

UrbnRok Technical Data

Product Name: UrbnRok

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Product description: Recycled glass work surfaces.

Component materials: Waste post-use consumer glass with an epoxy resin used as a binding agent.

Additives: Steritouch®.

UrbnRok is made from up to 93% recycled materials. The glass is 100% recycled post-consumer waste; which has been collected and re-processed solely by certified GlassRevolution partners in order that we can verify its provenance. Our resin is a non-emitting, non-toxic, purpose-designed resin. No heat is used in the production of UrbnRok whilst use of minimal resources ensures minimal embodied energy.

UrbnRok was specified in the first commercial building in the UK to successfully achieve LEED Gold certification. LEED - Leadership in Energy & Environmental Design – is a rating system created by the US Green Building Council.

Recycled content calculation (substrated UrbnRok material) for LEED:

COMPONENTS	WEIGHT (Kg/M2)	Post-Consumer %	Post-Consumer (Weight)	Pre-Consumer %	Pre-Consumer (Weight)
Recycled aggregate	33	100%	33%	0	0
Resin	5.3	0		0	0
Recycled MDF	11.7	0		100%	11.7
Sample tools	50		33		11.7

Post-consumer content (33/50) = 66%. Pre-consumer content (11.7/50) = 23.4%
Total recycled content 89.4%

Resin: Epoxy binders are used in countless applications to manufacture composite materials. UrbnRok combines an epoxy resin with an inert aggregate (glass) to manufacture a variety of work surfaces – counter tops, domestic worktops, cladding, screens, tables etc. “Epoxy” is a term referring to a family of resins, usually thermosetting, capable of forming tight cross-linked polymer structures marked by toughness, strong adhesion, and high corrosion and chemical resistance. Epoxies are generally two-part systems consisting of a resin and a hardener (or activator) that are combined in specific proportions to initiate a curing process. When epoxies are combined with aggregates, such as crushed glass, the aggregates lower the cost of the composite by adding volume to the epoxy, change the surface texture and increase the wearability of the surface. It is possible to change the aesthetics of the surface by using different coloured glass aggregate, and also by adding coloured pigment to the epoxy resin. Many modern composition countertops are made with epoxies and aggregates. Glass aggregate greatly improves surface properties such as resistance to knife cuts whilst the resin has a built-in viscosity to add a gloss finish to UrbnRok surfaces.

Sterile: UrbnRok is mixed with Steritouch® to ensure worksurfaces are sterile and protected from germs and bacteria. Steritouch® is added at the glass mixing stage so that the entire worksurface is protected for its entire lifetime – it is not just a surface coating and will not wash or wear off. UrbnRok was independently tested for antimicrobial performance using Steritouch® to the JIS Z 2801:2000 method. Each sample was inoculated with e.coli, germs were held in contact with the work surface using a sterile polythene film. Each sample was tested in triplicate with an additional three replicates of the control. The test results sheet and copies of all the Steritouch examination certificates are available on request. www.steritouch.com

Sourcing: The waste raw materials, which make the majority of UrbnRok are all sourced in the UK with over 75% of materials collected locally to our manufacturing base in Gatwick to minimise carbon collection mileage. We are diverting five tonnes of glass from the waste-stream each month. The glass is sourced from local pubs, clubs, restaurants and glaziers. Sourcing raw material is not an issue.

Embodied Energy: Due to the cold manufacturing process used to make UrbnRok the company uses minimal energy consumption. In-house recycling measures also ensure the company uses very little water, with all water and solvents used at least three times. UrbnRok is produced in a new eco designed factory that incorporates many green features – extensive insulation and utilisation of daylight for example – to ensure the whole process has the smallest possible carbon footprint. **IMPORTANTLY, THE MOULD-MADE MANUFACTURING PROCESS DOES NOT CREATE ANY WASTE. WE DO NOT MAKE SLABS WHICH ARE THEN CUT DOWN.**

Recyclability: UrbnRok is completely recyclable at the end of its lifetime. It can be crushed and reused to make new UrbnRok products over and over again.

Leachability: **UrbnRok made with recycled TV/computer screen glass** has been tested for leachability by NuLifeGlass at Sheffield University. Full results are available on request. In summary, the results showed that a kitchen worksurface of 10m² would release less than 0.1g of lead in a year. As the worktop is non-porous there is no mechanism for lead to migrate from the middle of the material to the surface and we would expect a massive drop-off in the leaching rate with time. There are no specific regulations applying to leachability of kitchen worksurfaces, so the Safe Drinking Water Act was used as a guideline. The test results showed that even when the UrbnRok worktops were tested under conditions designed to encourage leaching, the amount of lead released was way below the legal limit for pipes/fittings used for the supply of drinking water. The University test results were stunning – even when the samples were tested for 28 times longer than need be.

Colour matching: UrbnRok is produced in batches using a uniform-sourced resin. For a large contract, glass is processed and stored in 5,000kg lots. This quantity of glass allows for 200m² of identical material. The resin is purchased from the same supplier to the same specification. Slight variations in colour may occur but these are miniscule and clients must always be advised that UrbnRok is ultimately a recycled material and will never achieve the uniformity of a more-controlled manufactured product. These inherent variances become a positive feature – a “talking point” of the product. The ergonomic, random patterns always appeal to end-users and can be marketed advantageously to demonstrate “boastable” green credentials by commercial clients.

Technical specifications (UrbnRok has been independently tested by CERAM Limited):-

Resistance to stains	BS EN ISO 10545-14:1997 - Value 5*
Slip resistance	BS7976 (pendulum)
Breaking strength & Modules of Rupture	ISO 10545 (part 4)
Impact Resistance Test	ISO 10545 (part 5)
Surface Abrasion Test	ISO 10545 (part 7)
Chemical Resistance Test	ISO 10545 (part 13)

Resistance to staining is classified in 5 values, where a value of 1 shows that the stain could not be removed and 5 indicates the stain was easily removed. A minimum requirement for glazed tiles and worktops is Classification 3.

Applications: UrbnRok is hugely versatile and has 100's of design applications from kitchen worktops to wall coatings. As a mould-made product the design options are endless. It is possible to incorporate logos, patterns and/or words in corporate colour schemes. We can also manufacture the material in three dimensions with moulded forms, drop-down edges and translucent sections. LEDs can be set into the material.

Range: Standard UrbnRok is available in a range of 30 colours designed to marry the availability of raw materials with architects' expectations although bespoke clients are offered an unlimited palette of colour options. Altering the colour of the glass or resin creates a new-look mix every time. Changing the size of the glass chips – or mixing different sized cullets together - is a popular option for bespoke commissions. It is also possible to add other wastestream materials which extend the variety of decorative finishes; eg: sea-shells, khaki/grey TV and computer screen glass, crushed CDs, car-brake lights, crushed mirrors etc.

Cleaning and Maintenance: All UrbnRok worktops are supplied polished and sealed to create a barrier to common household stains. Depending on usage, we recommend that sealant is reapplied every three years, as for most other worktops. Sealing is an easy process, just wipe on the product and let it sit for 20 minutes, then wipe off. Using a window squeegee will aid smooth application.

Ninety-five percent of a UrbnRok worktop surface is glass, which is inert and impervious to stains. Like granite, the acids found in red wine, lemons and vinegar could stain if not cleaned right away. Other staining agents – like coffee, tea, beetroot, turmeric, curry powder, etc - may leave a trace if allowed to remain on the surface, as they would on other worktops. We recommend wiping with a soft cloth and mild detergent, avoiding hard abrasives and scouring pads which will etch the surface. Most mass-market cleaners are corrosive to surfaces and contain harsh bleach which may affect the colour of the counters. The worst offenders are abrasive cleaning agents, paint remover, nail-polish remover, solvents, oven cleaner, toilet/drain cleaners. If contact should occur with any of these materials wipe immediately and wash off thoroughly with a mild soap solution. Rinse with water. Do not use boiling water to clean UrbnRok.

For any additional technical information or maintenance advice please contact the UrbnRok team on 02080 588 313

Awards: UrbnRok holds several design and environmental awards:-

National Recycling Awards – Winner 2008
The Design Awards – Gold Award 2009
Kitchen and Bathroom News – Most Wanted Awarded 2009
South London Green Business of the Year Award – 2008
Exceptional commitment to sustainability and the Environment Award – Winner 2008
Grand Designs Green Technology Award – Winner 2010

UrbnRok is fully accredited by OnePlanetProducts. A joint initiative by WWF and Bioregional Quintain to assist architects and specifiers by providing a detailed assessment of environmentally-friendly products.

UrbnRok Limited signed up to the Mayor of London's Green Procurement Code in June 2009.