



SMILE PLASTICS

DATA
SHEET

DATA SHEET

Every Smile Plastics panel is a unique material and is made by hand-selected recycled plastics. Although sorted into specific types it can not be guaranteed that each panel is only made of one type of recycled plastic and could be a mixture of different types of recycled plastics. These different combinations of recycled plastics will greatly affect material properties so the data sheets are only indicative of what our recycled materials may actually perform like.

These data sheets can provide guidelines for how to use Smile Plastics materials but are only indications and may not represent the actual material being used in the products.

No guarantees or warranties can be given or are implied in respect of these guidelines.

↓ Heron in Marine Blue full sheet, 2000 × 1000mm



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ALBA
CHARCOAL
HERON
HERON DUO
HERON WASHES
KALEIDO
OCEAN
SPECTRA
COSMOS
GREY MIST
QUARRY
BRECON
MAWN
SLATE
LIMESTONE
ORCA
DAPPLES

ALBA

Made from waste yoghurt pots



Made from the humble kitchen cast-off, your yoghurt pot, Alba is our best-selling material and you can see why. Sophisticated, luxurious and highly versatile in appearance, this interior staple 'goes with anything' transcending time and trends.

With its white, marble-like surface and hints of gold and silver (from yoghurt pot foil), Alba isn't just easy on the eye, it's easy to use too.

Available in 5mm, 12mm, 20mm thickness.



RHIPS

	Unit	
Physical		
Density	g/cm ³	1.06
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	6.8
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2240
Tensile Maximum Load	N	1366
Tensile Strength (yield)	MPa	21.3
Tensile Strength (break)	MPa	17
Elongation at Break	%	5
Shore D Hardness	D	73.9
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	86.2
Coefficient of Thermal Expansion	µm/m°C	97.6
Flammability Rating **		UL94HB
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass
Not recommended for outdoor applications as the material may yellow / destabilise with exposure to UV. **Flammability Rating: where better ratings are required we can make up Custom materials from waste streams that have a higher rating.		

DATA SHEET

CHARCOAL

Made from plastic packaging



Charcoal is a classics material with white streaks giving it a “zhuzh” that draws the eye in. We’d say stars at night or gracefully smudged chalk on a blackboard.

What about you? Whatever it says to you, Charcoal is a versatile canvas for your design. Perfect for quietly making a statement, it can also be backlit to bring the details in the pattern out even more.

Charcoal is made from reclaimed medical equipment, combined with “waste” food packaging. Could it be just what the doctor ordered?

Available in 5mm, 12mm, 20mm thickness.

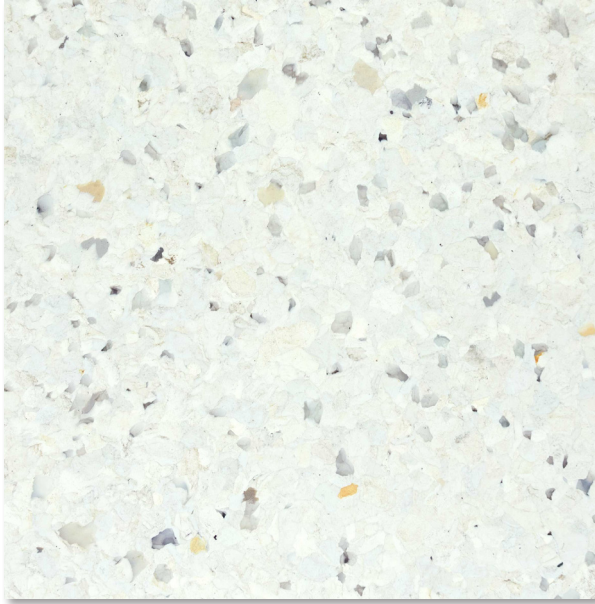
RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
Tensile Strength (yield)	MPa	45.2
Tensile Strength (break)	MPa	45.2
Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

**Flammability Rating: where better ratings are required we can make up Custom materials from waste streams that have a higher rating.

HERON

Made from white goods



With layered feathery soft grey tones, a smattering of yellow hues, warm ochre flecks, black and blizzard white, it's hard to imagine that Heron came from humble beginnings. But, in fact, it was created from the staple kitchen fixtures we use every day.

Would-be discarded white goods make up the foundations of the Heron mix, bringing a unique aesthetic and colour palette that is less reminiscent of its original material make-up and more alike the appearance of the statuesque bird after which it was named.

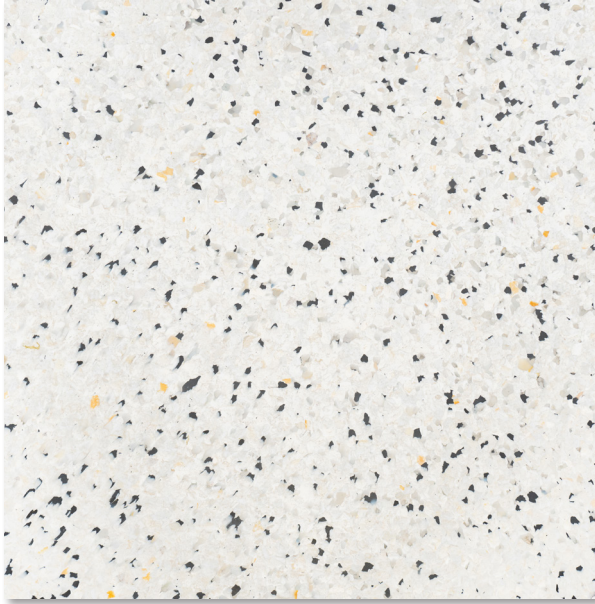
Available in 5mm, 12mm and 20mm thickness.

RHIPS

	Unit	
Physical		
Density	g/cm ³	1.06
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	6.8
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2240
Tensile Maximum Load	N	1366
Tensile Strength (yield)	MPa	21.3
Tensile Strength (break)	MPa	17
Elongation at Break	%	5
Shore D Hardness	D	73.9
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	86.2
Coefficient of Thermal Expansion	µm/m°C	97.6
Flammability Rating **		UL94HB
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass
Not recommended for outdoor applications as the material may yellow / destabilise with exposure to UV.		
**Flammability Rating: where better ratings are required we can make up Custom materials from waste streams that have a higher rating.		

HERON DUO

Made from white goods



Design isn't black and white. And neither is Heron Duo. While a monochrome palette dominates, this new material features subtle glimmers of dynamic grey and pearl tones, alongside unexpected hints of rich ochre, for a truly unique palette that reveals something new at every glance.

Utilising discarded black plant pots and white goods in a twist on our popular Heron material, Heron Duo contributes to commercial interior schemes seeking to make a meaningful statement. As with all Smile Plastics products, Heron Duo wears its sustainability credentials, quite literally, on its sleeve, resulting in a contemporary spin on classic monochrome.

Available in thicknesses of 5mm, 12mm and 20mm.

RHIPS

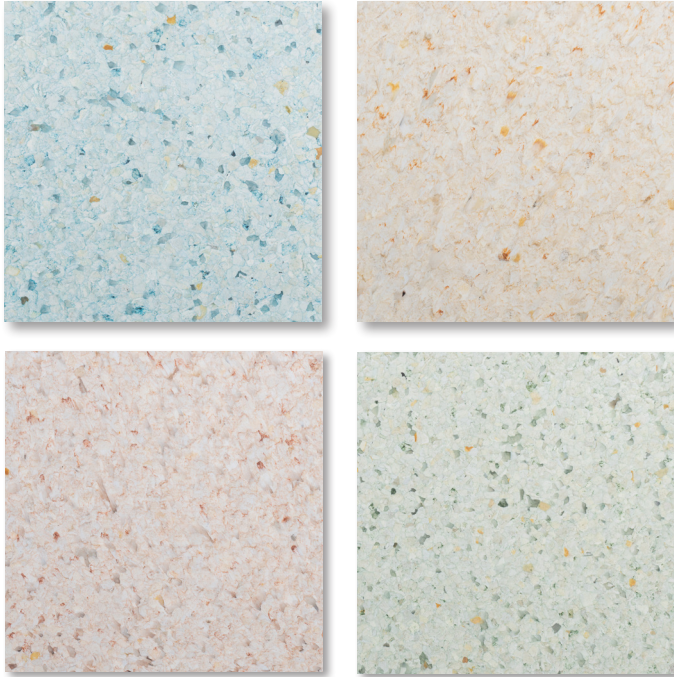
	Unit	
Physical		
Density	g/cm ³	1.06
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	6.8
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2240
Tensile Maximum Load	N	1366
Tensile Strength (yield)	MPa	21.3
Tensile Strength (break)	MPa	17
Elongation at Break	%	5
Shore D Hardness	D	73.9
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	86.2
Coefficient of Thermal Expansion	µm/m°C	97.6
Flammability Rating **		UL94HB
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

Not recommended for outdoor applications as the material may yellow / destabilise with exposure to UV.

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HERON WASHES

Made from white goods



It's hard to imagine that our Heron materials have come from humble beginnings.

In fact, they have been created from the staple kitchen fixtures we use every day. As with all our materials, remnants of Heron's previous life can be spied on its surface, providing a subtle and creative nod to the part it plays in the circular lifecycle that our built environment's future crucially relies on.

Available in 5mm, 12mm and 20mm thickness.



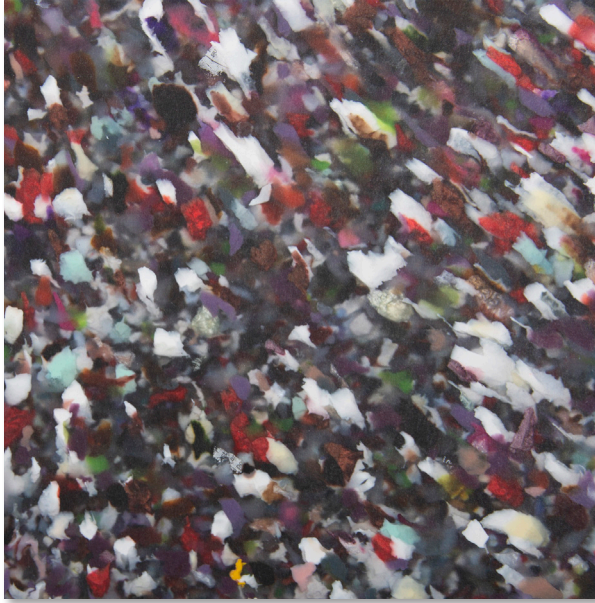
RHIPS

	Unit	
Physical		
Density	g/cm ³	1.06
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	6.8
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2240
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Tensile Strength (yield)	MPa	21.3
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Elongation at Break	%	5
Shore D Hardness	D	73.9
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	86.2
Coefficient of Thermal Expansion	µm/m°C	97.6
Flammability Rating **		UL94HB
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass
Not recommended for outdoor applications as the material may yellow / destabilise with exposure to UV.		
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DATA SHEET

KALEIDO

Made from recycled plastic bottles



Kaleido is every maximalist's dream. Brash, extrovert, heady and a bit of a diva that's out to seize the spotlight. Kaleido is also made from recycled cosmetic bottles, so you might say that goes with the territory.

But it's definitely not just about the aesthetic. Take a moment to look at the material up close and see its sustaina-beauty. You'll see traces of bar codes and labels at the surface, so there's lots of Aha! moments for eagle-eyed visitors.

Available in 5mm, 12mm, 20mm thickness.

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
Tensile Strength (yield)	MPa	45.2
Tensile Strength (break)	MPa	45.2
Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

**Flammability Rating: where better ratings are required we can make up Custom materials from waste streams that have a higher rating.

OCEAN

Made from plastic packaging



It's easy to feel a bit blue about plastic in the oceans. Our Ocean material gets into the heart of the matter, by keeping plastic in our economic system we are doing a small bit to preserve marine beauty. Like all our panels, Ocean should stay beautiful for future generations to come.

Available in 5mm, 12mm, 20mm thickness.

10

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
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Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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SPECTRA

Made from plastic packaging



As its name suggests, Spectra is an illuminating product – in every sense of the word. Created from PET packaging waste with elements of Kaleido, colourful, energetic fragments of Spectra's previous life running through its core.

The pairing of these flecks with an otherwise translucent aesthetic offers a moment of clarity. Spectra provides a nod to our current reliance on plastic PPE, while serving as a reminder of the polluted waterways that flow directly into our oceans. While its creation may be rooted in a rather uncertain present, this beautiful material undoubtedly lights the way to a brighter future.

Available in 5mm, 12mm and 20mm thickness.

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RPET / RPETCOPOLYESTER

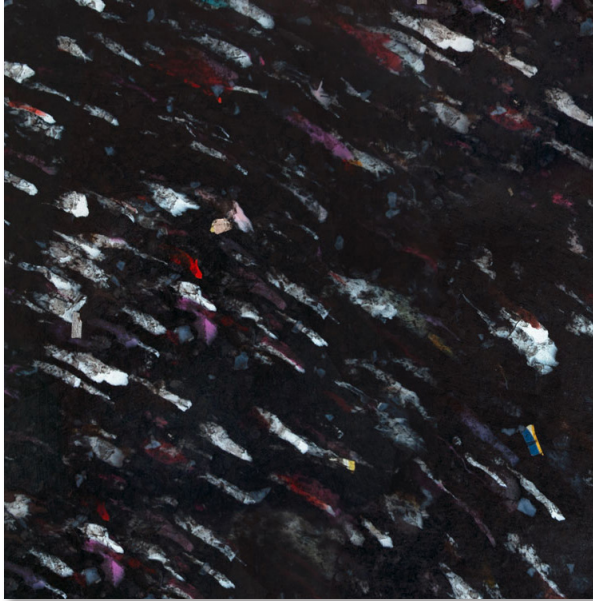
	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
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Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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DATA SHEET

COSMOS

Made from plastic packaging



An intergalactic combination of expansive monochrome and explosive bursts of brilliant colour, Cosmos is an otherworldly delight. Though its appearance may be ethereal, its material make-up was sourced here on Earth, comprising a pigmented PET plastic packaging base, and a hint of Kaleido.

The dynamic visual pace of Cosmos makes it appear to have been painted, with its splatters and splashes of bold colour reflective of the vigorous process in which it was created. When it comes to transforming waste into wonder, Cosmos proves the sky doesn't have to be the limit.

Available in 5mm, 12mm and 20mm thickness.

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
Tensile Strength (yield)	MPa	45.2
Tensile Strength (break)	MPa	45.2
Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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GREY MIST

Made from plastic packaging



Come walk with us, amidst the rolling mist and the hushed hills...

Sorry for waxing a bit lyrical there, but it's only because the (drama queen) Grey Mist was inspired by walks in the Welsh hills close to where Smile Plastics are headquartered. It's a beautiful area, full of natural poetry.

So, put your cynicism to one side and let your imagination wander. Don your wellies, pack your woollies and thermos, and use Grey Mist to create your own landscape.

Available in 5mm, 12mm, 20mm thickness.

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
Tensile Strength (yield)	MPa	45.2
Tensile Strength (break)	MPa	45.2
Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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QUARRY

Made from plastic packaging



A rich red shade sets the tone for Quarry, a new surface material made from 100% recycled plastic. With a visual appearance that sits between lava and volcanic sediment, tonally reminiscent of the sea-soaked beach at Black Rock Sands, this fiery surface solution – with lighter specks of the materials' former life glinting through for added impact – blazes a trail in terms of what's possible when creating organic-inspired commercial interiors products for your next scheme.

Available in 5mm, 12mm, 20mm thickness.

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
Tensile Strength (yield)	MPa	45.2
Tensile Strength (break)	MPa	45.2
Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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BRECON

Made from plastic packaging



Our Brecon material has a speckled base palette of golden yellow, light greys and white, giving off a calming, natural aesthetic, which subtly evokes the outdoors and casts the mind to the soft reeds that line the Severn's riverbank. Rather than clamour for attention, Brecon's understated combination of hues works seamlessly with its surroundings, reflecting nature's astute ability for achieving perfect balance.

Available in thicknesses of 5mm, 12mm and 20mm.

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
Tensile Strength (yield)	MPa	45.2
Tensile Strength (break)	MPa	45.2
Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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MAWN

Made from plastic packaging



The deep, earthy hues of Mawn are reminiscent of the peatlands of the Welsh countryside. Supporting key habitats, and providing a natural carbon store for climate regulation, these fabled environments have provided a constant source of inspiration for stories, songs, and now, surface materials.

Thanks to its solid colour distribution, Mawn, created from discarded, 100% recycled plastic, has been crafted to work harmoniously with all elements of a commercial interior design scheme, evoking the calm and comfort of our beloved outdoors wherever it sits.

Available in thicknesses of 5mm, 12mm and 20mm.

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
Tensile Strength (yield)	MPa	45.2
Tensile Strength (break)	MPa	45.2
Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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SLATE

Made from plastic packaging



With a nod to the slate quarries and caverns rooted in our Welsh heritage, our new Slate material comprises a palette of deep mossy green with glimmers of white. Taking visual inspiration from the nuanced tones of earthy material matter, subtle detailing, created through Slate's unique material mix, results in a dynamic, engaging textural effect suited to contemporary commercial interior schemes.

Available in thicknesses of 5mm, 12mm and 20mm.

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	2106
Tensile Maximum Load	N	2721
Tensile Strength (yield)	MPa	45.2
Tensile Strength (break)	MPa	45.2
Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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LIMESTONE

Made from plastic packaging



Channelling the cool, calming attributes of natural stone, our Limestone material offers a pared back beauty – slightly rugged and weather-beaten – just like the boulders you might expect to find atop the remote peaks of the Brecon Beacons or The Black Mountain Range.

Limestone takes inspiration from, and respects, the natural environment. Subtle in appearance with flecks of white in amongst grey/pink tones, layers upon layers of understated detail – the likes of which you'd expect to find in nature – make Limestone a dynamic choice for commercial interior schemes.

Available in thicknesses of 5mm, 12mm and 20mm.

RPET / RPETCOPOLYESTER

	Unit	
Physical		
Density	g/cm ³	1.28
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	3.93
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Tensile Strength (yield)	MPa	45.2
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Elongation at Break	%	8
Shore D Hardness	D	73.3
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	72.6
Coefficient of Thermal Expansion	µm/m°C	82.7
Flammability Rating **		C, s1-d0
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

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ORCA

Made from chopping boards
and plastic packaging



A reimagined version of our highly popular Black Dapple.

Whilst it shares the elegant, marble-like quality of the Dapples, we think Orca has a unique character and a striking style of its own.

Using a classic monochrome palette, the intensely dark base colour contrasts with patches of white, bringing depth and drama to the material. The result is a visually playful and bold aesthetic, very much inspired by one of our favourite sea creatures. Perhaps monochrome isn't so black and white after all?

Available in 12mm and 20mm thickness.

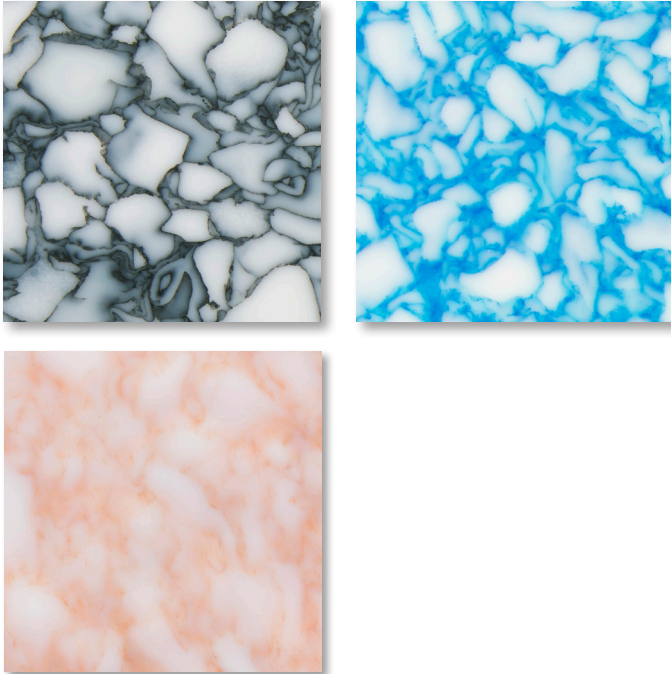
RHDPE (PE300)

	Unit	
Physical		
Density	g/cm ³	0.95
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	11.01
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	802
Tensile Maximum Load	N	1206
Tensile Strength (yield)	MPa	22.2
Tensile Strength (break)	MPa	12.9
Elongation at Break	%	128
Shore D Hardness	D	61.1
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	46.1
Coefficient of Thermal Expansion	µm/m°C	158.4
Flammability Rating **		UL94HB
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

**Flammability Rating: where better ratings are required we can make up Custom materials from waste streams that have a higher rating.

DAPPLE

Made from chopping boards
and plastic packaging



We think this beauty looks like a cross-section of marble. The intense black colour of its base contrasts with the weave of white veins. Playful yet sophisticated, Dapple's high contrast pattern gives it a lively personality that evokes the material's millions of years of biological, geological and manmade processes.

Served in Black, Blue or Limited Edition Coral - the choice is yours.

Available in 12mm and 20mm thickness.

20

RHDPE (PE300)

	Unit	
Physical		
Density	g/cm ³	0.95
Mechanical		
Izod Impact Strength (notched)	kJ/m ²	11.01
Modulus of Elasticity (Chord 0.05%-0.25%)	MPa	802
Tensile Maximum Load	N	1206
Tensile Strength (yield)	MPa	22.2
Tensile Strength (break)	MPa	12.9
Elongation at Break	%	128
Shore D Hardness	D	61.1
Thermal		
Heat Deflection Temperature (1.8 Mpa)	°C	46.1
Coefficient of Thermal Expansion	µm/m°C	158.4
Flammability Rating **		UL94HB
Bacterial		
Fungi Resistance	Fungal Growth %	0
Food Contact	Pass/Fail	Pass

**Flammability Rating: where better ratings are required we can make up Custom materials from waste streams that have a higher rating.

DATA SHEET

MATERIALS REIMAGINED



Certificate Number 19268
ISO 9001, ISO 14001