

# Technical information

## Proterra NATURAL SOLID OIL GE 11254

### Product description

Is a mixture of extremely low-solvent and low-odour high solid natural oils with excellent mechanical and chemical resistance. For low-emission surface finishes on exclusive wood surfaces subject to normal to high indoor demands. Easy to apply, fast drying and free from cobalt and lead-based siccatives. NATURAL-SOLID-OIL already exhibits good resistance and abrasion resistance in the first coat without hardener. The product can optionally be hardened for even faster drying and even better resistance. Apply once or twice using a spatula, roller or cloth and then rub it in and remove the excess. Our NATURAL-SOLID-OIL is so high-yielding that the wood is reliably protected by just one application of the hardened oil. This natural oil contains at least 94 % of renewable raw materials and only has a solvent content of less than 0.5 %. The oiled surfaces are suitable for contact with food of all kinds.

### Areas of application

For parquet and surface coating. Surface treatment of woods in indoor areas, such as living rooms, bedrooms, children's furniture, wall and ceiling panelling. Suitable for coating children's toys. Low-flammable according to DIN EN 13501-1 and IMO-certified, so can be used for ship interior coating.

### Area of application

- Internal fit-out
- Furniture
- Crafted parquet flooring
- The fitting out of ship interiors
- Special applications
- Doors
- Stairs

### Substrate material

- Dark, fine pored hardwood
- dark deciduous woods with coarse pores
- light deciduous woods with fine pores
- light deciduous woods with coarse pores
- Conifers

### Surface Preparation

#### Surface preparation

In the furniture sector: Clean, well seasoned wood, depending on species, application process and the desired effect.

On parquet flooring: Careful, even and graduated bare wood sanding of properly laid and prepared parquet surface.

#### Substrate sanding grits



120 - 320

#### Comments on sanding



The quality and uniformity of the wood and of the lacquer sanding are crucial to the final surface finish. After sanding, remove dust as prescribed.

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### Application

Application	Spray nozzle size	Spray pressure	Atomizing pressure
Compressed air spraying	1,5 - 1,8 mm	2 - 3 bar	
Gauze pads / cloth			
Smooth roller			
Rolling			
Filling			
Spreading			
Wiping with a cloth			

### Times

Drying		16 h / 20 °C
Follow-up coating within		1,5 d / 20 °C
Stackable after		24 h / 20 °C
Resilient after		7 d / 20 °C
Accessible after		16 h / 20 °C
Complete drying		1 d / 20 °C

### Finishing

#### Finishing

After adequate drying.

On furniture: regular cleaning and care using Proterra Cleaning agent GR 1900.

On parquet flooring: initial care and subsequent maintenance using Hesse PROTECT-CLEANER PR 90 or Hesse ANTISLIP-CLEANER PR 93 and Hesse INTENSIV-CLEANER PR 91.

Timely and regular subsequent oiling is required to retain the exclusivity of the oiled surface for as long as possible.

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### Processing instructions

In the furniture sector: Apply and rub in the product with a saturated fine sanding fleece. After a short exposure time, remove any excess with a cotton cloth. The surface should appear dry; if not, drying problems may occur. On parquet flooring: Apply the material with an appropriate trowel; after a short exposure time, work in evenly using the single-disc sander and white non-abrasive pad until the surface appears dry.

Optional, additional sealing:

Surfaces treated 2 x with the oil at a mixing ratio of 25 : 1 with OIL-HARDENER HIGH-SOLID OR 5180 can be sealed without sanding using Hesse HYDRO Seals (e.g. PURA-ONE HDE 51-(gloss level) or PURA-NATURA HDE 52-0) after drying over night at 20 °C room temperature with sufficient air circulation.

If the oil surface is older than 16 h / 20 °C, it should be lightly sanded back (do not sand through it!) to achieve a good surface result.

This additional sealing will influence the colour tone, feel and look of the surface. Please assess this based on a trial coating.

This product must only be combined with other approved and technically suitable products when used as a flame retardant coating material for seagoing vessels according to the latest version of SOLAS 74/88 Reg. II-2/3, II-2/5 and II-2/6, IMO Resolution MSC.36(63)-(1994 HSC-Code) 7 and IMO Resolution MSC.97(73)-(2000 HSC-Code) 7. The maximum application amount in wet film when using this product as a flame retardant coating material for seagoing vessels is 30 g/m<sup>2</sup>.

### Particular instructions

NATURAL-SOLID-OIL can be used as an accentuating and wood content blocking basecoat beneath special HYDRO-PU lacquers.

Complete drying and the mechanical and chemical resistance of the surface will be increased by hardening at 100 : 4 with OR 5180 or OR 5188. Pot life of the mixture: 1 hour at 20 °C room-temperature. The hardener contains isocyanate. Please observe safety instructions; see the safety data sheet.

The material dries with oxidation – please observe the general application instructions. A skin can form on open containers due to the spontaneous reaction of the product with atmospheric oxygen! Please check before application! This skin cannot be incorporated, but must be carefully removed and disposed of before application. We recommend that you also sieve the material before applying it.












"A risk assessment was undertaken according to Directive 2014/90/EU, Annex II, Section 3. This coating does not pose a physical risk to health nor a risk to the environment when cured and dried."

For coating the insides of cupboards, we recommend Proterra Resit GE 17102 because of its low intrinsic smell. After suitable drying, can be re-coated with, for example, GZ 1020, GZ 1023.

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### Technical data





Flow time (+/- 15%)		55 s / DIN4
Yield per coat		48 - 96 m <sup>2</sup> /l The spreading rate is heavily dependent on the type of application. The specifications relate to a liter of ready-for-use product, if necessary including hardener and thinner.
Giscode		Ö10+
Proportion of renewable raw materi-		94.4 %
Non-volatile proportion		99.1 %
VOC FR		A+
Shelf life in weeks		104
Storage temperature		10 - 35 °C
Working Temperature Range		20 - 40 °C
Number of coats (max)		2
Amount per layer (minimum)		10 g/m <sup>2</sup>
Amount per layer (max)		20 g/m <sup>2</sup>
Total application volume		40 g/m <sup>2</sup>

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### Particular properties / testing standards

Sign	Product standard / basis
	Product meets the requirements of solvent based paints and coatings regulation - ChemVOCFarbV (German ordinance on solvent-based paints and varnishes) - according to the national implementation of 2004/42/EG ("Deco-paint Directive").
	Non-slip class R10 per DIN 51130
	Emission-tested construction product per DIBt [German institute for construction technology] principles,
	Saliva and sweat resistance according to DIN 53160 Parts 1 and 2: no discolouration (Level 5)
	Antimicrobial effect according to ISO 22196: 2007
	Toy safety as per DIN EN 71-3
	Quality Assurance System Certificate (Module D); Directive 2014/90/EU (Marine Equipment Directive)
	Manufacturer's declaration on biodegradability
	Geeignet als Oberflächenbehandlungsmittel von Holz für Arbeitsflächen in Lebensmittelverarbeitenden Betrieben und darf dabei in direkten Kontakt mit Lebensmitteln aller Art kommen.
	Construction book registered
	Antimicrobial effectiveness
	Classification of fire behaviour under DIN EN 13501-1 on validated substrate materials

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### Sample process

#### Walnut living room shelving

Bare wood sanding: 320 grit with subsequent dust removal.

Use a fine sanding fleece to apply 1 x 10 - 20 g/m<sup>2</sup> Protterra NATURAL-SOLID-OIL GE 11254 and rub in evenly.

Allow a brief absorption period and then use a soft cotton cloth to remove the excess until the entire surface appears uniformly dry.

Drying: > 16 h / 20 °C and with adequate air exchange.

Use a fine sanding fleece to apply 1 x 10 - 20 g/m<sup>2</sup> Protterra NATURAL-SOLID-OIL GE 11254 and rub in evenly.

Allow a brief absorption period and then use a soft cotton cloth to remove the excess until the entire surface appears uniformly dry.

Drying: > 16 h / 20 °C and with adequate air exchange. Full resilience is achieved after > 7 d / 20 °C.

#### Rustic oak planks, laid as per instructions.

Wood sanding: 150 grit with subsequent dust removal.

Use a spatula to apply 1 x 15 - 20 g/m<sup>2</sup> Protterra NATURAL-SOLID-OIL GE 11254.

Absorption period: 1 h / 20 °C (depending on surface area), without padding.

Use a spatula to apply 1 x 15 - 20 g/m<sup>2</sup> Protterra NATURAL-SOLID-OIL GE 11254.

Absorption period: 1 h / 20 °C (depending on surface area) then use a single-disc sander with white pad to work it in until the surface appears dry. Pad it off again after a further 20 - 30 min / 20 °C until the surface is even.

Drying: > 16 h / 20 °C and with adequate air exchange. The parquet is then accessible with care.

Full resilience is achieved after > 7 d / 20 °C.

Advantages of this application method: pronounced accentuation and protective effect, formation of complete oil structure within a day, time saving (only one intensive and one light padding stage)

### Ordering information

Order number	Colour tone	Gloss level 60° (Gloss +/-5)	Gloss level
GE 11254			

### Accessories

	Order number	Product description
Thinners	OV 1200	Special thinner
	OV 89	OIL-THINNER
Additives and care products	PR 90	PROTECT-CLEANER
Additives and care products	GR 1900	Cleaning agent
Additives and care products	PR 91	INTENSIVE-CLEANER
Additives and care products	PR 93	ANTISLIP-CLEANER
Additives and care products	OR 5180	OIL-HARDENER HIGH SOLID

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### General instructions on workmanship

Materials with oxidative drying: a skin can form on the surface in containers, mainly opened containers. This should be removed prior to use. Low temperatures, increased ambient humidity, inadequate air exchange and wood contents that inhibit drying can extend the oil's drying time.

The risk of spontaneous combustion means that coating substances generating heat during drying (oxidative drying oils) and coating substances forming highly flammable deposits may not be applied in the same spray booth without further precautions (see BGR 500, section 3: Handling different coating substances). Cotton cloths, cardboard and paper saturated with oil pose a risk of spontaneous combustion due to heat accumulation. They should therefore be spread out in the air to dry before being disposed of. Even oil-saturated wood dust is prone to spontaneous combustion; as a precaution please do not dispose of it in sealed containers and, where possible, do not use the spray booth for sanding. The oil itself does not combust spontaneously. The necessary cleaning, care and refresh intervals should be matched to the number of layers of oil applied and the nature and intensity of use. The material properties have been tested on commonly available woods, such as oak, beech, etc. Resins in softwoods, coloured woods and exotic or unusual wood species can result in delayed drying and optical impairments. Please therefore check for suitability prior to use on such woods. Please also note that oils, like almost all natural materials, change colour over time under the influence of light and heat. Their colour can alter both under the influence of light (e.g. the sun's UV rays, etc.) and due to light deprivation (yellowing at absence of light, e.g. beneath tablecloths, carpets, cabinets, etc.). This can become particularly apparent on brightly pigmented substrates. Oiled surfaces have a distinctive odour. This diminishes in a matter of days with progressive drying.

Our technical information is continually adapted to keep up to date with the latest technology and statutory regulations. The indicated values are no specification, but typical product data. The latest version is always available online at [www.hesse-lignal.de](http://www.hesse-lignal.de) or talk to your local account manager. This information is for advice and is based on the best knowledge available and careful research in line with the current state of the art. This information cannot be held as legally binding. We also refer you to our terms and conditions of business. Material safety data sheet is provided in accordance with EC regulation no. 1907/2006.

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