Type II Environmental Declaration

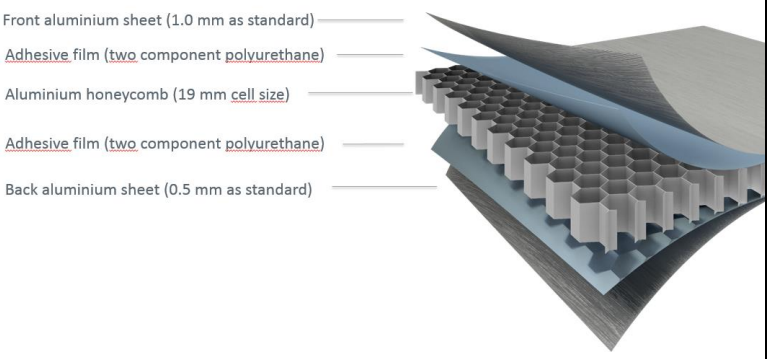
According to ISO 14020

Product: HunterDouglas® QuadroClad™ 300 (QC300) Ventilated Rainscreen Façade Panels

Productcode: **40557**

1. Description of the building product

1.1 Description of the declared/functional unit and of the application:

Description of the declared/functional unit and of the application: Definition of the declared/functional unit	**HunterDouglas® QuadroClad™ 300 (QC300) Ventilated Rainscreen Façade Panels** Open-jointed façade system based on Rainscreen technology. Façade panel elements are composite panels with overall thickness of 25 mm, consisting of an aluminium honeycomb core, a coated aluminium sheet bonded to the outer side, and a coated aluminium sheet bonded to the reverse side. Both aluminium sheets are bonded to the aluminium honeycomb core utilizing a two component adhesive. **QuadroClad™ 300 System:** • **Rainscreen Façade panel:** **Type:** Honeycomb panel in modules in variable lengths up to 6000mm (or bigger on request). The panel will be formed with an extruded aluminium perimeter frame, (with mitred and sealed joints) providing twin horizontal and vertical drainage channels **Material:** Aluminium honeycomb panels shall consist of two skins of smooth aluminium alloy AW 3005 **Thickness:** 25mm thick composite panel formed in controlled factory conditions using a core of aluminium hexagonal honeycomb with a nominal cellular dimension of 19mm x 0.03mm. Outer skin 1.0mm thick smooth aluminium, inner skin 0.5mm thick smooth aluminium. **Finish/colour:** The panel will be painted on the outside surface with factory applied Luxacote® paint / PVF2 paint finish and will provide a minimum hardness factor of 2H (EN 13523-4: Pencil hardness) test to external colour/finish and standard coated internal finish / colour. 

	• **Fixing system:** The panel will be secured to the HunterDouglas® support system by means of the HunterDouglas® patented panel bracket, at appropriate centres. The panel will be fixed to and supported by the HunterDouglas® proprietary extruded aluminium support system complete with tie-back brackets and adjustable connectors etc., with vertical adjustment of ± 25mm and 10mm horizontal alignment from plumb. • **Fasteners:** Appropriate fastener (by others) having regard for the pullout/cantilever effect the clamp will have on the fastener and its relationship to the wind load criteria. • **Joint type:** 10mm open joint • **Primary support structure:** TBA by Architect • **Secondary support/framing system:** Material: TBA By Architect Fasteners: TBA By Architect Backing wall: TBA By Architect
Function / Application	Large and ultra-flat Ventilated Rainscreen Façade panels. Available in multioptional finishing and shapes: trapezoidal, curved or cranked. Capability to withstand very high wind loads and suitable for high-rise buildings. Individual panel mounting. Made to measure product
Product standard / technical approval	Factory Quality Standard: EN-ISO 9001: 2008, Product Certificates: WF 172002, WF 172003, WF 172113, ITB AT-15-3593/2006, Coil coating conform EN 1396. Durability category 4C, Table C1

2. Components / Materials

Since HunterDouglas® QuadroClad™ is a made to measure product, this declaration, in the Components/Materials section, gives information on three representative product sizes.

Composition / configuration of the product					
One panel **QuadroClad™ 300** of dimensions **0.9 m × 2.0 m.** Total weight of the product: **15.9 kg**					
Type of element	**Weight of element**	**Surface area**	**Material**	**Recycled content**	**Description**
Exterior skin	4.87 kg	1.8 m^2	AW-3005	94%	Coil coated aluminium with Luxacote® or PVF2 coating.
Inside skin	2.12 kg	1.5 m^2	AW-3005	94%	Coil coated aluminium

Perimeter frame	5.67 kg	5,8 m'	AW-6060	30%	Extruded aluminium frame
Honeycomb core	0.96 kg		AW-3003	20%	Honeycomb core
Bonding glue	1.08 kg		PU	0%	Binder of the exterior and interior skin to the honeycomb
Glue/kit	0.18 kg			0%	Sealing
Total recycled panel content by weight				62%	

Composition / configuration of the product					
One panel **QuadroClad™ 300** of dimensions **1.2 m × 4.0 m.** Total weight of the product: **35.2 kg**					
Type of element	**Weight of element**	**Surface area**	**Material**	**Recycled content**	**Description**
Exterior skin	13.0 kg	4.8 m2	AW-3005	94%	Coil coated aluminium with Luxacote® or PVF2 coating.
Inside skin	5.9 kg	4.2 m2	AW-3005	94%	Coil coated aluminium
Perimeter frame	10.1 kg	10,4 m'	AW-6060	30%	Extruded aluminium frame
Honeycomb core	2.7 kg		AW-3003	20%	Honeycomb core
Bonding glue	2.9 kg		PU	0%	Binder of the exterior and interior skin to the honeycomb
Glue/kit	0.5 kg			0%	Sealing
Total recycled panel content by weight				67%	

Composition / configuration of the product					
One panel **QuadroClad™ 300** of dimensions **1.5 m × 6.0 m.** Total weight of the product: **62.1 kg**					
Type of element	**Weight of element**	**Surface area**	**Material**	**Recycled content**	**Description**
Exterior skin	24.4 kg	9.0 m^2	AW-3005	94%	Coil coated aluminium with Luxacote® or PVF2 coating.
Inside skin	11.4 kg	8.2 m^2	AW-3005	94%	Coil coated aluminium
Perimeter frame	14.6 kg	15,0 m'	AW-6060	30%	Extruded aluminium frame
Honeycomb core	5.3 kg		AW-3003	20%	Honeycomb core
Bonding glue	5.4 kg		PU	0%	Binder of the exterior and interior skin to the honeycomb
Glue/kit	0.9 kg			0%	Sealing
Total recycled panel content by weight				70%	

3. Additional information on production/ assembly

Documentation of availability, extraction and origin of materials	QuadroClad™ consists for over 90% of aluminium. Due to metallurgical constraints (in particular corrosion resistance), part of this is primary aluminium. The raw material for primary aluminium is extracted through industrial processes from the earth. As the aluminium used in QuadroClad™ is sourced from third parties, Hunter Douglas has no information as to the location of extraction of the raw material. As shown in tables of section 2, depending on the size of the panels, the total percentage of recycled content varies between 62% and 70%. There is no information on the origin of this recycled content. Most likely, both primary and secondary sources are variable.

Production	For the production of QuadroClad™ 300 Ventilated Rainscreen Façade Panels the components are supplied by multiple suppliers. The components are modified and compiled to QuadroClad™ 300 Ventilated Rainscreen Façade Panels by the following performed operations and compositions: • **Slitting:** Work up coil in such a way that the width is suitable for the next process. The scrap from the slitting process is being recycled. • **Roll forming:** Profiling strip on coil in order to get a suitable profile for making the final panel. • **Gluing panels:** composite panels are assembled from roll formed cassettes and provided with a honeycomb core by gluing honeycomb plates. • **Specials:** Panels which need a non-standard shape are processed in such a way that the requested shape is realised.
Packaging	All finished products are packed before shipment to the customer. The products are packed in wooden packaging materials on wooden pallets. The wood used is Whitewood which originates from European production forests. Recycled carton is used to pack the panels within the wooden packaging. Between the panels PE foam protection sheet is placed. For weathering protection the packed pallet is wrapped in plastic.
Documentation of aspects of occupational health and safety during production	No additional health protection measures beyond the legally binding national or European Union safety regulations are required during the entire manufacturing process.
Environmental management system in place	No

4. Additional information concerning integration and application of the product in a building

4.1 Characterisation of the product in delivery condition

Characteristics	HunterDouglas® QuadroClad™ is a made to measure product • **Dimensions:** There are no standard sizes for QuadroClad™ 300. Product limitations: length 600-6000mm in length (or bigger on request) x 225-1500mm in width. Thickness: 25mm. • **Weight:** approximately 5.5 kg/m² • **Units per delivery:** No restrictions • **Fire behaviour:** BS476 part 7, class1 (WF 172002, WF 172003, WF 172113), NFPA 285, ASTM E-84, EN13501 • **Coal coating**: conform EN 1396

4.2 Fitting, Erection, Installation in the Building

Ancillary materials	QuadroClad™ 300Ventilated Rainscreen Façade panels are part of the QuadroClad™ 300 Open jointed cladding system. In addition to the panels, this system consists of: • **Fixing system:** The panel will be fixed to and supported by the Hunter Douglas® proprietary extruded aluminium support system complete with tie-back brackets and adjustable connectors etc. • **Fasteners** At the building site the system will be installed onto the existing primary or secondary support structure (provided by others) and be suitable for a Ventilated Rainscreen Façade, (i.e. provide an impervious barrier, thermal insulation and be able to accommodate the imposed loadings).

Recommendations for avoiding environmental impacts at the building site/ installation site	• When handling the QuadroClad™ 300 Ventilated Rainscreen Façade panels, care must be taken that they are treated correctly. This applies to their transport, storage on site, unpacking and installation. • The product shall only be used for its intended purpose • The installer has to execute the installation with appropriate care to avoid scratches, damages, etcetera. • Avoid installation of the product in extreme weather conditions. • Protective foils on the panels may only be removed after finishing of the installation. It is however recommended that the protective foil is removed from the panels within approximately 2-3 months, the former on sun facing elevations in summer conditions. • When cleaning after installation is required, it is advised to use a slightly damp, non-linting and non-abrasive cloth. A mild (pH=7) cleaning agent may be used if necessary. Never use aggressive cleaning agents since they will cause damage to the panels. Before cleaning, always try the chosen method of cleaning on a nonvisible part of the panel. After cleaning rinse with sufficient clean water to wash down remains of cleaner and dirt.
Documentation of aspects of occupational health and safety	There is no need for special measures for health and occupational protection at the building site during installation, other than the normal safety precautions required by public law when installing a façade.
Documentation of environmental aspects	The product has no impact on the environment. No special measures are necessary for the protection of the environment.
Recommendations for waste at the building site	QuadroClad™ panels are made to measure. This means that, besides the packaging material, there is no residual material or scrap at the building site.

5. Additional information supporting potential modelling of the use stage of the product

Aspects of health and environment	• In the use stage of QuadroClad™ Ventilated Rainscreen Façade panels there are no emissions to air and no impacts on indoor air. • In the use stage of QuadroClad™ Ventilated Rainscreen Façade panels with coil coated facings there are no emissions to the ground water.
Service life	QuadroClad™ Ventilated Rainscreen Façade panels have an expected service life of over 50 years.
Maintenance **Cleaning**	QuadroClad™ Ventilated Rainscreen Façade panels are extensively tested for corrosion resistance, fire resistance and wind-load performance. Other than cleaning QuadroClad™ Ventilated Rainscreen Façade panels are essentially maintenance free. Cleaning the coated aluminium of façades should be part of the maintenance of the building. In general once every six months. This maintenance should already start at an early stage. When cleaning is required, it is advised to use a slightly damp, non-linting and non-abrasive cloth. A mild (pH=7) cleaning agent may be used if necessary. Never use aggressive cleaning agents since they will cause damage to the panels. Before cleaning, always try the chosen method of cleaning on a non-visible part of the panel. After cleaning rinse with sufficient clean water to wash down remains of cleaner and dirt.

External influences	• **Cleaning:** When the cleaning instructions are followed normally no problems should occur. • **Water:** QuadroClad™ Ventilated Rainscreen Façade panels are impenetrable elements which will not be affected by water. • **Wind:** QuadroClad™ Ventilated Rainscreen Façade panels are able to withstand extremely high wind loads. • **Thermal shock:** No discernable bow due to sun radiation will occur within the panel. • **Expansion/contraction:** The QuadroClad™ Ventilated Rainscreen Façade panel's expansion / contraction is controlled through the use of locking clips and as such no deformations will occur due to thermal movement of the panels. • **UV:** the coatings used for the coil coat treatment have a high level of colour continuity. EN 1396, UV resistance index 3. • **Fire:** QuadroClad™ Ventilated Rainscreen Façade panels are tested BS476 part 7, class1;NFPA 285, ASTM E-84, EN13501

6. Additional information for end of life processes

Documentation of Recycling information	• QuadroClad has excellent recyclability, as exemplified by the high percentage of recycled content. • Recycling requires an intermediary processing step in which coatings and bonding glue are removed. • Depending on the geography, collection rates for aluminium building products are normally above 90%.