

DATE: 25.01.19

Sustainability Scheme:**BREEAM UK New Construction 2018***Relevant for any assessment including 'Fully fitted' project scope.***Optima System:****Optima 117 plus****Description:**

Frameless glazed partition system comprising multiple modules of laminated or toughened glass installed into extruded aluminium track sections with glass sealed into tracks with PVC gaskets and between panels with Optima Nebula™, Aluminium or PETG dry-joints. System incorporates integral deflection head capable of enabling relocation.

Optima 117 plus can contribute towards BREEAM NC18 credits as follows:

Issue:**Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA)****Credit:****Superstructure**

Method using the BREEAM Simplified Building LCA Tool

Optima 117 plus is classified in the Construction Library under: '2.7 Internal walls and partitions'

LCA tool: **Simplified Building LCA**

Construction ID: **BSBLT.378.v1**

Optima 117 plus partitions, when appropriately configured, can satisfy the requirements of the Simplified Building LCA tool definition of an:

"Aluminium proprietary glazed partitioning system, single glazed, safety glass"

Achieving **0.457 EcoPoints per 1m²**

Issue:**Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD)****Credit: Specification of products with a recognised environmental product declaration (EPD)**

Robust environmental performance information has been collected for the Optima Aluminium Framed Glazed Partition Systems and provided in a third party certified **environmental product declaration (EPD) conforming to ISO 14025 using product category rules based on BS EN 15804.**

The Optima Aluminium Framed Glazed Partition Systems EPD is applicable to more than one product in the same product category from a single manufacturer, and qualifies for **0.75 EPD points**

[Reference: BREEAM NC18 Table 9.8 EPD points for different types of EPD].

The Optima 117 plus partition system is classified as **Material category: Glass** (P314 Uniclass equivalent code)

[Reference: BREEAM NC18 Table 9.9 Material classification].

DATE: 25.01.19

Reference Documents:

Optima Products Limited Environmental Product Declaration

Issue:

Mat 03 Responsible sourcing of construction products

Credit: Prerequisite

All timber and timber-based products used in the Optima 117 plus partition system are legally harvested and traded timber as per the UK Government's Timber Procurement Policy (TPP) demonstrated by Optima's factory being **FSC® Chain of Custody certified** (certificate TT-COC-006448).

Credit: Measuring responsible sourcing

Optima Products Limited operate a certified **ISO 14001 EMS covering the Key Process** of glazed partition manufacture applicable to the Optima 117 plus system.

Many of our suppliers are also certified including glass production and aluminium manufacture Key Processes.

Reference Documents:

Optima Products Limited FSC certificate**Optima Products Limited ISO 14001 certificate**

*Issue:***Mat 06 Material efficiency***Credit:*

Optima 117 plus partitions, when appropriately configured, can help to optimise material efficiency through building design, procurement, refurbishment, maintenance and end of life in order to minimise the environmental impacts of material use and waste.

Aluminium profiles are procured from suppliers in different sized lengths to reduce off-cuts and material wastage during manufacture.

Optima partitions are designed with reuse in mind. Optima 117 plus system is demountable and relocatable providing opportunities for reuse in future project refits. Each partition can be deconstructed allowing for ease of strip-out and material reclamation. Aluminium frames are 100% recyclable and glass can be reused in existing form where opportunities exist.

Optima 117 plus components include recycled content as summarised below:

Material	Aluminium ¹	Glass ²	PVC ³	Totals (kg/m)
Mass (kg/m)	4.141	81.000	0.240	85.381
Mass % of Total	4.850	94.869	0.281	
Pre-Consumer (%)	0.000	20.000	0.000	18.974
Pre-Consumer (kg/m)	0.000	16.200	0.000	16.200
Post-Consumer (%)	79.000	0.000	0.000	3.832
Post-Consumer (kg/m)	3.271	0.000	0.000	3.271
Sum of post-consumer + pre-consumer recycled content = (%)				22.805

Data sources: 1 SAPA (UK); 2 Pilkington (UK); 3 Polyplas

Values taken for a 2.7 metre high partition over a 3 metre linear run in equal 1 metre modules with a single abutment to represent a typical large multi-cell fit-out. Height presumed at 3 metres to account for off-cut wastage.

Aluminium mass/m includes 1/3 of a wall abutment.

PVC mass/m includes for Nebula glass-to-glass joints.

These recycled figures are not necessarily compliant with ISO 14021:1999 Type II Self-declared Environmental Claims

*Issue:***Wst 06 Design for disassembly and adaptability***Credit:*

The Optima 117 plus partition system accommodates future changes of use of the building over its lifespan. Partitions are installed in such a way as to provide adaptability of the internal environment to accommodate changes in working practices such as relocating or resizing meeting rooms etc.

Partitions and can be considered re-locatable, if configured with deflection heads, leaving no permanent damage to the building structure and can be re-used in alternative locations as required by a change of use or requirements.

Standardised frame and glazing sizes are used wherever the architectural design allows to facilitate reuse and ease of replacement components.

Existing partition installations can also be extended by the addition of extra units to allow for a change in operational requirements.

Issue: Hea 01 Visual comfort

Credit: Daylighting Use of fully glazed office and meeting room fronts using Optima 117 plus allows for daylight penetration to internal areas beyond perimeter cellular offices assisting with internal average daylight factors and average daylight illuminance levels. It also allows for increased view of sky from desk height.

Optima 117 plus visible light transmittance = up to 0.89

Credit: View out Use of fully glazed office and meeting room fronts using Optima 117 plus can help to provide line of sight to external views for areas beyond perimeter cellular offices.

Issue: Hea 02 Indoor air quality

Credit: Emissions from construction products The Optima 117 plus partition system can optionally be powder-coated during off-site manufacture with the coating categorised under product type:

'Interior paints and coatings'

[Reference: BREEAM NC18 Table 5.11 Emissions criteria by product type]

Products used:
Syntha Pulvin Matt and Matt Metallic

Formaldehyde emissions (mg/m ³)	Total VOC emissions (mg/m ³)	Category 1A and 1B carcinogens	Testing Standard	Additional Notes
Zero	Zero	Unknown	Unknown	n/a

[Reference: Syntha Pulvin Technical Manual]

The Optima 117 plus system employs dry joints between horizontal glass sections not requiring the use of VOC emitting silicones or sealants.

To maintain acoustic integrity the Optima 117 plus partition system installation ensures all abutment tracks are properly sealed to the structure with proprietary acoustic sealant categorised under product type:

'Interior adhesives and sealants (including flooring adhesives)'

[Reference: BREEAM NC18 Table 5.11 Emissions criteria by product type]

Products used:
British Gypsum Gyproc Sealant

Formaldehyde emissions (mg/m ³)	Total VOC emissions (mg/m ³)	Category 1A and 1B carcinogens	Testing Standard	Additional Notes
unknown	1.534 x10 ⁸	unknown	unknown	n/a

[Reference : British Gypsum C02 Technical Performance (28/11/2018)]

Optional Tech panels contain wood products manufactured off-site categorised under product type:

'Wood-based products (including wood flooring)'

[Reference: BREEAM NC18 Table 5.11 Emissions criteria by product type]

Products used:
Aluminium faced Tech Panels contain 12mm plywood.
Glass faced Tech Panels contain 9mm plywood.

Formaldehyde emissions (mg/m ³)	Total VOC emissions (mg/m ³)	Category 1A and 1B carcinogens	Testing Standard	Additional Notes
Unknown	Unknown	Unknown	Unknown	n/a

[Reference: tbc]

DATE: 25.01.19

Reference Documents:

**Optima Products Limited
(Technical Note) VOC
Statement**

**British Gypsum C02
Technical Performance**

TECHNICAL NOTE
DATE: 08.08.16

Building materials, furnishings, paints, office equipment and consumer products are significant sources of volatile organic compounds (VOCs) in buildings, and other environments. These chemicals can have an adverse effect on health and comfort, including eye and airway irritation, headaches and tiredness. There is increasing demand, backed by standards and voluntary testing schemes, to reduce VOC emissions from indoor sources.

The publication of VOC data for materials produced by/for Optima and for materials used on site in the course of construction works for the core Optima partitioning products is a key component of the Optima Environmental Policy.

The following data is a summary of the VOC content of components and materials as notified by their respective manufacturers.

Component / Material	VOC level	VOC Content (g/l) where known	Reference
Toughened float glass	Zero VOC	-	Non-organic/solvent
Extruded Aluminium (Grade 6063)	Zero VOC	-	Non-organic/solvent
Sheet Steel (Grade D021)	Zero VOC	-	Non-organic/solvent
PVB laminated glass interlayer	(Low VOC)	n/a	
Powder Coated Aluminium	Zero VOC	-	Non-organic/solvent
Anodised Aluminium	Zero VOC	-	Non-organic/solvent
Rigid PVC Extrusions	(Zero VOC)	n/a	
Co-EX PVC Extrusions	(Low VOC)	n/a	
PETG Plastic Extrusions	(Zero VOC)	n/a	
Glazing Silicone (DOWSIL)	Low VOC	31	Data published by Dow Corning
Fire-rated Silicone (DOWSIL)	Low VOC	29	Data published by Dow Corning
Acoustic Sealant (Dypruc)	Medium VOC	153.4	Data published by British Gypsum
PVC Foam sealant tape	(Zero VOC)	n/a	

n/a Not available or data awaited from supplier (est.)
Presumed level pending confirmation from supplier

Optima will continue to monitor the published VOC content of its source material and, wherever possible, replace an existing product with an alternative lower VOC emitting product. This document will be updated when changes occur.

Issued by: Peter Long
Date: 08.08.16

Title: VOC Statement
Ref: 002030

All Glazed Systems



Issue: **Hea 05 Acoustic performance**

Credit: Optima 117 plus partitions, when appropriately configured, can help to meet the sound insulation acoustic criteria as relevant to the building type and function, in accordance with the relevant Hea05 acoustic criteria tables 5.14-5.19

[Reference: BREEAM NC18 Tables 5.14 to 5.19 BREEAM acoustic criteria].

The Optima 117 plus partition system has achieved the following UKAS accredited acoustic values for the stated construct:

32dB (Rw)	Estimate(1)	10mm Toughened Glass in single glazed multi-module screen
33dB (Rw)	Test Ref: 542-434	12mm Toughened Glass in single glazed multi-module screen
35dB (Rw)	Test Ref: 542-435	10.8mm Laminated Glass in single glazed multi-module screen
36dB (Rw)	Estimate(1)	12.8mm Laminated Glass in single glazed multi-module screen
37dB (Rw)	Test Ref: 542-436	10.8mm Acoustic Laminated Glass in single glazed multi-module screen
38dB (Rw)	Test Ref: 542-432	12.8mm Acoustic Laminated Glass in single glazed multi-module screen
40dB (Rw)	Test Ref: 3385-2959	16.8mm Acoustic Laminated Glass in single glazed multi-module screen
40dB (Rw)	Test Refs: WYC386771 & WYC391439	Tech Panel - 100mm overall depth with uninsulated cavity
(1) Estimate based on UKAS accredited test data and glass manufacturers' published performance data.		

It should be noted that in an on-site acoustic test, a partition may demonstrate a 3dB to 8dB lesser performance than under laboratory conditions, depending on the partition type. This can be further affected by ambient noise levels on the receiving side of the test sample and by poorly insulated abutments offering a 'flanking' path for audible sound.

DATE: 25.01.19

Reference Documents:**Optima 117 plus
Designer's Guide****Issued By:****Position:****Environmental + Sustainability Lead**

To validate this compliance statement the system installation must be carried out in strict accordance with the details summarised in the Optima Designer's Guide and Installer's Guide.

Sustainability Scheme:**BREEAM UK Refurbishment and Fit-out 2014**

Relevant for any assessment including 'Part 4 – Interior Design' project scope.

Optima System: Description:**Optima 117 plus**

Frameless glazed partition system comprising multiple modules of laminated or toughened glass installed into extruded aluminium track sections with glass sealed into tracks with PVC gaskets and between panels with Optima Nebula™, Aluminium or PETG dry-joints. System incorporates integral deflection head capable of enabling relocation.

Optima 117 plus can contribute towards BREEAM RFO14 credits as follows:

Issue:**Mat 01 – Environmental impact of materials**

Optima 117 plus is a relevant element as defined by CN7 (item 3.c) as:
'Part 4 includes interior fit-out elements including: c. Internal walls and partitions'

Credit:Option 1: Project lifecycle assessment study

The Green Guide to Specification can be used towards option 1 as a type of life cycle assessment (LCA) tool for the assessment of new elements including internal walls and partitions to measure the life cycle environmental impact of the refurbishment or fit-out works.

LCA tool: BRE Global Green Guide to Specification
Generic Specification Element Number: **1209750002**

Optima 117 plus partitions, when appropriately configured, can satisfy the requirements of the Green Guide generic specification definition of an:

"Aluminium proprietary glazed partition system, single glazed, safety glass"

Achieving a **Summary Rating of A+.**

Details of the installation methods required to support this statement are available on request from the Technical Department at Optima Products Limited

Option 2: Elemental assessment of environmental performance information

Robust environmental performance information has been collected for the Optima 117 plus partition system materials and provided in a third party certified environmental product declaration (EPD) that conforms to **ISO 14025** using product category rules based on BS EN 15804 - qualifying for **5 Mat01 (Part B) Calculator points.**

DATE: 25.01.19

Reference Documents:

Source:
www.bre.co.uk/greenguide
 © Building Research
 Establishment Limited 2014

Optima Products Limited
 Environmental Product
 Declaration

Green Guide 2008 ratings	
Building type >	Commercial
Category >	Internal Wall
Element type >	Proprietary and Demountable Partitions
Element	Aluminium proprietary glazed partitioning system, single glazed, safety glass
Element Number	1209750002
Summary Rating	A+
Climate Change	B
Water Extraction	B
Mineral Resource Extraction	A+
Stratospheric Ozone Depletion	A+
Human Toxicity	C
Ecotoxicity to Freshwater	A+
Nuclear Waste (higher level)	B
Ecotoxicity to Land	A+
Waste Disposal	A+
Fossil Fuel Depletion	A
Eutrophication	A+
Photochemical Ozone Creation	A+
Acidification	A
Kg of CO ₂ eq. (60 years)	37.0



Issue:

Mat 03 - Responsible sourcing of materials

Credit: Pre-requisite All timber and timber-based products used in the Optima 117 plus partition system are legally harvested and traded timber as per the UK Government's Timber Procurement Policy (TPP) demonstrated by Optima's factory being **FSC® Chain of Custody certified** (certificate TT-COC-006448).

Credit: Responsible sourcing of materials (RSM) Optima Products Limited operate a certified **ISO 14001 EMS covering the Key Process** of glazed partition manufacture applicable to the Optima 117 plus system.

Many of our suppliers are also certified including glass production and aluminium manufacture Key Processes.

Reference Documents:

Optima Products Limited FSC
 certificate

Optima Products Limited ISO
 14001 certificate



Issue: Mat 06 Material efficiency

Credit: Optima 117 plus partitions, when appropriately configured, can help to optimise material efficiency through building design, procurement, refurbishment, maintenance and end of life in order to minimise the environmental impacts of material use and waste.

Aluminium profiles are procured from suppliers in different sized lengths to reduce off-cuts and material wastage during manufacture.

Optima partitions are designed with reuse in mind. Optima 117 plus system is demountable and relocatable providing opportunities for reuse in future project refits. Each partition can be deconstructed allowing for ease of strip-out and material reclamation. Aluminium frames are 100% recyclable and glass can be reused in existing form where opportunities exist.

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Mass % of Total	4.850	94.869	0.281	
Pre-Consumer (%)	0.000	20.000	0.000	18.974
Pre-Consumer (kg/m)	0.000	16.200	0.000	16.200
Post-Consumer (%)	79.000	0.000	0.000	3.832
Post-Consumer (kg/m)	3.271	0.000	0.000	3.271
Sum of post-consumer + pre-consumer recycled content = (%)				13.318

Data sources: 1 SAPA (UK); 2 Pilkington (UK); 3 Polyplas

Values taken for a 2.7 metre high partition over a 3 metre linear run in equal 1 metre modules with a single abutment to represent a typical large multi-cell fit-out. Height presumed at 3 metres to account for off-cut wastage.

Aluminium mass/m includes 1/3 of a wall abutment.

PVC mass/m includes for Nebula glass-to-glass joints.

These recycled figures are not necessarily compliant with ISO 14021:1999 Type II Self-declared Environmental Claims

Issue: Wst 06 Functional adaptability

Credit: The Optima 117 plus partition system accommodates future changes of use of the building over its lifespan. Partitions are installed in such a way as to provide adaptability of the internal environment to accommodate changes in working practices such as relocating or resizing meeting rooms etc.

Partitions and can be considered re-locatable, if configured with deflection heads, leaving no permanent damage to the building structure and can be re-used in alternative locations as required by a change of use or requirements.

Standardised frame and glazing sizes are used wherever the architectural design allows to facilitate reuse and ease of replacement components.

Existing partition installations can also be extended by the addition of extra units to allow for a change in operational requirements.

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Issue: Hea 01 Visual comfort

Credit: Daylighting Use of fully glazed office and meeting room fronts using Optima 117 plus allows for daylight penetration to internal areas beyond perimeter cellular offices assisting with internal average daylight factors and average daylight illuminance levels. It also allows for increased view of sky from desk height.

Optima 117 plus visible light transmittance = up to 0.89

Credit: View out Use of fully glazed office and meeting room fronts using Optima 117 plus can help to provide line of sight to external views for areas beyond perimeter cellular offices.

Issue: Hea 02 Indoor air quality

Credit: Volatile organic compound (VOC) emission levels (products) The Optima 117 plus partition system (without 'Tech panels') does not contain any of the applicable product types requiring compliance against VOC or Formaldehyde levels.
[Reference: BREEAM RFO14 Table 20 VOC criteria by product type]

Tech panels contain wood products, falling under product type B:
'Wood panels (including particle board, fibreboard including MDF, OSB, cement bonded particle board, plywood, solid wood panel and acoustic board)'

Products used:

Aluminium faced Tech Panels contain 12mm plywood.

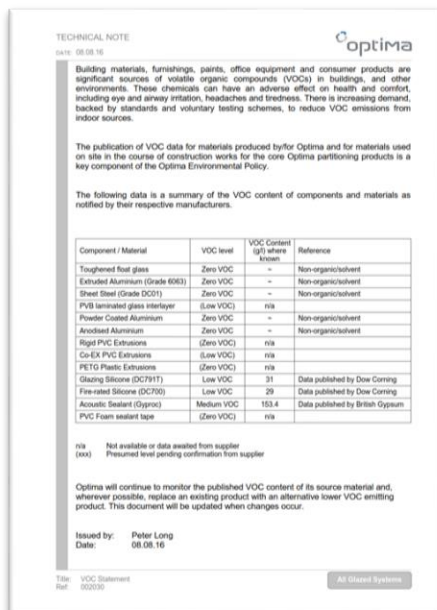
Glass faced Tech Panels contain 9mm plywood.

Formaldehyde performance	Performance standard	Testing standard	Absence of prohibited wood preservatives/biocides.
unknown	unknown	unknown	unknown

[Reference: tbc]

Reference Documents:

Optima Products Limited (Technical Note) VOC Statement



Issue: Hea 05 Acoustic performance

Credit: Optima 117 plus partitions, when appropriately configured, can help to meet the sound insulation acoustic criteria as relevant to the building type and function, in accordance with the relevant Hea05 acoustic criteria tables 21-25

[Reference: BREEAM RFO14 Tables 21 to 25 BREEAM acoustic criteria].

The Optima 117 plus partition system has achieved the following UKAS accredited acoustic values for the stated construct:

32dB (Rw)	Estimate(1)	10mm Toughened Glass in single glazed multi-module screen
33dB (Rw)	Test Ref: 542-434	12mm Toughened Glass in single glazed multi-module screen
35dB (Rw)	Test Ref: 542-435	10.8mm Laminated Glass in single glazed multi-module screen
36dB (Rw)	Estimate(1)	12.8mm Laminated Glass in single glazed multi-module screen
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38dB (Rw)	Test Ref: 542-432	12.8mm Acoustic Laminated Glass in single glazed multi-module screen
40dB (Rw)	Test Ref: 3385-2959	16.8mm Acoustic Laminated Glass in single glazed multi-module screen
40dB (Rw)	Test Refs: WYC386771 & WYC391439	Tech Panel – 100mm overall depth with uninsulated cavity

(1) Estimate based on UKAS accredited test data and glass manufacturers' published performance data.

Reference Documents:

Optima 117 plus Designer's Guide



Issued By:

Position:

Environmental + Sustainability Lead

To validate this compliance statement the system installation must be carried out in strict accordance with the details summarised in the Optima Designer's Guide and Installer's Guide.