

**WELL Building Standard® COMPLIANCE DOCUMENT**



We are WELL-Being  
and Comfort Designers



*Although Qualitynet believes that the products examined can contribute to a WELL Building Standard® certification, it should be remembered that, globally, only GBCI (Green Business Certification Inc) can assign scores and issue a WELL Building Standard® certificate. Recalling that the WELL Building Standard® rating system certifies the building and not the materials, Qualitynet does not guarantee the achievement of the building's final score.*

**Dott.ssa. Iris Visentin LEED AP BD&C**

## Index

<b>COMPANY</b> .....	<b>4</b>
Vision .....	5
Mission .....	5
Values .....	5
Certification .....	6
Corporate Social Responsibility .....	6
Process Certifications .....	6
THERMAL INSULATION .....	7
BUILDING .....	12
OTHER .....	13
CHARACTERISTICS OF SUSTAINABILITY AND SALUBRITY .....	13
<b>WELL BUILDING STANDARD® RATING SYSTEM</b> .....	<b>14</b>
CONCEPT “AIR” .....	24
A01 FUNDAMENTAL AIR QUALITY   P .....	24
A14 MICROBE AND MOLD CONTROL   O (MAX: 2 PT) .....	24
CONCEPT “WATER” .....	25
W03 LEGIONELLA CONTROL   P .....	25
W07 MOISTURE MANAGEMENT   O (MAX: 3 PT) .....	25
CONCEPT “THERMAL COMFORT” .....	26
T05 RADIANT THERMAL COMFORT   O (MAX: 2 PT) .....	26
T07 HUMIDITY CONTROL   O (MAX: 1 PT) .....	26
CONCEPT “SOUND” .....	27
S01 SOUND MAPPING   P .....	28
S02 MAXIMUM NOISE LEVELS   O (MAX: 3 PT) .....	28
S03 SOUND BARRIERS   O (MAX: 3 PT) .....	29
S04 SOUND ABSORPTION   O (MAX: 3 PT) .....	30
CONCEPT “MATERIALS” .....	31
X01 FUNDAMENTAL MATERIAL PRECAUTIONS   P .....	31
X08 HAZARDOUS MATERIAL REDUCTION   O (MAX: 1 PT) .....	31
X10 VOLATILE COMPOUND REDUCTION   O (MAX: 3 PT) .....	32
X11 LONG-TERM EMISSION CONTROL   O (MAX: 3 PT) .....	33
CONCEPT “MIND” .....	34
M07 RESTORATIVE SPACES   O (MAX: 1 PT) .....	34
<b>ANNEX 1 – VOC REPORT TEST</b> .....	<b>38</b>

# TROCELLEN

## ENVIRONMENT AND SUSTAINABILITY

### COMPANY

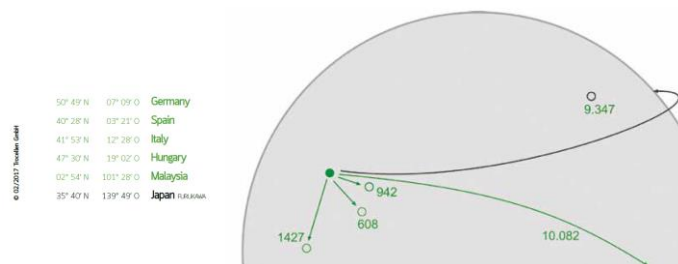
Trocellen is a manufacturer of cross-linked PO foams. Together with our Japanese owner, Furukawa Electric Co. Ltd., we are heading for global success. With more than 600 employees at seven sites and many cooperating companies, various partner universities, institutes and designers we offer solutions for a wide variety of industries and applications. Via our diverse business units, we meet industry-specific requirements and continuously develop innovative products for all kinds of needs. We produce finished goods, semi-finished products and raw materials for the consumer market and for our partners in various industries such as automotive, construction and insulation, leisure and professional sport, adhesive tapes, footwear and packaging

Through the great variety of our products we provide people with a warm and quiet home and working environment. We make travel comfortably and safe. We help

them enjoy their leisure activities and protect their health at the same time. We make fashion secure and security stylish. We develop solutions and realize a great variety of professional projects in cooperation with our partners.



Trocellen was founded as a new company and brand of Dynamit Nobel and HT Troplast. The name and the products quickly built up a strong reputation and Trocellen soon became a successful brand of the company. With headquarters in Troisdorf, Germany, the evolving and transforming company has since opened or acquired various production plants in Germany, Italy, Spain, Hungary and Malaysia.



## Vision

### *MAKING A DIFFERENCE – SHAPING THE FUTURE*

We shape a safe and comfortable future with products that make a difference. Our smart solutions improve people's lives and promote our partners' businesses. We run a prospering company, a first-choice workplace and a number of responsible business operations.

## Mission

### *EXPANDING THE HORIZON FOR ADVANCED SOLUTIONS*

Relying on our broad experience, know-how and the extensive support of our owner in the background we keep looking for new solutions. We work together with our partners to develop and maximize industry performance. We listen to needs without tying ourselves to established ways. We aim to answer questions not even posed.

## Values

### *INNOVATION*

Whenever we find that even the best solution on the market is not good enough, we are eager to create a better one.

### *TALENT*

In order to be the best, we hire the best – and we are continually developing our talent pool to remain the best.

### *DIVERSITY'*

Being at home in many markets and industries results broad knowledge base and well founded operations: we are as diverse as our partners' needs.

### *RESPONSABILITY*

We always keep our partners' interests in mind and consider the environmental and social impacts of our actions under any circumstances.

### *PARTNERSHIP*

Since collective success is unimaginable without collective thinking and working, we aim to build long term partnerships.

## Certification

In order to provide stable, high-performance products and services, Trocellen pays special attention to quality assurance. We are focused on monitoring and improving all our products, management and customer services. We are dedicated to continuous development in all areas that can influence the performance of our products and services, and positively influence cooperation with our partners and customer satisfaction. All our activities are customer focused. In order to meet their expectations, we conduct surveys concerning customer satisfaction, encouraging both the employee and the client to open and honest communication.

## Corporate Social Responsibility

Trocellen believes that the market position, advanced technology and vast production and business activities require to be more responsible and to make a greater contribution to the development, sustainability and security of the business, the environment and society. Below you can find the link to consult detailed information about the guidelines and social responsibility activities of our company, including the Corporate Social Responsibility:

<https://trocellen.com/csr/>

## Process Certifications

Trocellen has obtained and maintains the following certifications:

- ISO 9001
- ISO 50001
- BS OHSAS 18001

For more information see the link.

<https://trocellen.com/technology/quality-assurance/>

## APPLICATIONS AND PRODUCTS

### THERMAL INSULATION

#### TROCELLEN CLASS

TROCELLEN CLASS ADHESIVE Chemically cross-linked, closed cell polyethylene foam. • Euroclass B-s2,d0 – BL-s1,d0 for thickness 3-12 mm.

TROCELLEN CLASS ALU ADHESIVE Chemically cross-linked, closed cell polyethylene foam, laminated with aluminum sheet. • Euroclass B-s2,d0 – BL-s1,d0 for thickness 3-14 mm; • Euroclass C-s2,d0 – BL-s1,d0; thickness range: 15-24 mm.

TROCELLEN CLASS ALU.S ADHESIVE Chemically cross-linked, closed cell polyethylene foam, laminated with aluminum sheet. With improved performance. • Euroclass B-s2,d0 – BL-s1,d0; thickness range: 3-16 mm • Weather resistant and can also be used outdoors.

#### TROCELLEN DUCT

TROCELLEN DUCT CL1 - naked

TROCELLEN DUCT CL0-2 ALU – type N, laminated with smooth or embossed low thickness aluminum

TROCELLEN DUCT CL1 ALU – type CL1, laminated with smooth or embossed low thickness aluminum

TROCELLEN DUCT AL CL1 – type CL1, laminated with metallic, embossed, scratch-resistant PE film

TROCELLEN DUCT AL CL1 REF – type CL1, laminated with a metallic polyester film

TROCELLEN DUCT CL1 ALU-NET – type CL1, laminated with low thickness, screened aluminum. Has been classified “Class 0 surface” according to English law BS 476-Part 6/7, in the thickness 13 mm.

#### TROCELLEN SLEEVES

TROCELLEN N - Chemically crosslinked polyethylene foam, without flame retardants

TROCELLEN P - Chemically cross-linked foam, laminated with scratch resistant embossed polyethylene film.

TROCELLEN AL - Chemically cross-linked foam, laminated with scratch-resistant embossed metal film.

TROCELLEN AL/CL1 - Chemically cross-linked foam with fire retardant additives, certified Class 1, laminated with scratch-resistant embossed metallic film.

TROCELLEN CLASS AL (marked CE) - Trocellen Class represents the range of products with the CE mark and Euroclass classification, in accordance with the EN 14313 standard. Chemically cross-linked closed cell foam sleeves, colour light green, laminated with scratch-resistant embossed metallic film.. Also available TROCELLEN CLASS P, with scratch-resistant and embossed PE film.

#### TROCELLEN ISOCOMPACT

TROCELLEN ISOCOMPACT - AL/CL1 - CL1/ALU-NET



Chemically cross-linked, closed-cell, insulating material, light grey. Multi-layered product, thickness 10 to 15 mm, certified in Class 1 according to UNI 8457/UNI 9174 and finished outside with an embossed, scratch-resistant, metalized film, or with reinforced aluminium layer.

#### TROCELLEN CLASS AL ISOCOMPACT (marked CE)

Cross linked polyethylene closed cell, high thickness insulating foam for piping, light green, multi-layer, externally finished with a metalized embossed antiscratch film.

### **TROCELLEN HIGH-TEMP**

Product range composed of a closed-cell, chemically cross-linked polyethylene foam, finished outside with an embossed scratch-resistant film and coupled with polyester non-woven. The product is available in sleeves, thicknesses 13 and 20 mm, and in rolls thicknesses 15 and 20 mm. It is certified class 1 according to UNI 8457 and UNI 9174.

### **TROCELLEN ROLLS**

TROCELLEN N - Dark gray color, does not contain flame retardants. Over 7 mm thick, it complies with the flame speed specification lower than 100 mm / min required by US standards - FMVSS 302 and German - DIN 75200.

TROCELLEN NP N type, laminated with scratch resistant embossed metallic polyethylene film

TROCELLEN AL- N type, laminated with scratch resistant embossed black polyethylene film

TROCELLEN AL REF - N type, laminated with a metallic polyester film

TROCELLEN CL1 Light grey in colour, produced with flame retardant additives to make it conform to the standards for the category, for example TROCELLEN CL1 Italy, M1 France, etc.)

TROCELLEN AL/CL1. - CL1 type, with embossed, scratch resistant metallic PE film

TROCELLEN AL/CL1 REF - CL1 type, with embossed, scratch resistant metallic PET film

TROCELLEN CL1 ALU - CL1 type, with low thickness smooth or embossed aluminium

TROCELLEN CLASS OEM (not CE marked) - Euroclass B-s2, d0 for thicknesses 3-12 mm; adhesive, according to law EN 13501-1, light green

### **ISO HANGER**

It is made with TROCELLEN chemically cross-linked polyethylene foam CL1 certified by fire. ISO-HANGER is produced by heat-sealing multiple layers of TROCELLEN. This process allows to obtain well-defined shapes, shaped in such a way as to facilitate the arrangement of the support on the pipe and a geometry for the locking joint designed to minimize energy losses.

### **ACCESSORIES**

GASKETS IN: TROCELLEN, EPDM,

TAPES IN AL / C1, AL / CL1 HR and aluminum,

BANDS in TROCELLEN CLASS

GLUE MATIBLOCK



## **AIRSILENT**

Airsilent Polyurethane foam, based on polyester, flexible, open cells, used for sound absorption

### FLAT AIRSILENT

Types available:

- K: polyester-based polyurethane foam, anthracite colour
- KP: as K type bonded on one side with black embossed polyolefin film
- AL: as K type bonded on one side with metallic embossed polyolefin film
- K-ALU: as K type bonded on one side with aluminium

The black or metallic film covering is applied for protection, making the protect resistant to dust and humidity and prolonging its life span.

### EGG-BOX SHAPED AIRSILENT

Same characteristics as K type

Thickness:

20 mm - 10 mm flat part and 10 mm egg-box shaped

30 mm - 15 mm flat part and 15 mm egg-box shaped

40 mm - 20 mm flat part and 20 mm egg-box shaped

50 mm - 25 mm flat part and 25 mm egg-box shaped

### AIRSILENT TECH

Textile polyester fibres (80-90% regenerated), thermo-welded without resins and glue, density 40 kg/m<sup>3</sup>, color white or green.

## **APLOMB**

Multilayer product, with one or more sheets of lead, laminated with flexible, damping and sound-absorbing materials. See the AIRILENT 2017 ITA sheet for the different compositions, eg:

### APLOMB 11

- Composition:
  - layer of polyethylene foam (anti-vibration) laminated with embossed black film, 3 mm thick
  - 0.35 mm thick lead foil, weight 4 kg / m<sup>2</sup>
  - layer of open cell polyurethane foam (sound absorbing), 12 mm thick

### APLOMB 22

- Composition:
  - layer of polyethylene foam (anti-vibration) laminated with embossed black film, 3 mm thick
  - 0.35 mm thick lead foil, weight 4 kg / m<sup>2</sup>
  - layer of polyethylene foam (anti-vibration) laminated with embossed black film, 3 mm thick

### APLOMB AL/CL1

- Composition:
  - layer of polyethylene foam (antivibration) coupled with embossed metallic film, Class 1, thickness 3 mm
  - 0.35 mm thick lead foil, weight 4 kg / m<sup>2</sup>
  - layer of polyethylene foam (anti-vibration) Class 1, thickness 6 mm

### APLOMB 1

- Composition:
  - 10 mm thick open cell polyurethane foam layer
  - 0.35 mm thick lead foil, weight 4 kg / m<sup>2</sup>
  - 10 mm thick open cell polyurethane foam layer

#### APLOMB 1/B

- Composition:
  - 10 mm thick open cell polyurethane foam layer
  - 0.35 mm thick lead foil, weight 4 kg / m<sup>2</sup>
  - 20 mm + 20 mm thick embossed polyurethane foam layer (also available in 15 mm + 15 mm thickness)

### **ISOLMASS**

#### ISOLMASS 11

A three-layer composite product for airborne sound insulation of waste water pipes in plastic and partitions in general. Composed of a heavy polyolefin layer with mineral fillers, laminated on one side with **TROCELLEN** cross-linked PE foam with a thickness of 3 mm, and on the other side with open cell PU with a thickness of 12 mm.

Net weight: 4,4 kg/m<sup>2</sup>

#### ISOLMASS 22

A three-layer composite product for impact and airborne sound insulation of floors and walls. Composed of a heavy polyolefin layer with mineral fillers, laminated on both sides with **TROCELLEN** cross-linked PE foam with a thickness of 3 mm.

Net weight: 4,2 kg/m<sup>2</sup>

#### ISOLMASS 1 TECH

A three-layer composite product for airborne sound insulation partitions in general.

Composed of a heavy polyolefin layer with mineral fillers, laminated on both sides with polyester fiber (PET) with a thickness of 10 and 20 mm.

Net weight: 5,2 kg/m<sup>2</sup>

#### ISOLMASS 4 TECH

A two-layer composite product for airborne sound insulation partitions in general.

Composed of a heavy polyolefin layer with mineral fillers, laminated on one side with polyester fiber (PET) with a thickness of 20 mm.

Net weight: 4,8 kg/m<sup>2</sup>

#### ISOLMASS 4

A single layer product, used as vibration damping for airborne sound insulation of partitions. Composed only of heavy polyolefin layer with mineral fillers, thickness 2 mm.

Net weight: 4 kg/m<sup>2</sup>

#### ISOLMASS FR

A single layer product, used as vibration damping for airborne sound insulation of partitions. For applications where it is required high performance of fire reaction (Euroclass). Composed of self-extinguish heavy polyolefin layer with mineral fillers, thickness 2 ÷ 5 mm.

Net weight: 4-10 kg/m<sup>2</sup>

ISOLMASS 3 TECH FR

A two-layer composite product for airborne sound insulation of waste water pipes. Composed of a heavy polyolefin layer with mineral fillers, laminated on one side with polyester fiber (PET) with a thickness of 12 mm. Net weight: 3,3 kg/m<sup>2</sup>

**ISOSOUND**

It is made with TROCELLEN, chemically cross-linked polyethylene foam used for more than thirty years for the thermal and acoustic insulation of pipes and channels

TROCELLEN VN: PE foam, physically cross-linked

TROCELLEN N: PE foam, chemically cross-linked

## BUILDING

### TROSIL

#### TROSIL 4 mm

Chemically cross-linked, closed cell polyethylene foam, CFC free. Type TROSIL, thickness 4 mm, density 30 kg / m<sup>3</sup>; Certified impact sound insulation  $\Delta L_w = 28$  Db; Apparent dynamic stiffness  $s't = s' = 73$  MN/m<sup>3</sup>.

#### TROSIL 5 mm

Chemically cross-linked, closed cell polyethylene foam, CFC free. Type TROSIL, thickness 5 mm, density 30 kg / m<sup>3</sup>; Certified impact sound insulation  $\Delta L_w = 28$  dB; Apparent dynamic stiffness  $s't = s' = 52$  MN/m<sup>3</sup>.

#### TROSIL 10 mm

Chemically cross-linked, closed cell polyethylene foam, CFC free. Type TROSIL, thickness 10 mm (also available in the version with battens), density 30 kg / m<sup>3</sup>; Certified impact sound insulation  $\Delta L_w = 36$  dB; Apparent dynamic stiffness  $s't = s' = 19$  MN/m<sup>3</sup>

### TROSIL TECH

#### TROSIL TECH 10 mm

Chemically cross-linked, closed cell polyethylene foam, CFC free. Type TROSIL TECH, density 30 kg / m<sup>3</sup>, coupled with non-woven fabric in; polyester fiber, batten, total thickness 10 mm. Certified impact sound insulation  $\Delta L_w = 33$  dB. Apparent dynamic stiffness  $s't = 9$  MN/m<sup>3</sup>

#### TROSIL TECH MD 6.5

Chemically cross-linked, closed cell polyethylene foam, CFC free. Type TROSIL TECH, density 60 kg / m<sup>3</sup>, coupled with non-woven fabric in; polyester fiber, battened, total thickness 4.5 mm. Certified impact sound insulation  $\Delta L_w = 20-22$  dB. Total dynamic stiffness  $s' = 35$  MN/m<sup>3</sup>

### ACCESSORIES

#### JOIN BAND

Adhesive strips of resilient material for joining insulating sheets from underfloor. Composed of TROCELLEN TROSIL, beige color, without CFC.

#### N BAND

Adhesive strips of resilient material for the perimeter insulation of the flooring. Used to decouple the floor of the wall, they are glued to the undersized cloth thus creating the ideal "tank" for casting the screed. They are produced using chemically cross-linked polyethylene foam, adhesive, anthracite color, without CFC.

#### P BAND

Like Trocellen N Band with 50 mm pre-incision to facilitate "L" laying and with the addition of reinforced TNT to avoid breakage.

#### TROCELLEN D-TAPE

Tape composed of Trocellen polyolefin foam, thickness 3 mm, density 30 kg / mc. To be applied as a decoupling for metal profiles in dry wall systems.

## OTHER

### TR-EECeLL

Trocellen bio-based polyethylene foam, suitable for acoustic and thermal insulation. The polyethylene resin comes from sugar cane processing waste, demonstrating the eco-friendly nature of the product.

### DISTRICT HEATING PILLOW

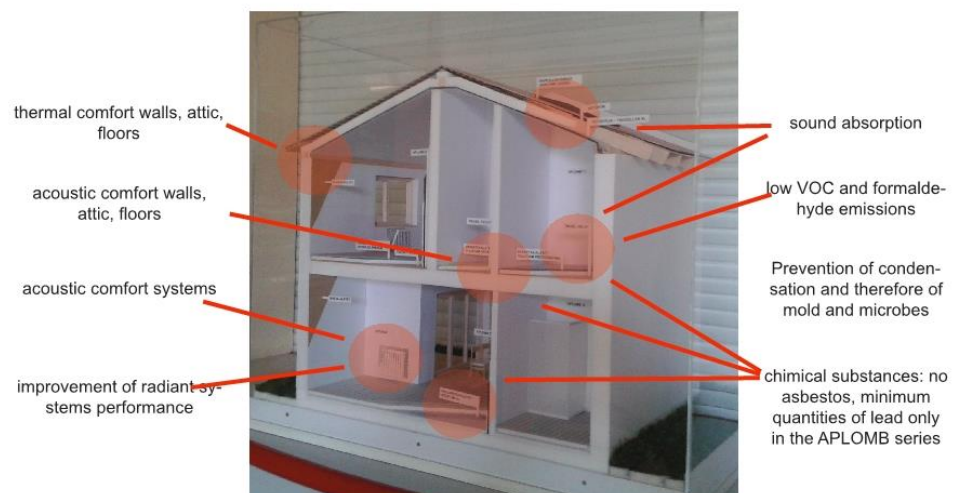
Polyethylene foam with excellent physical and mechanical properties, used to prevent mechanical damage to pre-insulated district heating pipes.

### I-WALS

Decorated 3D panels in polyethylene foam, to be applied to walls and ceilings. CE marked, they are safe and easy to install (self-adhesive). They come in different shapes and colors to meet every design needs.

## CHARACTERISTICS OF SUSTAINABILITY AND SALUBRITY

The TROCELLEN products described contribute to the sustainability of a building through specific characteristics that distinguish them and are summarized in the following diagram.



## WELL BUILDING STANDARD® RATING SYSTEM

Source: International WELL Building Institute™ (IWBI™)

Parallel to the interest of environmental impacts, strategies to improve human health and well-being have increased, but despite this they have played a relatively modest role in the evolution of construction standards. WELL Building Standard®, launched in October 2014 after 6 years of research and development, is the first standard of its kind that focuses on the health and well-being of the building's occupants, through the definition of 100 performance metrics, strategies of planning and management policies that can be implemented. The WELL certification of a building can lead to a built environment that helps improve nutrition, fitness, mood, sleep, comfort and user performance.

The development of WELL v2 was based on the principles of equity, globalization, scientific evidence, application of best practices and proven strategies, customer orientation and resilience.

It can be applied to all types of projects, and the system is designed to grow in specificity and adapting over time and to geographical areas.

There are ten reference areas ("*concept*") in WELL v2: *Air, Water, Nourishment, Light, Movement, Thermal Comfort, Sound, Materials, Mind and Community*. Each concept is composed of distinct features ("*features*") with health-related purposes. These features ("*features*") can be Prescriptive ("*Preconditions*") or Optional ("*Optimization*"). All features, or features, are defined for specific types of space.

WELL v2 is a scoring system, with a total of 110 points available for each project. The certification levels are as follows:

- WELL Silver Certification: 50 points
- WELL Gold Certification: 60 points
- WELL Platinum Certification: 80 points

Projects must obtain at least 2 points per concept and cannot get more than 12 points per concept up to a maximum total of 100. There are then 10 points awarded for Innovation.

The International WELL Building Institute (IWBI) is leading the global movement to transform buildings and communities in ways that help people thrive. IWBI offers "WELL Building Standard", the first rating system for buildings focused exclusively on how buildings and everything around them can improve comfort and guide better choices so as not to compromise health and well-being.

IWBI's work extends to health progress through the design of entire neighborhoods through the WELL Community standard, and to the convening and mobilization of the welfare community through the management of WELL AP credentials.

WELL Certification and the WELL AP credentials program are managed by third parties through the collaboration of IWBI with Green Business Certification Inc. (GBCI), which also administers the LEED® certification, the global program for sustainable construction and the credential program professional LEED.

For more information see the following link: <https://www.wellcertified.com/>

**The WELL Building Standard® rating system certifies the building, does not certify the individual products or components, but the latter can help meet the requirements of the protocol and consequently obtain the relative scores for the building.**

**This also implies that the product CANNOT have a score (the score is always just about the building), but it can help the building get the score.**

The WELL® rating system certifies, as mentioned, only the buildings. The products, however, can help meet the requirements of the WELL® features, and therefore help the building obtain the scores necessary for certification.

In this part of the document the description of the features to which the TROCELLEN products considered in this document can contribute can be consulted.

This description is the result of a careful analysis of the characteristics and products in light of the requirements, which led the company to adopt specific procedures for orders related to projects undergoing WELL® certification.

We repeat that only Prescriptive (P) and Optional (O) features to which TROCELLEN products can contribute are mentioned. The following tables show the credit checklists, ie the titles of Prescriptive (P) and Optional (O) features in the relevant reference areas, and relative scores assigned to the building.

As already mentioned, in the following paragraphs we will illustrate the excellence of TROCELLEN products in relation to the features of the WELL Building Standard® protocol, taking as reference the WELL Building Standard® v 2.1 standard.



## TROCELLEN E WELL® V 2.1 FEATURES

In the following check lists we highlight the features that TROCELLEN products can contribute to <sup>1</sup>:

Concept	P/O	Feature	Part	Points
				18
Air	P	01. Fundamental Air Quality	1. Meet Thresholds for Particulate 2. Meet Thresholds for Organic Gases 3. Meet Thresholds for Inorganic 4. Meet Radon Threshold 5. Monitor Fundamental Air Parameters	- - - - -
	P	02. Smoke-Free Environment	1. Prohibit Indoor Smoking 2. Prohibit Outdoor Smoking	- -
	P	03. Ventilation Effectiveness	1. Ensure Adequate Ventilation 2. Conduct System Balancing	- -
	P	04. Construction Pollution Management	1. Mitigate Construction Pollution	-
	O	05. Enhanced Air Quality	1. Meet Enhanced Thresholds for Particulate Matter	2
			2. Meet Enhanced Thresholds for Organic Gases	1
			3. Meet Enhanced Thresholds for Inorganic Gases	1
	O	06. Enhanced Ventilation	1. Increase Outdoor Air Supply	3
			2. Implement Demand-Controlled Ventilation	3
			3. Implement Displacement	1
			4. Implement Advanced Air Distribution	3
	O	07. Operable Windows	1. Provide Operable Windows	1
			2. Manage Window Use	1
			3. Apply Universal Design to Windows	1
O	08. Air Quality Monitoring and Awareness	1. Implement Indoor Air Monitors	1	
		2. Promote Air Quality Awareness	1	
O	09. Pollution Infiltration Management	1. Design Healthy Envelope and Entryways	1	
O	10. Combustion Minimization	1. Manage Combustion	1	
O	11. Source Separation	1. Manage Pollution and Exhaust	1	
O	12. Air Filtration	1. Implement Particle Filtration	1	
O	13. Active VOC Control	1. Implement Carbon Filtration	1	
O	14. Microbe and Mold Control	1. Implement Ultraviolet Air	1	
		2. Manage Condensation and Mold	1	
				9

<sup>1</sup> Source: International WELL Building Institute – [www.wellcertified.com](http://www.wellcertified.com) – WELLv2SubmittalRequirements.xls

Concept	P/O	Feature	Part	Points
Water				9
	P	01. Fundamental Water Quality	1. Meet Sediment Thresholds	-
			2. Meet Microorganisms Thresholds	-
			3. Monitor Fundamental Water Parameters	-
	P	02. Water Contaminants	1. Meet Dissolved Metal Thresholds	-
			2. Meet Organic Pollutant Thresholds	-
			3. Meet Disinfectant Byproducts Thresholds	-
			4. Meet Herbicide and Pesticide Thresholds	-
			5. Meet Fertilizer Thresholds	-
			6. Meet Public Water Additive Thresholds	-
			7. Monitor Water Contaminant Parameters	-
	P	03. Legionella Control	1. Implement Legionella Management Plan	-
	O	04. Enhanced Water Quality	1. Meet Drinking Water Taste Properties	1
	O	05. Water Quality Consistency	1. Test and Display Water Quality	1
			2. Filter Drinking Water	1
O	06. Drinking Water Promotion	1. Ensure Drinking Water Access	1	
O	07. Moisture Management	1. Manage Exterior Liquid Water	1	
		2. Isolate Moisture-sensitive Materials	1	
		3. Manage Interior Liquid Water	1	
O	08. Handwashing	1. Provide Adequate Sink	1	
		2. Provide Handwashing Support	1	

Concept	P/O	Feature	Part	Points
Nourishment				17
	P	01. Fruits and Vegetables	1. Ensure Fruit and Vegetable Availability 2. Promote Fruit and Vegetable Visibility	- -
	P	02. Nutritional Transparency	1. Provide Nutritional Information 2. Implement Ingredient Labeling 3. Implement Refined Ingredient Labeling	- - -
	O	03. Refined Ingredients	1. Limit Total Sugars 2. Promote Whole Grains 3. Manage Oils	1 1 1
	O	04. Food Advertising	1. Promote Healthy Nutritional Messaging 2. Implement Healthy Menu Design	1 1
	O	05. Artificial Ingredients	1. Restrict Artificial Ingredients	1
	O	06. Portion Sizes	1. Promote Healthy Portions	1
	O	07. Nutrition Education	1. Provide Nutrition Education	1
	O	08. Mindful Eating	1. Include Designated Eating Space 2. Provide Daily Meal Breaks	1 1
	O	09. Special Diets	1. Manage Allergies and Alternatives 2. Implement Enhanced Ingredient Labeling	1 1
	O	10. Food Preparation	1. Provide Meal Support	1
	O	11. Responsible Food Sourcing	1. Implement Responsible Sourcing	1
	O	12. Food Production	1. Provide Gardening Space 2. Provide Planting Support	1 1
	O	13. Local Food Environment	1. Ensure Food Access	1

Concept	P/O	Feature	Part	Points
Light				14
	P	01. Light Exposure and Education	1. Ensure Indoor Light Exposure 2. Promote Lighting Education	- -
	P	02. Visual Lighting Design	1. Light Levels for Visual Acuity	-
	O	03. Circadian Lighting Design	1. Lighting for the Circadian System	3
	O	04. Glare Control	1. Control Solar Glare 2. Manage Glare from Electric Lighting	2 2
	O	05. Enhanced Daylight Access	1. Implement Enhanced Daylight Plan 2. Implement Enhanced Daylight Simulation 3. Ensure Views	1 2 1
	O	06. Visual Balance	1. Manage Brightness	1
	O	07. Electric Light Quality	1. Ensure Color Rendering Quality 2. Manage Flicker	1 1
	O	08. Occupant Control of Lighting Environments	1. Enhance Occupant Controllability 2. Provide Supplemental Lighting	1 1

Concept	P/O	Feature	Part	Points
Movement				20
	P	01. Active Buildings and Communities	1. Design Active Buildings and Communities	-
	P	02. Visual and Physical Ergonomics	1. Support Visual Ergonomics	-
			2. Ensure Desk Height Flexibility	-
			3. Ensure Seat Flexibility	-
			4. Provide Standing Support	-
			5. Provide Ergonomics Education	-
	O	03. Movement Network and Circulation	1. Design Aesthetic Circulation Networks	1
			2. Integrate Point-of-Decision Signage	1
			3. Promote Visible Stairs	1
	O	04. Active Commuter and Occupant Support	1. Provide Bicycle Storage	2
			2. Provide Facilities for Active Occupants	2
	O	05. Site Planning and Selection	1. Select Sites with Diverse Uses	2
			2. Select Sites with Access to Mass Transit	2
			3. Select Sites with Pedestrian Friendly Streets	2
			4. Select Sites with Bike Friendly Streets	2
O	06. Physical Activity Opportunities	1. Implement Activity Programs for Employees	2	
		2. Implement Activity Programs for Students	2	
O	07. Active Furnishings	1. Provide Active Workstations	2	
O	08. Physical Activity Spaces and Equipment	1. Provide Dedicated Activity Spaces	1	
		2. Provide Physical Activity Equipment	1	
		3. Provide Off-Site Activity Spaces	1	
O	09. Exterior Active Design	1. Integrate Active Façades	1	
		2. Provide On-Site Pedestrian Destinations	1	
O	10. Enhanced Ergonomics	1. Utilize Ergonomic Consultation	1	
O	11. Physical Activity Promotion	1. Promote Physical Activity	1	
		2. Promote Participation Awareness	1	
O	12. Self-Monitoring	1. Provide Self-Monitoring Tools	1	

Concept	P/O	Feature	Part
Thermal Comfort			
	P	01. Thermal Performance	1. Support Thermal Environment 2. Monitor Thermal Parameters
	O	02. Enhanced Thermal Performance	1. Enhance Thermal Environment 2. Achieve Thermal Comfort
	O	03. Thermal Zoning	1. Ensure Thermostat Control 2. Promote Free Address
	O	04. Individual Thermal Control	1. Ensure Personal Thermal Comfort 2. Facilitate Thermal Adaptation
	O	05. Radiant Thermal Comfort	1. Implement Radiant Systems 2. Implement Dedicated Outdoor Air Systems
	O	06. Thermal Comfort Monitoring	1. Monitor Thermal Environment
	O	07. Humidity Control	1. Manage Relative Humidity

Concept	P/O	Feature	Part	Points
				11
Sound	P	01. Sound Mapping	1. Manage Background Noise Level	-
			2. Manage Acoustical Privacy	-
			3. Label Acoustic Zones	-
	O	02. Maximum Noise Levels	1. Limit Background Noise Levels	3
	O	03. Sound Barriers	1. Ensure Adequate Wall Construction	2
			2. Ensure Proper Door Specifications	1
O	04. Sound Absorption	1. Meet Thresholds for Reverberation Time	1	
		2. Implement Sound Reducing Ceilings	1	
		3. Implement Sound Reducing Vertical Surfaces	1	
O	05. Sound Masking	1. Implement Sound Masking	2	

Concept	P/O	Feature	Part	Points	LOA
				24	
	P	01. Fundamental Material Precautions	1. Restrict Asbestos 2. Limit Mercury 3. Restrict Lead	- - -	Architect MEP Architect
	P	02. Hazardous Material Abatement	1. Manage Asbestos Hazards 2. Manage Lead Hazards 3. Manage Polychlorinated Biphenyl (PCB) Hazards	- - -	Contractor Contractor Contractor
	P	03. Outdoor Structures	1. Ensure Acceptable Structures 2. Manage Exterior Paint and Soil	- -	Architect Architect
	O	04. Waste Management	1. Manage Hazardous Waste	1	Owner
	O	05. In-Place Management	1. Manage Hazardous Materials	2	Owner
	O	06. Site Remediation	1. Implement Site Assessment and Cleanup	2	Architect
	O	07. Pesticide Use	1. Manage Pesticides	1	
	O	08. Hazardous Material Reduction	1. Limit Hazardous Materials	1	Architect
Materials	O	09. Cleaning Products and Protocol	1. Ensure Acceptable Cleaning Ingredients	1	
			2. Implement Acceptable Cleaning Practices	1	
	O	10. Volatile Compound Reduction	1. Manage Volatile Organic Compounds	2	Architect
			2. Manage Semi-Volatile Organic Compounds (SVOCs)	1	Architect
			3. Purchase Compliant Products	1	
	O	11. Long-Term Emission Control	1. Manage Furniture and Furnishings Emissions	2	Architect
			2. Manage Flooring and Insulation Emissions	1	Architect
	O	12. Short-Term Emission Control	1. Manage Product Emissions: Adhesives, Sealants, Paints and Coatings	3	Architect
			2. Manage Product Content: Adhesives, Sealants, Paints and Coatings	2	Architect
	O	13. Enhanced Material Precaution	1. Select Optimized Materials	2	Architect
	O	14. Material Transparency	1. Promote Ingredient Disclosure	2	Architect

Concept	P/O	Feature	Part	Points
Mind				26
	P	01. Mental Health Promotion	1. Commit to Mental Health Promotion	-
			2. Promote Mental Health Literacy	-
	P	02. Access to Nature	1. Provide Access to Nature	-
	O	03. Mental Health Support	1. Provide Mental Health Screening	1
			2. Provide Mental Health Coverage	1
			3. Provide Workplace Support	1
	O	04. Mental Health Education	1. Offer Mental Health Education	1
			2. Offer Mental Health Education for Managers	1
	O	05. Stress Support	1. Develop Stress Management Plan	1
			2. Support Stress Management Programs	1
	O	06. Restorative Opportunities	1. Provide Micro- and Macro-Breaks	1
	O	07. Restorative Spaces	1. Provide Restorative Indoor Spaces	1
			2. Provide Restorative Outdoor Spaces	1
	O	08. Restorative Programming	1. Provide Restorative Programming	1
O	09. Enhanced Access to Nature	1. Provide Enhanced Access to Nature	1	
O	10. Focus Support	1. Assess Work Environment	1	
		2. Integrate Space Management	1	
O	11. Sleep Support	1. Provide Workplace Sleep Support	1	
		2. Provide Non-Workplace Sleep Support	1	
O	12. Business Travel	1. Provide Business Travel Support	1	
O	13. Tobacco Prevention and Cessation	1. Promote Tobacco Prevention	1	
		2. Support Tobacco Cessation	2	
O	14. Substance Use Education and Services	1. Promote Substance Abuse Prevention and Education	1	
		2. Provide Access to Substance Use Services	2	
O	15. Opioid Emergency Response Plan	1. Provide Opioid Emergency Response Kits and Training	3	



Concept	P/O	Feature	Part	Points
				31
Community	P	01. Health and Wellness Awareness	1. Provide WELL Feature Guide (Protocol)	0
			2. Promote Health and Wellness Education	0
	P	02. Integrative Design	1. Facilitate Stakeholder Charrette	0
			2. Integrate Beauty and Design	0
			3. Promote Health-Oriented Mission	0
			4. Facilitate Stakeholder Orientation	0
	P	03. Occupant Survey	1. Select Project Survey	0
			2. Administer Survey and Report Results	0
	O	04. Enhanced Occupant Survey	1. Select Enhanced Survey	1
			2. Administer Pre-Occupancy Survey and Report Results	1
			3. Monitor Survey Responses	1
			4. Facilitate Interviews and Focus Groups	1
	O	05. Health Services and Benefits	1. Promote Health Benefits	2
			2. Offer On-Demand Health Services	1
	O	06. Health Promotion	1. Promote Culture of Health	2
			2. Offer Health Risk Assessments	1
O	07. Community Immunity	1. Promote Seasonal Flu Prevention	1	
		2. Implement Immunization Schedule	1	
O	08. New Parent Support	1. Offer New Parent Leave	3	
		2. Promote Workplace Support	1	
O	09. New Mother Support	1. Offer Workplace Breastfeeding Support	1	
		2. Design Lactation Room	2	
		3. Promote Breastfeeding Education and Support	1	
O	10. Family Support	1. Offer Childcare Support	1	
		2. Offer Eldercare Support	1	
		3. Offer Family Leave	1	
		4. Offer Bereavement Support (Protocol)	1	
O	11. Civic Engagement	1. Promote Civic Engagement	1	
O	12. Organizational Transparency	1. Promote Equity Program Participation	2	
O	13. Accessibility and Universal Design	1. Ensure Essential Accessibility	1	
		2. Integrate Universal Design	2	
O	14. Bathroom Accommodations	1. Provide Essential	1	
		2. Provide Single-User Bathrooms	1	
		3. Provide Family Bathrooms	1	
O	15. Emergency Preparedness	1. Develop Emergency Preparedness Plan	1	
		2. Promote Emergency Resources	2	
O	16. Community Access and Engagement	1. Provide Community Space (Protocol)	1	

## CONCEPT “AIR”

Air cleaning is a crucial and fundamental element for human health. This concept of the WELL® protocol promotes and rewards the strategies that lead to healthy air inside the building, reducing or minimizing the sources of indoor pollution, requiring optimal levels of indoor air quality to support the well-being of the occupants of the building.

### A01 FUNDAMENTAL AIR QUALITY | P

#### PART 2 MEET THRESHOLDS FOR ORGANIC GASES

*For All Spaces except Commercial Kitchen Spaces:*

*The following thresholds are met:*

- a. Formaldehyde less than 27 ppb.*
- b. Individual component VOCs less than or equal to the limits listed in the table below [...]*

Thanks to the very low emissions of volatile organic compounds and formaldehyde, TROCELLEN products do not negatively impact the overall quality of the air, as shown by the VOC test reports issued by the products themselves. In Annex 1 you can consult the list of products and tests carried out.

### A14 MICROBE AND MOLD CONTROL | O (MAX: 2 PT)

#### PART 2 MANAGE CONDENSATION AND MOLD (MAX: 1 PT)

*For All Spaces:*

##### Condensation management

*A narrative describes how condensation is addressed for the project, considering the following:*

- a. High interior relative humidity levels, particularly in susceptible areas like laundry rooms, below-grade spaces and other high-humidity areas.*
- b. Air leakage that could wet either exposed interior materials or interstitially hidden materials.*
- c. Cold surfaces such as basements, slab-on-grade floors or the inside of exterior walls.*
- d. Oversized air conditioning units.*

##### Mold inspections

*The following requirements are met:*

- a. Annual inspections for signs of water damage or pooling, discoloration and mold on ceilings, walls and floors is performed by a professional demonstrated not to have a conflict of interest. The report is submitted annually through WELL Online.*
- b. One of the below is met:*
  - 1. Project achieves cooling coil mold reduction as per Part 1: Implement Ultraviolet Air Treatment.*
  - 2. All cooling coils (where applicable) are inspected on a quarterly basis for mold growth and cleaned if necessary. Dated photos demonstrating adherence are submitted annually through WELL Online.*
- c. For projects with tenants, there is a system in place for notifying building management about mold or water damage and addressing concerns.*

Thanks to their characteristics, TROCELLEN products prevent the formation of condensation, prevent dripping and do not allow the growth of molds. In particular, TROCELLEN CLASS ADHESIVE products have been tested with positive results according to ISO 846 in order to determine that the air treatment components must consist of materials that do not create nutrient sources for microorganisms (including legionella). The products are therefore compliant with the German technical standard VDI 6022.

## CONCEPT “WATER”

This Concept considers aspects of quality, distribution and control of water in a building. Includes features that address the availability and contaminant thresholds of drinking water, as well as features aimed at water management to avoid damage to building materials and environmental conditions.

### W03 LEGIONELLA CONTROL | P

#### PART 1 IMPLEMENT LEGIONELLA MANAGEMENT PLAN

*For All Spaces:*

*A narrative describes how the building addresses Legionella, and includes the following:*

- a. Formation of a team for Legionella management in the building.*
- b. Water system inventory and production of process flow diagrams.*
- c. Hazard analysis of water assets.*
- d. Identification of critical control points.*
- e. Maintenance and control measures, monitoring, establishment of performance limits and corrective actions.*
- f. Documentation, verification and validation procedures*

Thanks to their characteristics, TROCELLEN products prevent the formation of condensation, prevent dripping and do not allow the growth of molds. In particular, the TROCELLEN CLASS ADHESIVE products have been tested with positive results according to ISO 846 in order to determine that the air treatment components must consist of materials that do not create nutrient sources for microorganisms. The products are therefore compliant with the German technical standard VDI 6022.

### W07 MOISTURE MANAGEMENT | O (MAX: 3 PT)

#### PART 1 MANAGE EXTERIOR LIQUID WATER (MAX: 1 PT)

*For All Spaces:*

*The following requirements are met:*

- a. A continuous drainage plane (e.g., a weather-resistant barrier integrated with flashing systems at penetrations) is constructed interior to the exterior cladding.*
- b. To prevent the wicking of porous building materials, one of the below capillary break methods is used:*
  - 1. Free-draining spaces (e.g., between exterior cladding, weather-resistant barriers in wall assemblies).*
  - 2. Non-porous materials (e.g., closed-cell foams, waterproofing membranes, metal) between porous materials.*

Thanks to their characteristics, TROCELLEN products prevent the formation of condensation, prevent dripping and do not allow the growth of molds. In particular, the TROCELLEN CLASS ADHESIVE products have been tested with positive results according to ISO 846 in order to determine that the air treatment components must consist of materials that do not create nutrient sources for microorganisms. The products are therefore compliant with the German technical standard VDI 6022.

## CONCEPT “THERMAL COMFORT”

This concept aims to promote human productivity and guarantee the maximum level of thermal comfort among all building users by improving the design and control of HVAC systems and satisfying individual thermal preferences.

### T05 RADIANT THERMAL COMFORT | O (MAX: 2 PT)

#### PART 1 IMPLEMENT RADIANT SYSTEMS (MAX: 1 PT)

*For All Spaces except Commercial Kitchen Spaces:*

*At least 50% of the project floor area is serviced by one of the following systems:*

- a. Hydronic radiant heating and/or cooling systems.*
- b. Electric radiant systems.*

*Note: Projects pursuing this part for radiant cooling systems must also meet the condensation management requirements of “Part 1: Manage Relative Humidity in Feature T07: Humidity Control”.*

TROCELLEN products help improve the performance of the plants mentioned in the requirement.

### T07 HUMIDITY CONTROL | O (MAX: 1 PT)

#### PART 1 MANAGE RELATIVE HUMIDITY (MAX: 1 PT)

*For All Spaces:*

*All parts of the project except high-humidity areas meet one of the following requirements:*

- a. The mechanical system has the capability of maintaining relative humidity between 30% and 60% at all times by adding or removing moisture from the air.*
- b. The modeled relative humidity levels in the space are between 30% and 60% for at least 98% of all business hours of the year.*

TROCELLEN products help improve the performance of the plants mentioned in the requirement.

## CONCEPT “SOUND”

This concept aims to strengthen the health and well-being of the occupants through the identification and mitigation of acoustic comfort parameters that shape the occupants' experiences in the built environment.

TROCELLEN can offer an entire line of products dedicated to sound insulation, which can help improve the performance required by this area's credits. The following table shows some indicative reference values:

PRODUCT FAMILY	PRODUCT	SOUNDPROOFING parameter
AIRSILENT <sup>2</sup>	FLAT AIRSILENT K	High sound absorption values $\alpha$
	FLAT AIRSILENT KP	High sound absorption values $\alpha$
	FLAT AIRSILENT AL	High sound absorption values $\alpha$
	FLAT AIRSILENT K-ALU	High sound absorption values $\alpha$
	EGG-BOX SHAPED AIRSILENT K	High sound absorption values $\alpha$
	AIRSILENT TECH	High sound absorption values $\alpha$
APLOMB	APLOMB 11	Wall sound insulation $R_w = 26$ dB Wrapped on the pipes it lowers the sound level of the waste water by 15 dB
	APLOMB 22	Airborne sound insulation $R_w = 24$ dB
	APLOMB AL/CL1	Airborne sound insulation $R_w = 24$ dB
	APLOMB 1	Airborne sound insulation $R_w = 27$ dB
	APLOMB 1/B	Airborne sound insulation $R_w = 27$ dB
ISOLMASS	ISOLMASS 11	Acoustic insulation of waste water pipes; Airborne sound insulation $R_w = 27$ dB
	ISOLMASS 22	Airborne sound insulation $R_w = 26$ dB
	ISOLMASS 1 TECH	Airborne sound insulation $R_w = 25$ dB
	ISOLMASS 4 TECH	Airborne sound insulation $R_w = 27$ dB
	ISOLMASS 4	Airborne sound insulation $R_w = 26$ dB
	ISOLMASS FR	Airborne sound insulation $R_w$ from 26 dB
	ISOLMASS 3 TECH FR	Acoustic insulation of waste water pipes: airborne noise reduction > 10 dB
ISOSOUND	TROCELLEN ISOSOUND	EXAMPLES wall-mounted vertical discharge 29 dB; silent exhaust through-ceiling 33 dB standard vertical discharge in perimeter wall 31 dB
FLOORING UNDERLAY	TROCELLEN N	Impact noise reduction > 26 dB
	TROCELLEN VN	Impact noise reduction > 26 dB
	TROSIL	Impact noise reduction > 28 dB (4mm, 5 mm) 36 dB (10mm)
	TROSIL TECH	Impact noise reduction > 33 dB(10mm)
	TROSIL TECH MD 6.5	Impact noise reduction > 20-22 dB

<sup>2</sup> The AIRSILENT range consists of sound-absorbing products, useful for reducing the noise of the systems (“Hvac background noise” and the reverberation time (Reverberation time). The Alpha Sabine parameter varies according to the frequency and thickness. the values in the table would give an unreadable result. For more information, consult the technical data sheets available or contact the technical department

## S01 SOUND MAPPING | P

### PART 1 MANAGE BACKGROUND NOISE LEVEL

*For All Spaces:*

*Projects meet at least one of the following requirements to address background noise levels:*

- a. An annotated document is provided that indicates the projected background noise level (dBA or NC) attributable to HVAC equipment noise, external noise intrusion or a similar source (e.g., a floor plan is color-coded to indicate dBA levels between regularly occupied spaces or across façade elements).*
- b. A professional narrative is provided that indicates the measured background noise level (dBA or NC) attributable to HVAC equipment noise, external noise intrusion or a similar source in each space as denoted in Feature S02: Maximum Noise Levels.*

### PART 2 MANAGE ACOUSTICAL PRIVACY

*For All Spaces:*

*Projects meet at least one of the following requirements to address acoustical privacy:*

- a. An annotated document is provided that indicates the projected acoustical performance of typical walls that separate regularly occupied spaces throughout the project (e.g., STC/R, NIC/D or equivalent sound transmission metrics denoted on a partition schedule from an architectural drawing set).*
- b. A professional narrative is provided that indicates the measured level of acoustical privacy between regularly occupied spaces or within open workspace environments (e.g., NIC/D (or equivalent) or SPP data across partitions).*

*Part 3 Label Acoustic Zones*

*For All Spaces:*

*An annotated document is provided that labels specific zones throughout the project floor plan based on the following:*

- a. Loud zones: includes areas intended for appliances, mechanical equipment or amenities (e.g., kitchens, fitness rooms, social spaces, recreational rooms).*
- b. Quiet zones: includes areas intended for focused work, wellness, rest, study and/or privacy.*
- c. Mixed zones: includes areas intended for learning, collaboration and/or presentation.*

TROCELLEN acoustic products can improve the performance required by this requirement.

## S02 MAXIMUM NOISE LEVELS | O (MAX: 3 PT)

### PART 1 LIMIT BACKGROUND NOISE LEVELS (MAX: 3 PT)

*For All Spaces:*

*The following is achieved:*

- a. Background noise levels do not exceed the thresholds below: [...]*

TROCELLEN acoustic products can improve the performance required by this requirement.

## S03 SOUND BARRIERS | O (MAX: 3 PT)

### PART 1 ENSURE ADEQUATE WALL CONSTRUCTION (MAX: 2 PT)

*For Office Spaces:*

*The following is achieved:*

- a. Spaces listed below, if present, have interior partition walls and background noise that together meet the minimum SPP ratings listed in the table:*

*[tabella]*

*For Dwelling Units:*

*Dwelling unit partitions are constructed to meet the following requirements:*

- a. Minimum STC-50 for demising walls that separate dwelling units from other units and corridors.  
b. Minimum STC-45 for walls that separate bedrooms from other rooms within a given dwelling unit.*

*For Classroom:*

*Student Classrooms*

*Partitions in schools are designed and constructed to meet the following requirements:*

- a. Minimum STC-45 for walls that separate classrooms from corridors, staircases, offices or conference rooms.  
b. Minimum STC-50 for walls that separate classrooms from classrooms, therapy rooms and healthcare rooms.  
c. Minimum STC-53 for walls that separate classrooms from bathrooms.  
d. Minimum STC-60 for walls that separate classrooms from music rehearsal or performance spaces, auditoriums, mechanical equipment rooms, workshops, cafeterias, gymnasiums or indoor swimming pools.*

TROCELLEN acoustic products can improve the performance required by this requirement. In particular, the following products better meet the requirement:

APLOMB	APLOMB 22	Airborne sound insulation Rw= 24 dB
	APLOMB AL/CL1 <sup>3</sup>	Airborne sound insulation Rw= 24 dB
	APLOMB 1	Airborne sound insulation Rw=27 dB
	APLOMB 1/B	Airborne sound insulation Rw=27 dB
ISOLMASS	ISOLMASS 22	Airborne sound insulation Rw=26 dB
	ISOLMASS 1 TECH	Airborne sound insulation Rw=25 dB
	ISOLMASS 4 TECH	Airborne sound insulation Rw=27 dB
	ISOLMASS 4	Airborne sound insulation Rw=26 dB
	ISOLMASS FR	Airborne sound insulation Rw from 26 dB

<sup>3</sup> L'Aplomb AL/CL1 è come l'aplomb 22 con strato di polietilene a spessore più elevato. Ha quindi al minimo le stesse prestazioni dell'aplomb 22



## S04 SOUND ABSORPTION | O (MAX: 3 PT)

### PART 1 MEET THRESHOLDS FOR REVERBERATION TIME (MAX: 1 PT)

For All Spaces:

The following is achieved:

- a. Spaces meet the maximum RT thresholds in the table below [...]

### PART 2 IMPLEMENT SOUND REDUCING CEILINGS (MAX: 1 PT)

For All Spaces:

Spaces have ceiling finishes that meet the following specifications:

- a. Ceiling treatment meets the NRC/  $\alpha$  Min values described below [...]

### PART 3 IMPLEMENT SOUND REDUCING VERTICAL SURFACES (MAX: 1 PT)

For All Spaces:

Spaces have wall finishes that meet following requirement:

- a. Wall treatments meet the specifications described [...]

TROCELLEN acoustic products can improve the performance required by this requirement. In particular, the following products better meet the requirement:

FAMIGLIA	PRODOTTO	ISOLAMENTO ACUSTICO PARAMETRO
AIRSILENT	FLAT AIRSILENT K	High sound absorption values $\alpha$
	FLAT AIRSILENT KP	High sound absorption values $\alpha$
	FLAT AIRSILENT AL	High sound absorption values $\alpha$
	FLAT AIRSILENT K-ALU	High sound absorption values $\alpha$
	EGG-BOX SHAPED K	High sound absorption values $\alpha$
	AIRSILENT TECH	High sound absorption values $\alpha$

The AIRSILENT range consists of sound-absorbing products, useful for reducing the noise of the systems ("Hvac background noise" and the reverberation time (Reverberation time). The Alpha Sabine parameter varies according to the frequency and thickness. the values in the table would give an unreadable result. For more information, consult the technical data sheets available or contact the technical department.

## CONCEPT “MATERIALS”

This Concept aims to reduce human exposure to hazardous ingredients in building materials by restricting or eliminating compounds or products known to be toxic and promoting safer replacements. The compounds known to be hazardous to the health of workers at work and / or known to bioaccumulate or aggregate in the environment are also subject to restrictions and in some cases are not allowed.

### X01 FUNDAMENTAL MATERIAL PRECAUTIONS | P

*Part 1 Restrict Asbestos*

*For All Spaces:*

*The following building materials contain asbestos less than 1% by weight:*

- a. Thermal system insulation (applied to pipes, fittings, boilers, breeching, tanks, ducts or other like components to prevent heat loss or gain).*
- b. Surfacing material (that is sprayed, troweled or otherwise applied to surfaces, for example acoustical plaster or fireproofing materials).*
- c. Wallboard/millboard, resilient floor covering, roofing and siding shingles (including metal cladding) and construction mastics.*

TROCELLEN products do not contain asbestos.

### X08 HAZARDOUS MATERIAL REDUCTION | O (MAX: 1 PT)

PART 1 LIMIT HAZARDOUS MATERIALS (MAX: 1 PT)

*For All Spaces:*

*Projects meet one of the following requirements and develop a purchasing plan for continued procurement:*

- a. For all newly installed building materials, at minimum 20% by cost of the following building products and material types contain less than 100 ppm added lead:*
  - 1. Doors and door hardware.*
  - 2. Ductwork.*
  - 3. Conduits.*
  - 4. Metal studs.*
  - 5. Mirrors/glass.*
  - 6. Roofing or flashing.*
  - 7. Brass cooler drains, pumps, motors and valves.*
  - 8. Vinyl blinds or wallcovering.*
- b. For all newly installed furnishings and furniture (including textiles, finishes and dyes), all components that constitute at least 5%, by weight, furniture or furnishing assembly meet the following thresholds for material content:*
  - 1. Mercury less than 100 ppm.*
  - 2. Cadmium less than 100 ppm*
  - 3. Antimony less than 100 ppm.*
  - 4. Hexavalent chromium in plated finishes less than 1000 ppm.*

The TROCELLEN products that are applied on the pipes do not contain lead - all the products except for the APLOMB range.

I-WALS is a 3D panel for decorating walls and ceilings, also with thermal and acoustic insulation. I-WALS is composed of 100% expanded cross-linked polyethylene (CAS NR 9002-88-4).

## X10 VOLATILE COMPOUND REDUCTION | O (MAX: 3 PT)

### PART 1 MANAGE VOLATILE ORGANIC COMPOUNDS (MAX: 2 PT)

For All Spaces:

The following requirements are met:

a. At minimum, 20% by cost of the following newly installed components contain halogenated flame retardants at less than 100 ppm or the extent allowable by local code:

1. Furniture.
2. Window and waterproofing membranes, door and window frames and siding.
3. Flooring, ceiling tiles and wall coverings.
4. Piping and electrical cables, conduits and junction boxes.
5. Sound and thermal insulation.

Trocellen products without flame retardants with halogens are the following:

FAMILY	PRODUCT
AIRSILENT	FLAT AIRSILENT K
	FLAT AIRSILENT KP
	FLAT AIRSILENT AL
	FLAT AIRSILENT K-ALU
	AIRSILENT BUGNATO K
	AIRSILENT TECH
APLOMB	APLOMB 11
	APLOMB 22
	APLOMB 1
	APLOMB 1/B
TROCELLEN	TROCELLEN N
	TROCELLEN AL
	TROCELLEN ALU
	TROCELLEN VN
SLEEVES	TROCELLEN N
	TROCELLEN AL
ISOLMASS	ISOLMASS 11
	ISOLMASS 22
	ISOLMASS 1 TECH
	ISOLMASS 4 TECH
	ISOLMASS 4
	ISOLMASS FR
	ISOLMASS 3 TECH FR
ISOSOUND	TROCELLEN ISOSOUND
FLOORING UNDERLAY	TROCELLEN N
	TROCELLEN VN
	TROSIL
	TROSIL TECH
ROOFING INSULATION	TROCELLEN N
	TROCELLEN AL
	TROCELLEN ALU
	TROCELLEN VN
ACCESSORIES	FASCE
	BANDE
	NASTRI
	D-TAPE
OTHER PRODUCTS	DISTRICT HEATING PILLOW
	TR-EEC <sub>o</sub> LL

b. At minimum, 20% by cost of the following newly installed components contain urea-formaldehyde at less than 100 ppm or the extent allowable by local code:

1. Composite wood products.
2. Laminating adhesives and resins.
3. Thermal insulation.

Note: Projects can disclose or report ingredients listed here using labels approved for use in Part 1: Promote Ingredient Disclosure in Feature X14: Material Transparency to earn points toward that feature.

TROCELLEN insulation products do not contain urea-formaldehyde.

#### PART 2 MANAGE SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) (MAX: 1 PT)

For All Spaces:

The following requirements are met:

a. At minimum, 20% by cost of the following newly installed components contain phthalates at less than 100 ppm or the extent allowable by local code:

1. Flooring, including resilient and hard surface flooring and carpet.
2. Wall coverings, window blinds and shades, shower curtains, furniture and upholstery.
3. Plumbing pipes and moisture barriers.

b. All newly installed electrical components contain phthalates at less than 1000 ppm or the extent allowable by local code in the following:

1. Fire alarms, meters, sensors, thermostats and load break switches.

Note: Projects can disclose or report ingredients listed here using labels approved for use in Part 1: Promote Ingredient Disclosure in Feature X14: Material Transparency to earn points toward that feature.

#### PART 3 PURCHASE COMPLIANT PRODUCTS (MAX: 1 PT)

Note: Projects may only receive points for this part if Part 1: Manage Volatile Organic Compounds or Part 2: Manage Semi-Volatile Organic Compounds (SVOCs) is also achieved.

For All Spaces:

Projects have a program in place that specifies the following:

- a. Future purchasing for repair, renovation or replacement of building materials and products that complies with requirements for 100% of components listed in Part 1: Manage Volatile Organic Compounds and Part 2: Manage Semi-Volatile Organic Compounds (SVOCs).

Thanks to the very low emissions of volatile organic and formaldehyde substances, TROCELLEN products do not negatively impact the overall quality of the air, as shown by the VOC test reports issued by the products themselves.

## X11 LONG-TERM EMISSION CONTROL | O (MAX: 3 PT)

#### PART 2 MANAGE FLOORING AND INSULATION EMISSIONS (MAX: 1 PT)

For All Spaces:

All newly installed flooring and thermal and acoustic insulation inside the building meet the following VOC emission thresholds:

- a. California Department of Public Health (CDPH) Standard Method v.1.2-2017.

Note: Wherever procurement of a product or a material type is not possible, the project is permitted to submit documentation demonstrating an attempt has been made: for each listed product or material type applicable to the project, a petition or formal request is filed with at minimum three manufacturers who were unable to meet its needs.

Thanks to the very low emissions of volatile organic compounds and formaldehyde, TROCELLEN products do not have a negative impact on the overall quality of the air, as shown by the VOC test reports issued by the products themselves (V. ANNEX 1 - VOC REPORT TEST)

## CONCEPT “MIND”

This Concept promotes mental health through strategies, programs and design strategies that seek to address the various factors that influence cognitive and emotional well-being.

### M07 RESTORATIVE SPACES | O (MAX: 1 PT)

#### PART 1 PROVIDE RESTORATIVE INDOOR SPACES (MAX: 1 PT)

*For All Spaces:*

*Designated indoor space is available to all regular building occupants to support restorative practices.*

*This may be a*

*single space or several spaces that meets the following requirements:*

- a. Designated exclusively for contemplation, relaxation and restoration (not to be used for work).*
- b. Is a minimum of 7 m<sup>2</sup> [75 ft<sup>2</sup>] plus 0.1 m<sup>2</sup> [1 ft<sup>2</sup>] per regular building occupant, up to a maximum of 74 m<sup>2</sup> [800 ft<sup>2</sup>]. Room may be broken up into multiple smaller rooms that total the required amount.*
- c. A design plan and accompanying narrative describes elements that encourage contemplation, relaxation and restoration, and in consideration of the design criteria below:*
  - 1. Accessible design.*
  - 2. Lighting (e.g., dimmable light levels).*
  - 3. Intrusive noise and sound masking (e.g., water feature, natural sounds).*
  - 4. Thermal comfort.*
  - 5. Seating arrangements that accommodate a range of user preferences and activities (e.g., movable lightweight chairs, cushions, mats).*
  - 6. Nature incorporation.*
  - 7. Calming colors, textures and forms.*
  - 8. Visual privacy.*
- d. Is maintained on a weekly basis, at minimum.*
- e. Education materials or resources are available to occupants explaining the purpose of the space and how to make use of it.*

I-WALS, 3D decorative panel for wall application, can be realized in shapes and colors that can contribute to point 7, in order to create environments with colors, textures and calming and soothing forms.

## SUMMARY

QualityNet believes that the following TROCELLEN products can contribute to the features shown in the following table:

FAMILY	PRODUCT	A01	A14	W03	W07	T05	T07	S01	S02	S03	S04	X01	X08	X10	X11	M07
AIRSILENT	FLAT AIRSILENT K	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	
	FLAT AIRSILENT KP	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	
	FLAT AIRSILENT AL	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	
	FLAT AIRSILENT K- ALU	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	
	EGG-BOXED SHAPED AIRSILENT K	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	
	AIRSILENT TECH	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	
APLOMB	APLOMB 11	✓	✓	✓	✓			✓	✓	✓		✓		✓	✓	
	APLOMB 22	✓	✓	✓	✓			✓	✓	✓		✓		✓	✓	
	APLOMB AL/CL1	✓	✓	✓	✓			✓	✓	✓		✓		✓	✓	
	APLOMB 1	✓	✓	✓	✓			✓	✓	✓		✓		✓	✓	
	APLOMB 1/B	✓	✓	✓	✓			✓	✓	✓		✓		✓	✓	
TROCELLEN	TROCELLEN N	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN AL	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN ALU	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN VN	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
TROCELLEN DUCT	TROCELLEN CLASS ADHESIVE	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN CLASS ALU ADHESIVE	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN CLASS ALUS ADHESIVE	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
SLEEVES	TROCELLEN N	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN AL	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN AL/CL1	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN CLASS AL	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN CLASS P	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	

FAMILY	PRODUCT	A01	A14	W03	W07	T05	T07	S01	S02	S03	S04	X01	X08	X10	X11	M07
HIGH TEMP	TROCELLEN HIGH TEMP	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
ISOCOMPACT	TROCELLEN ISOCOMPACT, SLEEVES AL/CL1	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN ROLLS AL/CL1, CL1/ALU-NET	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN ISOCOMPACT, SLEEVES CL1/ALU-NET	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN CLASS AL ISOCOMPACT	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
ISO-HANGER	TROCELLEN ISO HANGER	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN ISO HANGER PIR		✓	✓	✓	✓	✓					✓	✓			
ISOLMASS	ISOLMASS 11	✓	✓	✓	✓			✓	✓	✓		✓	✓	✓	✓	
	ISOLMASS 22	✓	✓	✓	✓			✓	✓	✓		✓	✓	✓	✓	
	ISOLMASS 1 TECH		✓	✓	✓			✓	✓	✓		✓	✓			
	ISOLMASS 4 TECH		✓	✓	✓			✓	✓	✓		✓	✓			
	ISOLMASS 4		✓	✓	✓			✓	✓	✓		✓	✓			
	ISOLMASS FR		✓	✓	✓			✓	✓	✓		✓	✓			
ISOSOUND	TROCELLEN N	✓	✓	✓	✓			✓	✓	✓		✓	✓	✓	✓	
ROLLS	TROCELLEN ROLLS CL1	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN ROLLS AL/CL1	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN ROLLS CL1/ALU	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN CLASS OEM ROLLS	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
FLOORING UNDERLAY	TROCELLEN N	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
	TROCELLEN VN	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
	TROSIL	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
	TROSIL TECH	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
	TROSIL TECH MD	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	

FAMILY	PRODUCT	A01	A14	W03	W07	T05	T07	S01	S02	S03	S04	X01	X08	X10	X11	M07
ROOFING INSULATION	TROCELLEN N	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN AL	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN ALU	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
	TROCELLEN VN	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	
ACCESSORIES	BANDS	✓	✓	✓	✓							✓	✓	✓	✓	
	TAPES	✓	✓	✓	✓							✓	✓	✓	✓	
	STRIPS	✓	✓	✓	✓							✓	✓	✓	✓	
	D-TAPE	✓	✓	✓	✓							✓	✓	✓	✓	
OTHER PRODUCTS	DISTRICT HEATING PILLOW	✓	✓	✓	✓							✓	✓	✓	✓	
	TR-EECeLL	✓	✓	✓	✓							✓	✓	✓	✓	
	I-WALS	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓



## ANNEX 1 – VOC REPORT TEST

FAMILY	PRODUCT	TEST SAMPLE NAME	CERTIFICATE / TEST	NOTES
AIRSILENT	FLAT AIRSILENT K	OEKO TEX	Oeko-tex	
	FLAT AIRSILENT KP	OEKO TEX	Oeko-tex	
	FLAT AIRSILENT AL	OEKO TEX	Oeko-tex	
	FLAT AIRSILENT K-ALU	OEKO TEX	Oeko-tex	
	EGG-BOX SHAPED AIRSILENT K	OEKO TEX	Oeko-tex	
	AIRSILENT TECH	OEKO TEX	Oeko-tex	
APLOMB	APLOMB 11	Trocellen C-30 N	ISO 16000 + French VOC label	Considering the emissive layer (trocellen N)
	APLOMB 22	Trocellen C-30 N	ISO 16000 + French VOC label	Considering the emissive layer (trocellen N)
	APLOMB AL/CL1	Trocellen C-30 BNW18NF13	ISO 16000	Considering the emissive layer (trocellen CL1)
	APLOMB 1	OEKO TEX	Oeko-tex	Considering the emissive layer (AIRSILENT)
	APLOMB 1/B	OEKO TEX	Oeko-tex	Considering the emissive layer (AIRSILENT)
TROCELLEN	TROCELLEN N	Trocellen C-30 N	ISO 16000 + French VOC label	
	TROCELLEN AL	Isolène 49/50	ISO 16000 + French VOC label	
	TROCELLEN ALU	Trocellen C-30 N	ISO 16000 + French VOC label	
	TROCELLEN VN	MARTY BASIC	ISO 16000 + French VOC label	
TROCELLEN DUCT	TROCELLEN CLASS ADHESIVE	Trocellen Class Adhesive	ISO 16000	
	TROCELLEN CLASS ALU ADHESIVE	Trocellen Class ALU	ISO 16000	
	TROCELLEN CLASS ALUS ADHESIVE	Trocellen Class ALU	ISO 16000	
SLEEVES	TROCELLEN N	Trocellen C-30 N	ISO 16000 + French VOC label	
	TROCELLEN AL	Trocellen C-30 N	ISO 16000 + French VOC label	
	TROCELLEN AL/CL1	Trocellen C-30 BNW18NF13	ISO 16000	
	TROCELLEN CLASS AL	Trocellen Class Adhesive	ISO 16000	
	TROCELLEN CLASS P	Trocellen C-30 BNW18NF13	ISO 16000	
HIGH TEMP	TROCELLEN HIGH TEMP	Trocellen C-30 BNW18NF13	ISO 16000 - Oeko tex	Product composed of Trocellen CL1 + Airsilent TECH
ISOCOMPACT	TROCELLEN ISOCOMPACT, SLEEVES AL/CL1	Trocellen C-30 BNW18NF13	ISO 16000	
	TROCELLEN ROLLS AL/CL1, CL1/ALU-NET	Trocellen C-30 BNW18NF13	ISO 16000	
	TROCELLEN ISOCOMPACT, SLEEVES CL1/ALU-NET	Trocellen C-30 BNW18NF13	ISO 16000	
	TROCELLEN CLASS AL ISOCOMPACT	Trocellen Class Adhesive	ISO 16000	
ISO-HANGER	TROCELLEN ISO HANGER	Trocellen C-30 BNW18NF13	ISO 16000	

FAMILY	PRODUCT	TEST SAMPLE NAME	CERTIFICATE / TEST	NOTES
	TROCELLEN ISO HANGER PIR	-	-	
ISOLMASS	ISOLMASS 11	Trocellen C-30 N	ISO 16000 + French VOC label	Considering the emissive layer (trocellen N)
	ISOLMASS 22	Trocellen C-30 N	ISO 16000 + French VOC label	Considering the emissive layer (trocellen N)
	ISOLMASS 1 TECH	-	-	
	ISOLMASS 4 TECH	-	-	
	ISOLMASS 4	-	-	
	ISOLMASS FR	-	-	
ISOSOUND	TROCELLEN N	Trocellen C-30 N	ISO 16000 + French VOC label	
ROLLS	TROCELLEN ROLLS CL1	Trocellen C-30 BNW18NF13	ISO 16000	
	TROCELLEN ROLLS AL/CL1	Trocellen C-30 BNW18NF13	ISO 16000	
	TROCELLEN ROLLS CL1/ALU	Trocellen C-30 BNW18NF13	ISO 16000	
	TROCELLEN CLASS OEM ROLLS	Trocellen Class Adhesive	ISO 16000	
FLOORING UNDERLAY	TROCELLEN N	Trocellen C-30 N	ISO 16000 + French VOC label	
	TROCELLEN VN	MARTY BASIC	ISO 16000 + French VOC label	
	TROSIL	Trosil TECH MD	ISO 16000	Within the perimeter of analysis of the other certificates. Trosil tech with a dedicated test.
	TROSIL TECH	Trosil TECH MD	ISO 16000 + French VOC label	
	TROSIL TECH MD	Trosil TECH MD	ISO 16000 + French VOC label	
ROOFING INSULATION	TROCELLEN N	Trocellen C-30 N	ISO 16000 + French VOC label	
	TROCELLEN AL	Trocellen C-30 N	ISO 16000 + French VOC label	
	TROCELLEN ALU	Trocellen C-30 N	ISO 16000 + French VOC label	
	TROCELLEN VN	Trocellen C-30 N	ISO 16000 + French VOC label	
OTHER PRODUCT	DISTRICT HEATING PILLOW	Trocellen C-30 N	ISO 16000 + French VOC label	
	TR-ECELL	Trocellen C-30 N	ISO 16000 + French VOC label	
	I-WALS	I-WALS	ISO 16000 + French VOC label	
ACCESSORIES	BANDS		ISO 16000	PE foams (class, CL1, Trosil, etc.) cut in shapes and in some cases adhesive: within the analysis perimeter
	TAPES		ISO 16000	
	STRIPS		ISO 16000	
	D-TAPE		ISO 16000	