E+00	2.60E-07	9.99E-04	1.99E-02	2.26E-03	1.48E-05	8.70E+01
dECO Board 7mm Black	3.74E+00	2.25E-07	7.30E-04	1.61E-02	2.09E-03	9.42E-06	6.57E+01
dECO Board 7mm White	3.74E+00	2.16E-07	7.30E-04	1.61E-02	2.08E-03	9.46E-06	6.54E+01
dECO Board 12mm Black	3.72E+00	2.23E-07	7.24E-04	1.60E-02	2.06E-03	9.38E-06	6.54E+01
dECO Board 12mm White	3.71E+00	2.14E-07	7.24E-04	1.60E-02	2.06E-03	9.42E-06	6.51E+01
dECO Deluxe 7mm	3.37E+00	1.99E-07	6.34E-04	1.46E-02	1.88E-03	7.86E-06	5.75E+01
dECO Deluxe 12mm	3.37E+00	1.99E-07	6.34E-04	1.46E-02	1.88E-03	7.86E-06	5.75E+01
dECO Deluxe 24mm	2.43E+00	1.45E-07	5.11E-04	1.05E-02	1.19E-03	7.17E-06	4.40E+01
dECO Deluxe 48mm	2.84E+00	2.69E-06	3.11E-03	1.11E-02	1.23E-03	6.95E-06	4.39E+01

Product name	GWP (kgCO2 eq)	ODP (kgCFC11 eq)	POCP (kgC2H2 eq)	AP (kgSO2 eq)	EP (kgPO43- eq)	ADPE (kgSb eq)	ADPF (MJ)
dECO Deluxe EP 7mm	3.37E+00	1.99E-07	6.34E-04	1.46E-02	1.88E-03	7.86E-06	5.75E+01
dECO Deluxe EP 7mm Black	3.41E+00	2.05E-07	6.41E-04	1.50E-02	1.95E-03	7.64E-06	5.82E+01
dECO Deluxe EP 7mm White	3.40E+00	1.97E-07	6.40E-04	1.50E-02	1.95E-03	7.66E-06	5.78E+01
dECO Deluxe EP 12mm	3.37E+00	1.95E-07	6.35E-04	1.46E-02	1.88E-03	7.90E-06	5.74E+01
dECO Deluxe EP 12mm Black	3.41E+00	2.05E-07	6.41E-04	1.50E-02	1.95E-03	7.64E-06	5.82E+01
dECO Deluxe EP 12mm White	3.40E+00	1.97E-07	6.40E-04	1.50E-02	1.95E-03	7.66E-06	5.78E+01
dECO Deluxe EP 24mm	3.37E+00	1.99E-07	6.34E-04	1.46E-02	1.88E-03	7.86E-06	5.75E+01
dECO Deluxe EP 24mm Black	3.40E+00	1.97E-07	6.40E-04	1.50E-02	1.95E-03	7.66E-06	5.78E+01
dECO Deluxe EP 24mm White	3.40E+00	1.97E-07	6.40E-04	1.50E-02	1.95E-03	7.66E-06	5.78E+01
dECO E Fabric	2.95E+00	1.70E-07	4.86E-04	1.24E-02	1.76E-03	4.96E-06	4.60E+01
dECO Embrace Fabric	3.19E+00	1.84E-07	5.65E-04	1.36E-02	1.83E-03	6.50E-06	5.23E+01
dECO Flex	3.61E+00	2.01E-07	6.43E-04	1.48E-02	1.95E-03	7.96E-06	6.11E+01
dECO Hanging Cloud Black	3.87E+00	2.25E-07	7.78E-04	1.68E-02	2.09E-03	1.01E-05	6.89E+01
dECO Hanging Cloud White	4.74E+00	2.76E-07	1.06E-03	2.10E-02	2.38E-03	1.61E-05	9.14E+01
dECO M Fabric	3.43E+00	1.97E-07	6.44E-04	1.48E-02	1.91E-03	8.03E-06	5.85E+01
dECO Mini Flex	3.62E+00	2.05E-07	7.14E-04	1.56E-02	1.93E-03	9.63E-06	6.42E+01
dECO Panel 8mm Black	3.69E+00	2.17E-07	7.32E-04	1.58E-02	2.01E-03	9.16E-06	6.62E+01
dECO Panel 8mm White	3.82E+00	2.17E-07	7.75E-04	1.64E-02	2.04E-03	9.99E-06	6.91E+01

Product name	GWP (kgCO2 eq)	ODP (kgCFC11 eq)	POCP (kgC2H2 eq)	AP (kgSO2 eq)	EP (kgPO43- eq)	ADPE (kgSb eq)	ADPF (MJ)
dECO Panel 13.5mm Black	3.80E+00	2.25E-07	7.63E-04	1.64E-02	2.06E-03	9.94E-06	6.86E+01
dECO Panel 13.5mm White	3.93E+00	2.25E-07	8.08E-04	1.71E-02	2.09E-03	1.08E-05	7.15E+01
dECO Panel 25mm Black	3.21E+00	1.89E-07	5.62E-04	1.33E-02	1.89E-03	5.89E-06	5.31E+01
dECO Panel 25mm White	3.38E+00	1.92E-07	6.21E-04	1.43E-02	1.93E-03	7.02E-06	5.72E+01
dECO Panel 50mm Black	3.25E+00	1.93E-07	5.67E-04	1.35E-02	1.92E-03	6.09E-06	5.34E+01
dECO Panel 50mm White	3.44E+00	1.97E-07	6.33E-04	1.46E-02	1.97E-03	7.36E-06	5.79E+01
dECO Quiet Board 25mm Black	3.80E+00	2.26E-07	7.54E-04	1.63E-02	2.07E-03	9.83E-06	6.84E+01
dECO Quiet Board 25mm White	3.94E+00	2.25E-07	8.04E-04	1.70E-02	2.10E-03	1.08E-05	7.16E+01
dECO Quiet Board 50mm Black	3.60E+00	2.15E-07	6.84E-04	1.53E-02	2.03E-03	8.48E-06	6.27E+01
dECO Quiet Board 50mm White	3.78E+00	2.16E-07	7.44E-04	1.62E-02	2.07E-03	9.63E-06	6.67E+01
dECO Quiet Panel 25mm Black	3.67E+00	2.15E-07	7.19E-04	1.56E-02	2.00E-03	8.99E-06	6.58E+01
dECO Quiet Panel 25mm White	3.79E+00	2.15E-07	7.61E-04	1.63E-02	2.03E-03	9.81E-06	6.85E+01
dECO Quiet Panel 50mm Black	3.54E+00	2.10E-07	6.68E-04	1.50E-02	1.99E-03	8.07E-06	6.16E+01
dECO Quiet Panel 50mm White	3.69E+00	2.10E-07	7.22E-04	1.58E-02	2.03E-03	9.11E-06	6.52E+01
dECO Quiet Panel Export 25mm White	4.57E+00	2.62E-07	1.02E-03	2.01E-02	2.28E-03	1.50E-05	8.88E+01
dECO Quiet Panel Export 50mm White	4.71E+00	2.73E-07	1.06E-03	2.09E-02	2.35E-03	1.59E-05	9.15E+01
dECO Screen 12mm Black	3.67E+00	2.15E-07	7.26E-04	1.57E-02	2.00E-03	8.99E-06	6.58E+01
dECO Screen 12mm White	3.78E+00	2.14E-07	7.63E-04	1.62E-02	2.03E-03	9.71E-06	6.82E+01

Product name	GWP (kgCO2 eq)	ODP (kgCFC11 eq)	POCP (kgC2H2 eq)	AP (kgSO2 eq)	EP (kgPO43- eq)	ADPE (kgSb eq)	ADPF (MJ)
dECO Stick It	3.71E+00	2.13E-07	7.73E-04	1.60E-02	1.98E-03	9.91E-06	6.66E+01
dECO Tile 3D ET Wall	4.16E+00	2.43E-07	8.83E-04	1.81E-02	2.19E-03	1.28E-05	7.70E+01
dECO Tile 3D H Ceiling	4.29E+00	2.51E-07	9.03E-04	1.88E-02	2.30E-03	1.28E-05	7.82E+01
dECO Tile 3D H Wall	4.52E+00	2.63E-07	9.81E-04	1.97E-02	2.38E-03	1.41E-05	8.49E+01
dECO Tile 3D WW Ceiling	4.28E+00	2.48E-07	9.13E-04	1.88E-02	2.25E-03	1.31E-05	7.91E+01
dECO Tile 3D WW Wall	4.42E+00	2.59E-07	9.55E-04	1.94E-02	2.33E-03	1.40E-05	8.25E+01
dECO Tile Flat H Ceiling 13mm	3.73E+00	2.11E-07	7.42E-04	1.61E-02	2.00E-03	9.59E-06	6.63E+01
dECO Tile Flat H Ceiling 25mm	4.20E+00	2.40E-07	8.98E-04	1.83E-02	2.18E-03	1.24E-05	7.89E+01



Table 6 – Potential environmental impacts per 1 DU acoustic insulation products.

Product name	GWP (kgCO ₂ eq)	ODP (kgCFC11 eq)	POCP (kgC ₂ H ₂ eq)	AP (kgSO ₂ eq)	EP (kgPO ₄ - eq)	ADPE (kgSb eq)	ADPF (MJ)
Absorb Black	3.36E+00	1.90E-07	6.18E-04	1.44E-02	1.83E-03	7.60E-06	5.81E+01
Absorb White	3.36E+00	1.85E-07	6.18E-04	1.43E-02	1.83E-03	7.62E-06	5.79E+01
Blanket	3.44E+00	1.89E-07	6.44E-04	1.49E-02	1.88E-03	8.03E-06	6.15E+01
Easy Baffle	4.07E+00	2.30E-07	8.45E-04	1.78E-02	2.08E-03	1.24E-05	7.68E+01
Easy Baffle Black	3.04E+00	1.66E-07	5.06E-04	1.26E-02	1.76E-03	5.40E-06	5.01E+01
MAB Black	3.30E+00	1.88E-07	5.76E-04	1.37E-02	1.81E-03	6.89E-06	5.65E+01
MAB White	3.41E+00	1.87E-07	6.15E-04	1.42E-02	1.85E-03	7.70E-06	5.93E+01
MSB Black	3.08E+00	1.75E-07	5.13E-04	1.28E-02	1.77E-03	5.46E-06	5.14E+01
MSB White	3.64E+00	2.02E-07	7.00E-04	1.56E-02	1.94E-03	9.34E-06	6.58E+01
Polymax Acoustic R1.5	3.28E+00	1.82E-07	5.90E-04	1.40E-02	1.82E-03	7.19E-06	5.60E+01
Polymax Acoustic R2.0 75mm	3.27E+00	1.82E-07	5.87E-04	1.39E-02	1.81E-03	7.17E-06	5.57E+01
Polymax Acoustic R2.0 90mm	3.29E+00	1.82E-07	5.91E-04	1.40E-02	1.82E-03	7.21E-06	5.61E+01
Polymax Acoustic R2.5	3.25E+00	1.82E-07	5.84E-04	1.39E-02	1.81E-03	7.14E-06	5.53E+01
Prime Black	3.08E+00	1.75E-07	5.13E-04	1.28E-02	1.77E-03	5.45E-06	5.13E+01
Prime White	3.64E+00	2.02E-07	7.00E-04	1.56E-02	1.95E-03	9.32E-06	6.56E+01

Table 7 – Potential environmental impacts per 1 DU thermal insulation products

Product name	GWP (kgCO2 eq)	ODP (kgCFC11 eq)	POCP (kgC2H2 eq)	AP (kgSO2 eq)	EP (kgPO43- eq)	ADPE (kgSb eq)	ADPF (MJ)
Flexible Ducting	4.32E+00	2.39E-07	9.13E-04	1.90E-02	2.15E-03	1.34E-05	8.25E+01
Polymax Thermal Ceiling R2.0	3.39E+00	1.87E-07	6.21E-04	1.44E-02	1.85E-03	7.76E-06	5.86E+01
Polymax Thermal Ceiling R2.5	3.40E+00	1.87E-07	6.23E-04	1.45E-02	1.86E-03	7.79E-06	5.90E+01
Polymax Thermal Ceiling R3.0	3.38E+00	1.87E-07	6.19E-04	1.44E-02	1.85E-03	7.74E-06	5.84E+01
Polymax Thermal Ceiling R3.5	3.36E+00	1.87E-07	6.16E-04	1.43E-02	1.84E-03	7.71E-06	5.80E+01
Polymax Thermal Ceiling R4.0	3.37E+00	1.87E-07	6.17E-04	1.44E-02	1.85E-03	7.73E-06	5.81E+01
Polymax Thermal Wall R1.5	3.40E+00	1.87E-07	6.20E-04	1.44E-02	1.85E-03	7.76E-06	5.87E+01
Polymax Thermal Wall R2.0	3.37E+00	1.87E-07	6.14E-04	1.43E-02	1.84E-03	7.70E-06	5.80E+01
Polymax Thermal Wall R2.5	3.35E+00	1.86E-07	6.11E-04	1.42E-02	1.83E-03	7.66E-06	5.75E+01

Use of Resources

Table 8 – Use of resources per 1 DU decorative acoustic products.

PERE = Use of renewable primary energy excluding raw materials,
 PERT = Total use of renewable primary energy resources,
 PENRM = Use of non-renewable primary energy resources used as raw materials,
 SM = Use of secondary material,
 NRSF = Use of non-renewable secondary fuels,
 INA = Indicator not assessed

PERM = Use of renewable primary energy resources used as raw materials,
 PENRE = Use of non-renewable primary energy excluding raw materials,
 PENRT = Total use of non-renewable primary energy resources,
 RSF = Use of renewable secondary fuels,
 FW = Use of net fresh water,

Product name	PERE (MJ)	PERM (MJ)	PERT (MJ)	PENRE (MJ)	PENRM (MJ)	PENRT (MJ)	SM (kg)	RSF (MJ)	NRSF (MJ)	FW (m3)
dECO Baffle Platform 26mm White	4.03E+00	0.00E+00	4.03E+00	9.11E+01	2.07E+01	1.12E+02	1.33E-01	0.00E+00	0.00E+00	5.35E-02
dECO Baffle Platform 26mm Black	3.22E+00	0.00E+00	3.22E+00	6.92E+01	1.26E+01	8.18E+01	4.74E-01	0.00E+00	0.00E+00	5.04E-02
dECO Baffle Rise 26mm Black	3.07E+00	0.00E+00	3.07E+00	6.90E+01	1.26E+01	8.15E+01	4.74E-01	0.00E+00	0.00E+00	5.03E-02
dECO Baffle Rise 26mm White	3.88E+00	0.00E+00	3.88E+00	9.08E+01	2.07E+01	1.12E+02	1.33E-01	0.00E+00	0.00E+00	5.34E-02
dECO Board 7mm Black	3.46E+00	0.00E+00	3.46E+00	6.74E+01	1.24E+01	7.97E+01	5.20E-01	0.00E+00	0.00E+00	5.15E-02
dECO Board 7mm White	3.47E+00	0.00E+00	3.47E+00	6.70E+01	1.24E+01	7.93E+01	5.20E-01	0.00E+00	0.00E+00	5.17E-02
dECO Board 12mm Black	3.27E+00	0.00E+00	3.27E+00	6.70E+01	1.24E+01	7.94E+01	5.20E-01	0.00E+00	0.00E+00	5.13E-02
dECO Board 12mm White	3.28E+00	0.00E+00	3.28E+00	6.66E+01	1.24E+01	7.90E+01	5.20E-01	0.00E+00	0.00E+00	5.15E-02
dECO Deluxe 7mm	2.12E+00	9.00E+00	1.11E+01	5.87E+01	2.47E+01	8.35E+01	6.24E-01	0.00E+00	0.00E+00	4.99E-02
dECO Deluxe 12mm	2.12E+00	1.00E+01	1.21E+01	5.87E+01	2.47E+01	8.35E+01	6.24E-01	0.00E+00	0.00E+00	4.99E-02
dECO Deluxe 24mm	1.57E+00	0.00E+00	1.57E+00	4.53E+01	9.90E+00	5.52E+01	0.00E+00	0.00E+00	0.00E+00	2.72E-02

Product name	PERE (MJ)	PERM (MJ)	PERT (MJ)	PENRE (MJ)	PENRM (MJ)	PENRT (MJ)	SM (kg)	RSF (MJ)	NRSF (MJ)	FW (m3)
dECO Deluxe 48mm	1.53E+00	0.00E+00	1.53E+00	4.56E+01	9.53E+00	5.51E+01	0.00E+00	0.00E+00	0.00E+00	2.69E-02
dECO Deluxe EP 7mm	2.12E+00	0.00E+00	2.12E+00	5.87E+01	9.90E+00	6.86E+01	6.24E-01	0.00E+00	0.00E+00	4.99E-02
dECO Deluxe EP 7mm Black	2.17E+00	4.00E+00	6.17E+00	5.93E+01	9.90E+00	6.92E+01	6.24E-01	0.00E+00	0.00E+00	4.98E-02
dECO Deluxe EP 7mm White	2.18E+00	3.00E+00	5.18E+00	5.89E+01	9.90E+00	6.88E+01	6.24E-01	0.00E+00	0.00E+00	5.00E-02
dECO Deluxe EP 12mm	2.13E+00	0.00E+00	2.13E+00	5.86E+01	9.90E+00	6.85E+01	6.24E-01	0.00E+00	0.00E+00	5.01E-02
dECO Deluxe EP 12mm Black	2.17E+00	6.00E+00	8.17E+00	5.93E+01	9.90E+00	6.92E+01	6.24E-01	0.00E+00	0.00E+00	4.98E-02
dECO Deluxe EP 12mm Black	2.17E+00	6.00E+00	8.17E+00	5.93E+01	9.90E+00	6.92E+01	6.24E-01	0.00E+00	0.00E+00	4.98E-02
dECO Deluxe EP 12mm White	2.18E+00	5.00E+00	7.18E+00	5.89E+01	9.90E+00	6.88E+01	6.24E-01	0.00E+00	0.00E+00	5.00E-02
dECO Deluxe EP 24mm	2.12E+00	0.00E+00	2.12E+00	5.87E+01	9.90E+00	6.86E+01	6.24E-01	0.00E+00	0.00E+00	4.99E-02
dECO Deluxe EP 24mm White	2.18E+00	7.00E+00	9.18E+00	5.89E+01	9.90E+00	6.88E+01	6.24E-01	0.00E+00	0.00E+00	5.00E-02
dECO E Fabric	1.76E+00	0.00E+00	1.76E+00	4.66E+01	4.95E+00	5.16E+01	8.32E-01	0.00E+00	0.00E+00	4.90E-02
dECO Embrace Fabric	2.01E+00	0.00E+00	2.01E+00	5.33E+01	7.42E+00	6.08E+01	7.28E-01	0.00E+00	0.00E+00	4.98E-02
dECO Flex	2.33E+00	0.00E+00	2.33E+00	6.24E+01	9.99E+00	7.24E+01	6.07E-01	0.00E+00	0.00E+00	5.04E-02
dECO Hanging Cloud Black	3.62E+00	0.00E+00	3.62E+00	7.09E+01	1.34E+01	8.43E+01	4.58E-01	0.00E+00	0.00E+00	5.13E-02
dECO Hanging Cloud White	4.52E+00	0.00E+00	4.52E+00	9.55E+01	2.25E+01	1.18E+02	7.44E-02	0.00E+00	0.00E+00	5.48E-02
dECO M Fabric	2.26E+00	2.00E+00	4.26E+00	6.00E+01	9.90E+00	6.99E+01	6.24E-01	0.00E+00	0.00E+00	5.07E-02
dECO Mini Flex	2.40E+00	0.00E+00	2.40E+00	6.59E+01	1.12E+01	7.71E+01	4.99E-01	0.00E+00	0.00E+00	5.06E-02
dECO Panel 8mm Black	3.16E+00	0.00E+00	3.16E+00	6.83E+01	1.19E+01	8.02E+01	4.93E-01	0.00E+00	0.00E+00	5.01E-02

Product name	PERE (MJ)	PERM (MJ)	PERT (MJ)	PENRE (MJ)	PENRM (MJ)	PENRT (MJ)	SM (kg)	RSF (MJ)	NRSF (MJ)	FW (m3)
dECO Panel 8mm White	3.30E+00	0.00E+00	3.30E+00	7.13E+01	1.32E+01	8.45E+01	4.41E-01	0.00E+00	0.00E+00	5.07E-02
dECO Panel 13.5mm Black	3.23E+00	0.00E+00	3.23E+00	7.06E+01	1.32E+01	8.39E+01	4.57E-01	0.00E+00	0.00E+00	5.09E-02
dECO Panel 13.5mm White	3.38E+00	0.00E+00	3.38E+00	7.38E+01	1.45E+01	8.83E+01	4.04E-01	0.00E+00	0.00E+00	5.16E-02
dECO Panel 25mm Black	2.87E+00	0.00E+00	2.87E+00	5.41E+01	6.70E+00	6.08E+01	7.20E-01	0.00E+00	0.00E+00	4.87E-02
dECO Panel 25mm White	3.07E+00	0.00E+00	3.07E+00	5.84E+01	8.44E+00	6.69E+01	6.47E-01	0.00E+00	0.00E+00	4.93E-02
dECO Panel 50mm Black	3.01E+00	0.00E+00	3.01E+00	5.42E+01	7.02E+00	6.12E+01	7.23E-01	0.00E+00	0.00E+00	4.93E-02
dECO Panel 50mm White	3.23E+00	0.00E+00	3.23E+00	5.91E+01	8.97E+00	6.81E+01	6.41E-01	0.00E+00	0.00E+00	5.00E-02
dECO Quiet Board 25mm Black	3.34E+00	0.00E+00	3.34E+00	7.05E+01	1.30E+01	8.35E+01	4.61E-01	0.00E+00	0.00E+00	5.08E-02
dECO Quiet Board 25mm White	3.50E+00	0.00E+00	3.50E+00	7.40E+01	1.45E+01	8.84E+01	4.01E-01	0.00E+00	0.00E+00	5.15E-02
dECO Quiet Board 50mm Black	3.49E+00	0.00E+00	3.49E+00	6.85E+01	1.26E+01	8.11E+01	4.91E-01	0.00E+00	0.00E+00	5.12E-02
dECO Quiet Board 50mm White	3.49E+00	0.00E+00	3.49E+00	6.85E+01	1.26E+01	8.11E+01	4.91E-01	0.00E+00	0.00E+00	5.12E-02
dECO Quiet Panel 25mm Black	3.08E+00	0.00E+00	3.08E+00	6.79E+01	1.17E+01	7.96E+01	4.95E-01	0.00E+00	0.00E+00	4.98E-02
dECO Quiet Panel 25mm White	3.22E+00	0.00E+00	3.22E+00	7.08E+01	1.29E+01	8.37E+01	4.45E-01	0.00E+00	0.00E+00	5.04E-02
dECO Quiet Panel 50mm Black	3.13E+00	0.00E+00	3.13E+00	6.32E+01	1.02E+01	7.34E+01	5.77E-01	0.00E+00	0.00E+00	4.99E-02
dECO Quiet Panel 50mm White	3.31E+00	0.00E+00	3.31E+00	6.70E+01	1.18E+01	7.88E+01	5.11E-01	0.00E+00	0.00E+00	5.05E-02
dECO Quiet Panel Export 25mm White	4.03E+00	0.00E+00	4.03E+00	9.28E+01	2.10E+01	1.14E+02	1.04E-01	0.00E+00	0.00E+00	5.33E-02
dECO Quiet Panel Export 50mm White	4.36E+00	1.00E+00	5.36E+00	9.56E+01	2.23E+01	1.18E+02	6.78E-02	0.00E+00	0.00E+00	5.43E-02
dECO Screen 12mm Black	3.12E+00	0.00E+00	3.12E+00	6.79E+01	1.17E+01	7.96E+01	4.98E-01	0.00E+00	0.00E+00	4.99E-02

Product name	PERE (MJ)	PERM (MJ)	PERT (MJ)	PENRE (MJ)	PENRM (MJ)	PENRT (MJ)	SM (kg)	RSF (MJ)	NRSF (MJ)	FW (m3)
dECO Screen 12mm White	3.24E+00	0.00E+00	3.24E+00	7.05E+01	1.27E+01	8.32E+01	4.54E-01	0.00E+00	0.00E+00	5.04E-02
dECO Stick It	3.13E+00	0.00E+00	3.13E+00	6.85E+01	1.23E+01	8.08E+01	4.33E-01	0.00E+00	0.00E+00	5.04E-02
dECO Tile 3D ET Wall	4.21E+00	0.00E+00	4.21E+00	7.98E+01	1.63E+01	9.61E+01	2.55E-01	0.00E+00	0.00E+00	5.18E-02
dECO Tile 3D H Ceiling	4.80E+00	0.00E+00	4.80E+00	8.10E+01	1.61E+01	9.71E+01	3.19E-01	0.00E+00	0.00E+00	5.39E-02
dECO Tile 3D H Wall	5.40E+00	0.00E+00	5.40E+00	8.84E+01	1.76E+01	1.06E+02	2.00E-01	0.00E+00	0.00E+00	5.53E-02
dECO Tile 3D WW Ceiling	4.20E+00	0.00E+00	4.20E+00	8.20E+01	1.68E+01	9.88E+01	2.88E-01	0.00E+00	0.00E+00	5.36E-02
dECO Tile 3D WW Wall	4.68E+00	0.00E+00	4.68E+00	8.57E+01	1.76E+01	1.03E+02	2.38E-01	0.00E+00	0.00E+00	5.44E-02
dECO Tile Flat H - Ceiling 13mm	2.98E+00	0.00E+00	2.98E+00	6.82E+01	1.26E+01	8.07E+01	4.85E-01	0.00E+00	0.00E+00	5.06E-02
dECO Tile Flat H - Ceiling 25mm	3.87E+00	0.00E+00	3.87E+00	8.20E+01	1.69E+01	9.89E+01	2.79E-01	0.00E+00	0.00E+00	5.20E-02



Table 9 –Use of resources per 1 DU acoustic insulation products.

Product name	PERE (MJ)	PERM (MJ)	PERT (MJ)	PENRE (MJ)	PENRM (MJ)	PENRT (MJ)	SM (kg)	RSF (MJ)	NRSF (MJ)	FW (m3)
Blanket	2.41E+00	0.00E+00	2.41E+00	6.16E+01	9.65E+00	7.13E+01	5.96E-01	0.00E+00	0.00E+00	5.17E-02
Easy Baffle	3.00E+00	0.00E+00	3.00E+00	7.90E+01	1.67E+01	9.57E+01	3.00E-01	0.00E+00	0.00E+00	5.30E-02
Easy Baffle Black	1.90E+00	0.00E+00	1.90E+00	5.11E+01	5.96E+00	5.70E+01	7.51E-01	0.00E+00	0.00E+00	4.91E-02
High Performance Absorb Black	2.23E+00	0.00E+00	2.23E+00	5.81E+01	9.53E+00	6.77E+01	6.01E-01	0.00E+00	0.00E+00	4.95E-02
High Performance Absorb White	2.24E+00	0.00E+00	2.24E+00	5.80E+01	9.53E+00	6.75E+01	6.01E-01	0.00E+00	0.00E+00	4.96E-02
High Performance Prime Black	1.93E+00	0.00E+00	1.93E+00	5.24E+01	5.96E+00	5.83E+01	7.51E-01	0.00E+00	0.00E+00	4.94E-02
High Performance Prime White	2.54E+00	0.00E+00	2.54E+00	6.75E+01	1.19E+01	7.95E+01	5.01E-01	0.00E+00	0.00E+00	5.16E-02
MAB Black	2.14E+00	0.00E+00	2.14E+00	5.54E+01	8.29E+00	6.36E+01	6.53E-01	0.00E+00	0.00E+00	4.98E-02
MAB White	2.27E+00	0.00E+00	2.27E+00	5.83E+01	9.53E+00	6.78E+01	6.01E-01	0.00E+00	0.00E+00	5.04E-02
MSB Black	1.93E+00	0.00E+00	1.93E+00	5.25E+01	5.96E+00	5.84E+01	7.51E-01	0.00E+00	0.00E+00	4.95E-02
MSB White	2.55E+00	0.00E+00	2.55E+00	6.70E+01	1.19E+01	7.89E+01	5.01E-01	0.00E+00	0.00E+00	5.17E-02
Polymax Acoustic R1.5	2.17E+00	0.00E+00	2.17E+00	5.63E+01	8.82E+00	6.51E+01	6.31E-01	0.00E+00	0.00E+00	4.94E-02
Polymax Acoustic R2.0 75mm	2.16E+00	0.00E+00	2.16E+00	5.60E+01	8.82E+00	6.48E+01	6.31E-01	0.00E+00	0.00E+00	4.92E-02
Polymax Acoustic R2.0 90mm	2.18E+00	0.00E+00	2.18E+00	5.65E+01	8.82E+00	6.53E+01	6.31E-01	0.00E+00	0.00E+00	4.95E-02
Polymax Acoustic R2.5	2.14E+00	0.00E+00	2.14E+00	5.55E+01	8.82E+00	6.43E+01	6.31E-01	0.00E+00	0.00E+00	4.90E-02

Table 10 – Use of resources per 1 DU thermal insulation products

Product name	PERE (MJ)	PERM (MJ)	PERT (MJ)	PENRE (MJ)	PENRM (MJ)	PENRT (MJ)	SM (kg)	RSF (MJ)	NRSF (MJ)	FW (m3)
Flexible Ducting	3.25E+00	0.00E+00	3.25E+00	8.65E+01	1.80E+01	1.04E+02	2.45E-01	0.00E+00	0.00E+00	5.47E-02
Polymax Thermal Ceiling R2.0	2.27E+00	0.00E+00	2.27E+00	5.93E+01	9.65E+00	6.89E+01	5.96E-01	0.00E+00	0.00E+00	5.00E-02
Polymax Thermal Ceiling R2.5	2.29E+00	0.00E+00	2.29E+00	5.97E+01	9.65E+00	6.93E+01	5.96E-01	0.00E+00	0.00E+00	5.02E-02
Polymax Thermal Ceiling R3.0	2.26E+00	0.00E+00	2.26E+00	5.90E+01	9.65E+00	6.86E+01	5.96E-01	0.00E+00	0.00E+00	4.98E-02
Polymax Thermal Ceiling R3.5	2.25E+00	0.00E+00	2.25E+00	5.85E+01	9.65E+00	6.82E+01	5.96E-01	0.00E+00	0.00E+00	4.96E-02
Polymax Thermal Ceiling R4.0	2.25E+00	0.00E+00	2.25E+00	5.87E+01	9.65E+00	6.83E+01	5.96E-01	0.00E+00	0.00E+00	4.97E-02
Polymax Thermal Wall R1.5	2.28E+00	0.00E+00	2.28E+00	5.88E+01	9.65E+00	6.85E+01	5.96E-01	0.00E+00	0.00E+00	5.00E-02
Polymax Thermal Wall R2.0	2.24E+00	0.00E+00	2.24E+00	5.79E+01	9.65E+00	6.76E+01	5.96E-01	0.00E+00	0.00E+00	4.96E-02
Polymax Thermal Wall R2.5	2.22E+00	0.00E+00	2.22E+00	5.74E+01	9.65E+00	6.71E+01	5.96E-01	0.00E+00	0.00E+00	4.93E-02

Waste Production and Output Flows

Table 11 – Generation of waste per 1 DU decorative acoustic products.

HWD = Hazardous waste disposed,
RWD = Radioactive waste disposed,
MRE = Materials for recycling,
EE = Exported energy

NHWD = Non-hazardous waste disposed,
CRE = Components for reuse,
MER = Materials for energy recovery,

Product name	HWD (kg)	NHWD (kg)	RWD (kg)	CRE (kg)	MRE (kg)	MER (kg)	EE (MJ)
dECO Baffle Platform Black 26mm	3.84E-04	3.27E-01	8.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Baffle Platform White 26mm	6.25E-04	3.66E-01	1.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Baffle Rise Black 26mm	3.84E-04	3.24E-01	8.64E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Baffle Rise White 26mm	6.26E-04	3.64E-01	1.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Board Black 7mm	3.77E-04	3.01E-01	8.89E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Board White 7mm	3.81E-04	3.02E-01	8.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Board Black 12mm	3.77E-04	2.98E-01	8.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Board White 12mm	3.80E-04	2.99E-01	8.33E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe 7mm	3.03E-04	2.74E-01	7.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe 12mm	3.03E-04	2.74E-01	7.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe 24mm	2.99E-04	1.80E-01	5.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe 48mm	2.88E-04	1.79E-01	5.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe EP 12mm Black	3.03E-04	2.68E-01	7.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe EP 12mm White	3.06E-04	2.69E-01	7.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Product name	HWD (kg)	NHWD (kg)	RWD (kg)	CRE (kg)	MRE (kg)	MER (kg)	EE (MJ)
dECO Deluxe EP 24mm	3.03E-04	2.74E-01	7.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe EP 24mm Black	3.06E-04	2.69E-01	7.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe EP 24mm White	3.06E-04	2.69E-01	7.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe EP 7mm	3.03E-04	2.74E-01	7.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe EP 7mm Black	3.03E-04	2.68E-01	7.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe EP 7mm White	3.06E-04	2.69E-01	7.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Deluxe EP 12mm	3.06E-04	2.75E-01	7.60E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO E Fabric	1.61E-04	2.52E-01	6.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Flex	3.10E-04	2.99E-01	7.33E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Embrace Fabric	2.34E-04	2.67E-01	6.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Hanging Cloud Black	4.08E-04	3.39E-01	9.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Hanging Cloud White	6.80E-04	3.84E-01	1.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO M Fabric	3.07E-04	2.81E-01	7.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Mini Flex	3.93E-04	3.02E-01	8.15E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Panel 8mm Black	3.64E-04	2.98E-01	8.64E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Panel 8mm White	4.04E-04	3.15E-01	8.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Panel 13.5mm Black	4.02E-04	3.04E-01	9.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Panel 13.5mm White	4.44E-04	3.22E-01	9.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Product name	HWD (kg)	NHWD (kg)	RWD (kg)	CRE (kg)	MRE (kg)	MER (kg)	EE (MJ)
dECO Panel 25mm Black Base	2.11E-04	2.70E-01	6.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Panel 25mm White Base	2.65E-04	2.94E-01	7.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Panel 50mm Black Base	2.21E-04	2.72E-01	7.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Panel 50mm White Base	2.81E-04	2.99E-01	7.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Board 25mm Black	3.97E-04	3.08E-01	9.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Board 25mm White	4.42E-04	3.28E-01	9.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Panel 50mm Black	3.14E-04	2.91E-01	8.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Panel 50mm White	3.88E-04	3.20E-01	8.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Panel 25mm Black	3.57E-04	2.99E-01	8.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Panel 25mm White	3.96E-04	3.16E-01	8.60E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Panel 50mm Black	3.14E-04	2.91E-01	8.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Panel 50mm White	3.63E-04	3.13E-01	8.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Panel EXP 25mm White	6.35E-04	3.66E-01	1.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Quiet Panel EXP 50mm White	6.74E-04	3.78E-01	1.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Screen 12mm Black	3.56E-04	2.97E-01	8.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Screen 12mm White	3.91E-04	3.12E-01	8.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Stick It	3.80E-04	3.20E-01	8.58E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Product name	HWD (kg)	NHWD (kg)	RWD (kg)	CRE (kg)	MRE (kg)	MER (kg)	EE (MJ)
dECO Tile 3D ET Wall	5.32E-04	3.40E-01	1.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Tile 3D H Ceiling	5.24E-04	3.68E-01	1.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Tile 3D H Wall	5.79E-04	3.72E-01	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Tile 3D WW Ceiling	5.44E-04	3.53E-01	1.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Tile 3D WW Wall	5.79E-04	3.64E-01	1.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Tile Flat H Ceiling 13mm	3.87E-04	3.21E-01	8.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dECO Tile Flat H Ceiling 25mm	5.13E-04	3.43E-01	1.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00



Table 12 – Generation of waste per 1 DU acoustic insulation products.

Product name	HWD (kg)	NHWD (kg)	RWD (kg)	CRE (kg)	MRE (kg)	MER (kg)	EE (MJ)
Absorb Black	2.94E-04	2.78E-01	7.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Absorb White	2.96E-04	2.78E-01	7.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Blanket	3.00E-04	2.68E-01	7.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Easy Baffle	5.07E-04	3.16E-01	9.95E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Easy Baffle Black	1.90E-04	2.43E-01	5.93E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MAB Black	2.56E-04	2.46E-01	7.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MAB White	2.95E-04	2.55E-01	7.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MSB Black	1.88E-04	2.44E-01	6.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MSB White	3.66E-04	2.80E-01	8.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Acoustic R1.5	2.75E-04	2.76E-01	6.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Acoustic R2.0 75mm	2.75E-04	2.75E-01	6.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Acoustic R2.0 90mm	2.75E-04	2.76E-01	6.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Acoustic R2.5	2.75E-04	2.74E-01	6.93E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Prime Black	1.88E-04	2.44E-01	6.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Prime White	3.66E-04	2.86E-01	8.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 13 – Generation of waste per 1 DU thermal insulation products.

Product name	HWD (kg)	NHWD (kg)	RWD (kg)	CRE (kg)	MRE (kg)	MER (kg)	EE (MJ)
Flexible Ducting	5.46E-04	3.55E-01	1.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Thermal Ceiling R2.0	2.99E-04	2.80E-01	7.29E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Thermal Ceiling R2.5	3.00E-04	2.81E-01	7.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Thermal Ceiling R3.0	2.99E-04	2.80E-01	7.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Thermal Ceiling R3.5	2.99E-04	2.79E-01	7.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Thermal Ceiling R4.0	2.99E-04	2.79E-01	7.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Thermal Wall R1.5	2.99E-04	2.79E-01	7.29E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Thermal Wall R2.0	2.99E-04	2.77E-01	7.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymax Thermal Wall R2.5	2.99E-04	2.77E-01	7.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Interpretation of Results

The manufacturing of raw materials contributes between 83% to 98% of the potential environmental impacts, followed by transport of raw materials to the CSR Martini factory gate with 3% to 15% of impacts and CSR Martini manufacturing with 1 to 4%. On average the manufacturing of raw materials contributes 84% of the renewable energy input, 97% of the non-renewable energy input and 96% of the water input. Further the main contributor to the use of energy resources, secondary material and water is the manufacture of raw materials.

The main kind of waste generated in the life cycle of CSR Martini products is non-hazardous waste (>99%) with the main contributor to waste outputs being the raw material supply chain.

The manufacturing of raw materials is responsible for 100% of the hazardous waste, 91% of the non-hazardous waste and 83% of the radioactive waste. Transport of raw materials to the CSR Martini factory gate is responsible for 5% of the non-hazardous waste and 15% of the radioactive waste.



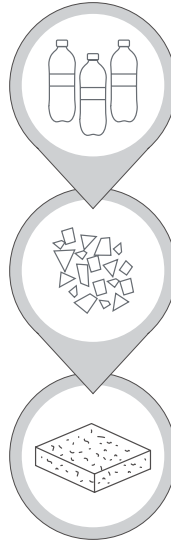
Sustainability

CSR Martini is committed to sustainable practice throughout its business.

Recycled Products

CSR Martini is focused on producing environmentally neutral and recyclable products through sustainable manufacturing processes. CSR Martini uses PET bottle recycled material for a select number of products, as we understand the importance of reducing impact on the environment and preserves ensure we are contributing to being an environmental friendly business.

Our range of insulation products is manufactured with thermally-bonded polyester fibres, of which up to 80% is made from post-consumer (PET) packaging, such as empty drink bottles.



Green Tag

Independent environmental assessments have been completed by Ecospecifier on Martini's range of products and are ideal for use in Green Star® projects.

Recognised by the Green Building Council of Australia (GBCA) and New Zealand Green Building Council (NZGBC), CSR Martini products can contribute to points available in the rating tools that assess the environmental sustainability of building projects at the design, construction and as built phases: Green Star® – Design and As Built, and the interior fit-out phase: Green Star® – Interiors.

Our products are GreenTag certified GreenRate Level 1 – the highest level achievable.



Environmental credentials:

- Products with recycled content reduce greenhouse gas emissions
- High reusable potential
- Products manufactured from thermally bonded polyester fibre have a minimum of 60% recycled fibre content from PET packaging such as empty drink bottles
- The products are 100% recyclable
- Volatile organic compounds (VOCs) generated in the manufacturing process is classified as low (0.01 mg/m3)
- No ozone-depleting gases are used during the manufacturing process
- No red list chemicals are present
- Safe, non-irritant, non-toxic, and non-allergenic

Safe Use Instruction Sheet (SUIS) can be downloaded from csmartini.com.au



Ecospecifier

The products covered by this EPD are verified as meeting the Ecospecifier Verified Product Standard.

Ecospecifier is an independent third party who provides a unbiased assessment to determine if products are eco and health preferable based on the premise that:

- They exhibit one or more eco or health preferable characteristic compared to other products in their category; or
- They are a member of a product category that is in itself an eco or health preferred category; and
- They do not contain 'significant' ecological or health damaging content.



Environmental Benefits

- Recycled content up to 80% PET
- Green Tag^{Cert™} certified
- 100% Recyclable
- Suitable for Green Star[™] projects
- Volatile organic compounds (VOCs) generated in the manufacturing process is classified as low (0.01 mg/m³s)

Fire Hazard Properties

Our products have been subjected to early fire hazard testing in accordance with Australian Standard AS 1530.3 or AS ISO 9705 - 2003 / ISO 9705:1993 and the following results were obtained:

		Test Standard	Building Code	Classification
Ignitability	0			
Spread of Flame	0	AS ISO 9705 - 2003	NCC C1.10	Group 1 SMOGRA < 100m ² /s ²
Heat Evolved	0			
Smoke Developed	0-1	ISO 9705:1993	NZBC C/VM2	Group 1-S Smoke Prod Rate < 5m ² /s

Programme-Related Information and Verification

See PCR for detailed requirements.

Programme:	The Australasian EPD Programme Australasian EPD Programme 69 Rutherford Street, Hutt Central, Lower Hutt 5010, New Zealand www.epd-australasia.com
EPD registration number:	S-P-01004
Published:	2018-08-09
Valid until:	2023-08-09
Revision date:	N/A
Product Category Rules:	PCR for Construction Products and Construction Services CPC 54 Version 2.2. 2017-05-30
Product group classification:	UN CPC 54
Reference year for data:	2016
Geographical scope:	Australia

Product category rules (PCR):
PCR for Construction Products and Construction
Services CPC 54 Version 2.2. 2017-05-30

PCR review was conducted by:
IVL Swedish Environmental Research Institute
Moderator: Martin Erlandsson, martin.erlandsson@ivl.se

Independent verification of the declaration and data, according to ISO 14025:2006:

EPD Process Certification (internal) EPD Verification (external) ✓

Third party verifier:

Jane Anderson
ConstructionLCA Limited
3 Evergreen Drive, Caistor, LN7 6NS United Kingdom
m: +44 (0) 7932 696077 email: jane@constructionlca.co.uk

Approved by the International EPD System



Mandatory Statements

The EPD of construction products may not be comparable if they do not comply with the requirements of comparability set in EN 15804. EPDs within the same product category but from different programmes may not be comparable.

EPD Owner:



CSR Martini Pty Ltd

Greg Selwood and Joanne Thomson
4 Macdonald Road, Ingleburn,
NSW 2565, AUSTRALIA

www.csrmartini.com.au

e: martinienquires@csr.com.au

w: www.csrmartini.com.au

Calls within Australia 1300 767 776

International Callers +61 2 8795 4400

LCA Author:



Edge Environment Pty Ltd

Jimmy Thomas and Joana Almeida
L5, 39 East Esplanade, Manly,
NSW 2095 Australia

t: +61 (2) 9438 0100

e: info@edgeenvironment.com.au

w: www.edgeenvironment.com.au

Programme Operator:



Australasian EPD Programme

69 Rutherford Street, Hutt Central,
Lower Hutt 5010, New Zealand

e: info@epd-australasia.com

w: epd-australasia.com



Visit us at www.csrmartini.com.au

Calls within Australia 1300 767 776 | International Callers +61 2 8795 4400

