INTRODUCTION

Elenite is a next-generation solid surface co-developed by LCI and Meganite, a Taiwanese solid surface manufacturer. Building upon the proven quality 100% acrylic solid surfaces, Elenite features a new recycled resin system engineered to deliver a new design language and superior carbon credentials.

This advanced composite is formulated with a blend of natural waste materials, recycled and virgin acrylic resins, fire retardants, and pigments. Elenite contains no unsaturated polyester, epoxy, or other non-acrylic resin systems - ensuring the durability, reparability, and consistent quality expected from solid surfaces.

01	>25% CO_2 reduction compared to standard solid surface.
02	Recycled content a minimum of 35%. This is equivalent to recycling 683 PET plastic bottles per square meter.
03	Elenite achieves European Fire Rating EN 13501 Class B, s1-d0 and American Fire and Smoke Rating ASTM E84 Class A

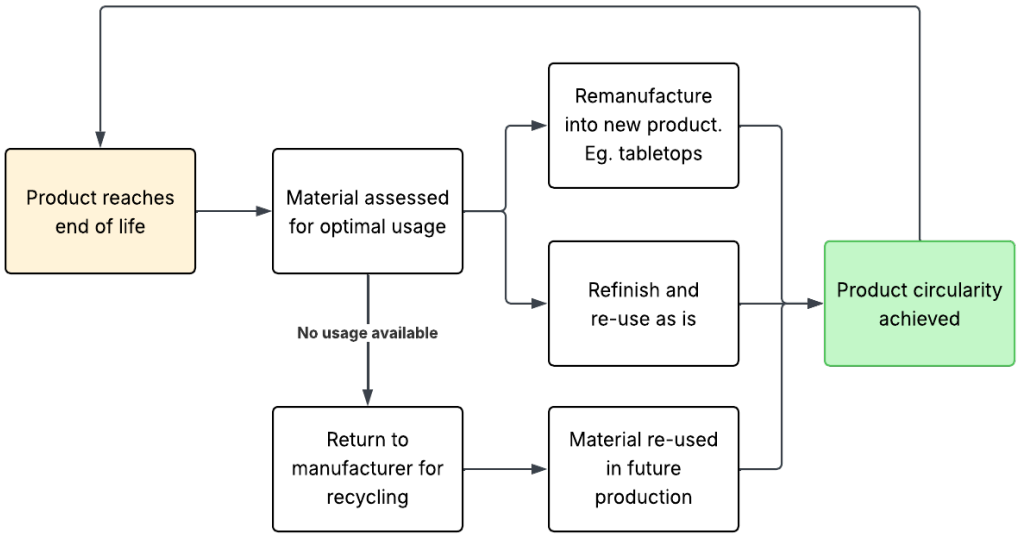
CO_2 REDUCTION COMPARED TO REGULAR SOLID SURFACE

Elenite demonstrates over 25% lower CO_2 emissions compared to Meganite's standard solid surface products. This reduction is equivalent to the carbon savings from recycling approximately 1,900 PET plastic bottles (600 ml / 20 oz)—the common size used for beverage containers worldwide.

The carbon emission comparison is based on Meganite's Life Cycle Analysis (LCA) reports and in-house calculations using recognized CO_2 emission models. All calculations were conducted and verified by personnel certified under ISO 14067, the international standard that defines the principles and requirements for quantifying and communicating the carbon footprint of products (CFP).

CIRCULARITY AND END OF LIFE

Elenite is a circular material and we offer a robust end of life process.



Like other solid surfaces Elenite is homogeneous, meaning the same material composition continues throughout. This allows for refinishing, sanding, and light repairs to restore its original look even after years of use.

At the end of the first life (ie. A countertop), it can be cut on site or at a shop into different pieces – such as pieces for tabletop. This circular process is affordable and achievable with little cost and energy. Please get in touch with your local distributor to learn more about our circular programmes – such as recommended fabricators, donation centers, or return for re-purposing.

WHAT IS THE DIFFERENCE BETWEEN ELENITE AND TRADITIONAL SOLID SURFACES?

While the overall formula and production process of Elenite are very similar to traditional 100% acrylic solid surface, a few key distinctions define its unique performance and sustainability profile:

01 Natural Element Integration	Elenite incorporates selected natural material; adding visual depth, tactile warmth, and a more organic aesthetic compared to traditional solid surfaces.
02 Recycled Resin	The formulation includes an industry leading percentage of recycled acrylic resin, significantly reducing overall CO_2 emissions while maintaining the structural integrity and performance of standard 100% acrylic solid surface.
03 Surface Texture	In designs featuring larger natural chips, the finished surface may exhibit a subtle, tactile texture offering a refined, natural touch that reflects the embedded materials' character.
04 Thermoforming	Due to the presence of natural elements, some particles may loosen or detach during or after thermoforming. As a result, thermoforming is not recommended unless potential detachment is acceptable for the intended use. If detachment occurs and can be tolerated, affected areas can be repaired using a color-matched solid surface adhesive typically used for seaming. Fabricators are advised to consult with their supplier or follow standard backfill techniques to achieve optimal results.

WHAT IS ELENITE'S COLOR CONSISTENCY?

We maintain strict control over the sourcing of natural fibers, emphasizing color consistency during selection. While we prioritize natural elements with more uniform tones, it is impossible to achieve exact color matches due to the inherent variability of natural materials (Delta E < 1 is the normal definition of exact). Over time, these elements - such as wood fibers - will naturally age and deepen slightly in color, adding character. The change is typically minimal and difficult to notice.

As with all solid surface materials, batch-to-batch color variation may occur, even in products without natural inclusions. The non-natural portion of Elenite is made from 100% acrylic resin with fire retardant, like a normal Meganite solid surface. This 100% acrylic resin formula has been sold in the marketplace since 1970s and it is wildly known for its excellent color stability and aging performance, unlike polyester resin–based materials, which tend to yellow rapidly.

WHAT ARE THE MOLD-RESISTANT PROPERTIES OF ELENITE?

Meganite® Elenite uses natural fiber chips treated with a mold-resistant additives and has been tested by ASTM G21. ASTM G21 is a standard test method for determining the resistance of synthetic polymeric materials to fungal growth. The test involves exposing materials to a mixture of fungal spores under controlled conditions for up to 28 days to see if they support mold and mildew.

After 28 days under controlled conditions (28–30 °C, >85 % RH, fungal inoculum), the specimen is evaluated visually and assigned a rating 0 to 4:

0 = no growth
1 = traces of growth (<10% coverage)
2 = light growth (10–30 %)
3 = moderate growth (30–60 %)
4 = heavy growth (>60 %)

Materials achieving rating 0 or 1 are commonly considered "mold resistant / fungal resistant" in specifications*.

Elenite's rating is 0.

* Citation from https://microbe-investigations.com/astm-g21-antifungal-testing/

WHAT FIRE TEST STANDARD DOES ELENITE COMPLY WITH?

Elenite has achieved European Fire rating EN 13501 Class B, s1-d0 and American fire and smoke rating ASTM E84 Class A. These are the same rating as Meganite Solid Surface and most 100% acrylic Solid Surface.

WHERE TO USE AND WHERE NOT TO USE ELENITE?

Elenite is recommended for use in tabletops, countertops, and vertical applications such as wall panels.

However, it is not recommended for areas with continuous water exposure such as submerged environments such as inside showers, pools, and spas. Nor is it suitable for spaces requiring stringent hygienic standards, such as hospital operating rooms.

This limitation exists because the natural elements incorporated into Elenite, while treated for mold resistance and encapsulated in acrylic resin during production, may still be affected by prolonged or high levels of moisture.

WHAT IS RECOMMENDED FABRICATION FINISH?

We recommend a matte finish - P320. A gloss finish is also possible but less commonly used.

DOES ELENITE NEED SPECIAL ADHESIVES WHEN JOINING SEAMS?

Elenite works with standard solid surface adhesive. Contact us to source adhesives specifically colour matched to Elenite colourways.

CAN YOU CUSTOMISE ELENITE SHEET SIZE AND COLOUR?

Yes. Other dimensions and colours are possible for Elenite with a MOQ is approximately 200 square meters. Please contact your LCI representative or email us for more details.

Standard size: 3660 x 760 x 12 mm

HOW TO CNC CUT ELENITE

For small production runs carbide tooling is also suitable but for best results we recommend PCD tooling as this will last longer and produce a better cut quality.

Every machine and tool is different but here are some general guidelines for CNC cutting.

- 12mm PCD turbo cutter
- RPM 18000
- Descent speed 5m/min
- Feed 7m/min
- 2 passes at 6mm each

HOW STORE & HANDLE ELENITE

Storage

- Store Elenite sheets flat on a level surface to prevent warping.
- Keep in a dry and well-ventilated area to preserve the integrity of the natural ingredients.
- Avoid direct sunlight, high humidity, or environments with temperatures above 40°C (90°F).
- Keep away from staining agents such as teak oil, ink, or strong chemicals.
- Use china markers or water-based markers for layout lines; pen marks can usually be removed with mild cleaners.

Handling

- Use a forklift to unload full pallets.
- Each sheet should be carried by at least two people to avoid cracking from excessive flexing.
- Always wear appropriate safety equipment (gloves, safety shoes, etc.) when handling sheets.