Worktop *materials* compared for specifiers

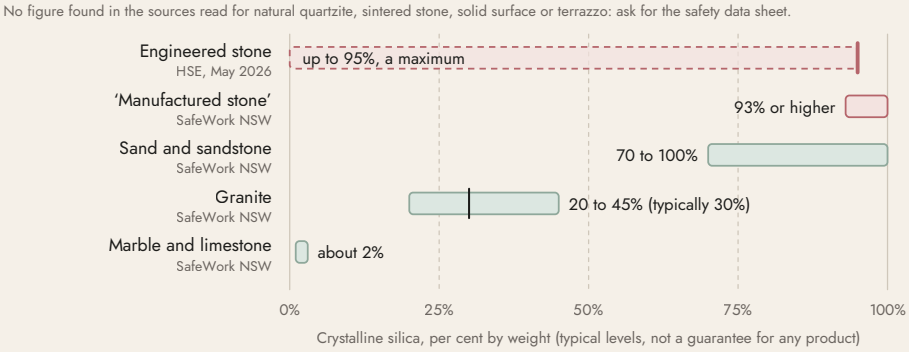
Compare worktops on declared properties, each with its test method. HSE says engineered stone can contain up to 95% crystalline silica; natural stones are typically 2% to 45% in one regulator's list. Ask for the data sheets and approve a production sample.

Compliance guidance. Silica figures are HSE's and SafeWork NSW's, read 6 November 2026. This page does not say any surface is safe or unsafe, or that any studio or partner works to HSE guidance. Standards were not read: confirm current editions, the supplier's safety data sheet and your contract adviser. Guidance, not legal advice.

AT A GLANCE

Surface	Etch and stain	Heat	Silica
Natural quartzite	Siliceous: resists most kitchen acids, not all. *NSI.*	No figure found. Trivets advised. *NSI.*	No figure found. Dust controls apply. *HSE.*
Granite	Siliceous. Absorption 0.05 to 0.40% by weight. *NSI.*	About 250 °C, but localised heat can crack it. *NSI.*	20 to 45%, typically 30%. *SafeWork NSW.*
Marble, limestone, travertine	Calcite: etches with mild acids. *NSI.*	Softer stones. No heat figure found.	About 2%. *SafeWork NSW.*
Engineered quartz	Tested to BS EN 14617-10. Ask for the result.	Tested to BS EN 14617-6. The resin decides: ask.	Up to 95%. *HSE.*
Sintered stone	Makers declare ISO 10545-14 and -13 classes.	Makers declare ISO 10545-9. Ask for hob advice.	No figure found. Ask.
Solid surface	A listed property of BS EN ISO 19712-1.	A listed property. Ask for hob advice.	No figure found. Ask.
Terrazzo	Cement-bound: porous, seal it. Resin-bound: non-porous. *Our page.*	The binder decides. Ask.	Depends on chips and binder. Ask.

Natural stone entries are NSI's general statements, not data for a slab. Silica: HSE, SafeWork NSW. 'Ask': no figure in the sources read.



Crystalline silica levels published by HSE (engineered stone, a maximum) and by SafeWork NSW (typical levels for the other materials). Typical levels are not guarantees for any product. Original drawing by Make Bespoke Studio.

THE TEST BEHIND EACH PROPERTY

Property	Natural stone	Engineered quartz	Sintered stone
Absorption	BS EN 13755:2008	BS EN 14617-1:2013	BS EN ISO 10545-3:2018
Flexural strength	BS EN 12372:2022 or 13161:2008	BS EN 14617-2:2016	BS EN ISO 10545-4:2019
Thermal shock	none found	BS EN 14617-6:2012	BS EN ISO 10545-9:2013
Chemicals and stains	none found	BS EN 14617-10:2012	BS EN ISO 10545-14:2015
Worktop standard	none found	BS EN 15388:2020	none found

SPECIFICATION WORDING

DECLARED PROPERTIES

Worktop: [material, variety or colour reference], [30] mm thick, to approved sample [ref] cut from the production slab. The supplier shall declare, with test method and edition, apparent density and water absorption [BS EN 13755 / BS EN 14617-1 / BS EN ISO 10545-3], flexural strength [BS EN 12372 / BS EN 14617-2 / BS EN ISO 10545-4] and, for manufactured surfaces, thermal shock and chemical and stain resistance [BS EN 14617-6 and -10 / BS EN ISO 10545-9 and -14 / BS EN ISO 19712-2]. Values to be issued with the safety data sheet before fabrication.

SILICA AND DUST CONTROL

The supplier shall state the crystalline silica content (per cent by weight) and issue the safety data sheet before order. Fabrication by wet methods or on-tool extraction as current HSE guidance requires, with sink, hob and tap cut-outs made in the workshop, not on site. Controls to be confirmed in writing. [Contract adviser or occupational hygienist to confirm.]

CARE AND HEAT

The supplier shall issue written care instructions before handover: cleaner type and pH, any sealer and its reapplication, and the maker's guidance on hot pans and hob surrounds. Trivets or heat mats to be [provided / advised] at handover.

TERMS USED

Engineered stone

A man-made slab of crushed stone bound with resin, which can contain a very high proportion of crystalline silica (HSE says up to 95%).

Respirable crystalline silica (RCS)

Very fine dust containing crystalline silica that, when breathed in, can cause silicosis and other lung disease; cutting stone dry creates large amounts.

STANDARDS AND SOURCES

- HSE: working engineered stone (updated 29 Apr 2026); press release 11 May 2026; installing stone worktops: read 6 Nov 2026.
- SafeWork NSW, what are crystalline silica and engineered stone; Natural Stone Institute consumer pages; Stone Federation GB, Natural stone in your home: undated; read 6 Nov 2026.
- Test standards named in the tables (BS EN 13755, 12372, 13161, 14157, 12670; BS EN 14617 series, 14618, 15388; BS EN 14411, BS EN ISO 10545 series; BS EN ISO 19712-1 and -2): editions as shown in the tables, all Current on BSI Knowledge, 6 Nov 2026. Named, not read.

Full guide: https://makebespoke.com/trade/technical/worktop-materials-compared. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.