



FAMILY COMPANY.

People & Values

Our family and our company are inextricably linked. Values such as sustainability, quality and health originate from one and the same fundamental attitude.

We also live this in our dealings with each other and our many years of expertise in the processing of sheep's wool make us a partner who can also realize unusual projects and find the right wool solution for every situation.



"We firmly believe that manufacturing products from sustainable raw materials is the order of the day." Our vision is to make the world honestly sustainable through sheep wool. We consider it our duty to strengthen people's environmental consciousness and to show that all of us bear responsibility for nature, human health and the conscious use of sustainable raw materials. The key to this lies in the creative development of the sheep wool and the ways in which it can be used. We produce innovative, high quality products which fulfill an important function, are sustainable and protect our environment.

A **NATURAL**BUILDING MATERIAL.

Thanks to its properties, sheep wool is the only naturallyoccurring insulation material which retains heat and also protects against heat, cold and damp. Sheep wool is a tried and tested material that has proven itself over thousands of years. It is the only insulation material whose producers – the sheep – continuously test its fitness for purpose in the most extreme climatic conditions. The wool has to fulfill its role of protecting the sheep in every imaginable weather situation.

The peculiarity of sheep wool raw fibers is reflected in the endproduct, a material with unique physical properties. At **ISOLENA**, we have over 50 years of experience with sheep wool through our in-house carpet weaving mill. We therefore understand better than anyone else how to turn this uniqueness into a range of products which perfectly meet the requirements of modern construction.



"We bear
responsibility
and offer innovative,
high-quality
wool solutions for
enjoyment of life.
Natural, sustainable,
healthy, unique."







THE INSULATION MATERIAL, THAT CAN DO MORE.

Nature has given us an unique, sustainable raw material whose use is the order of the day.

Plus points of sheep wool



SHEEP WOOL IS AN OUTSTANDING INSULATOR

ISOLENA achieves top insulation values by its very nature* and offers a unique combination of product benefits unmatched by any other insulation material.

*THERMAL CONDUCTIVITY λ_{tr} 0,0339 - 0,042 W/mK



CREATES A HEALTHY CLIMATE IN THE ROOM

Sheep wool is able to purify the air in a room within a very shortspace of time, removing many odors and harmful substances such as formaldehyde.



REGULATES HUMIDITY

Sheep wool can absorb up to 33% of its own weight in moisture, without losing any of its insulating properties. When the environment is dry, the wool releases the moisture.



FIRE PROTECTION

The natural fiber of sheep's wool has a self-ignition temperature of $560-600^{\circ}$ C. This is about twice as high as that of wood (270° C). Depending on the product, our sheep's wool insulation achieves a fire classification of C or D according to EN 13 501-1.



SOUND INSULATION

Sheep wool has very good sound absorption properties due to the different fiber fineness of the wool fiber and is therefore suitable for demanding acoustic optimization.



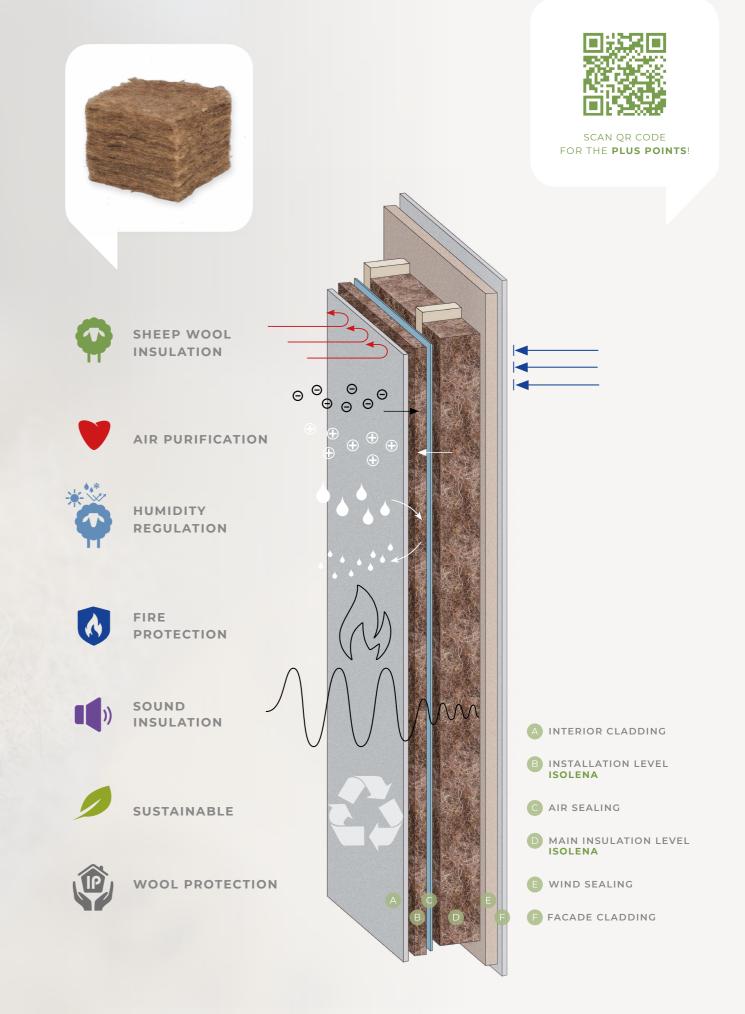
A SUSTAINABLE RAW MATERIAL

As a natural product, sheep wool is shorn twice a year and can be returned to the environmental cycle at any time.



IONIC PROTECT® THE NEW, INNOVATIVE WOOL PROTECTION

The most useful invention since virgin sheep wool has been used as insulation material. Biocide-free and EAD/CUAP tested.



THE PLUS IN **INSULATING POWER.**

ISOLENA insulation materials made from 100% sheep wool naturally achieve the best insulation values in every season and offer a unique combination of product benefits like no other insulation material. Pleasantly cool in summer and comfortably warm in winter. A constant room temperature not only makes living and working in buildings more pleasant, it is also healthier and better for the environment.











Due to rising energy prices, the choice of the right thermal insulation is also becoming increasingly important. Compared to conventional thermal insulation materials, ISOLENA sheep wool is a water vapor permeable insulation with an effective heat storage capacity that supports the efficient energy saving and reduction of the carbon footprint of your building.





GUARANTEED HIGH PERFORMANCE.

Sheep wool as a natural material is durable, powerful and has always had a protective function. With the special ISOLENA technology, we achieve a very good insulation value of 0.033 - 0.042 W/mK.

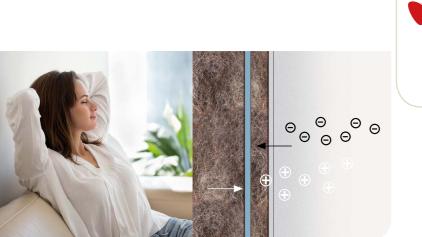
THERMAL CONDUCTIVITY IS USED TO EVALUATE THE EFFECT OF INSULATION MATERIALS. A COMPARISON:



Material	W/mK
Bricks	0.500 – 1.100
Hemp	0.040 - 0.045
Cellulose	0.039 - 0.045
Rock wool	0.035 - 0.040
Styrofoam	0.035 - 0.050
ISOLENA Sheep's wool	0.033 – 0.042
Glass wool	0.032 - 0.048
Polyurethane	0.023 - 0.029
Exp. Polystyrene (EPS)	0.031 - 0.045

SENSING THE ADDITIONAL FEEL-GOOD FACTOR.

Sheep wool generates an agreeable climate by its very nature and is beneficial to your health. ISOLENA has been proven to be able to break down harmful substances, thus causing the natural air in the room to circulate.







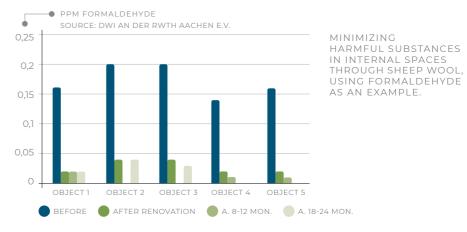


Investing in a healthy indoor climate. All you need is to install ISOLENA sheep wool as close as possible to the interior, such as in the installation levels, interior walls or false ceilings, inside the vapor barrier in the roof structure or in the acoustic levels.





SHEEP WOOL REMOVES HARMFUL SUBSTANCES FROM THE AIR. The secret behind this excellent ability is keratin, the protein building block which makes up sheep wool. The molecules in the side branches of the amino acids are able to absorb and neutralize harmful substances such as formaldehyde. This is done through a chemical reaction in which the harmful substances are connected to these molecules and converted.



BRINGING BALANCE TO YOUR INTERIOR HUMIDITY LEVEL.

Damp walls are an irritant to health and decrease your sense of well-being. ISOLENA can absorb a third of its own weight in moisture, without losing any of its insulation properties.

















ISOLENA has a hygroscopic action, which means that it adapts very quickly to the humidity of the room and absorbs moisture when the humidity is higher than the compensatory moisture in the wool. If the air in the room is too dry, the moisture is released again.





THE HYDROPHOBIC EFFECT LASTS A LIFETIME.

Sheep wool can absorb up to 33% of its own weight in moisture, without compromising its insulation properties and without becoming "wet". It remains full and has no negative impact on the structure. This is down to the unique structure of the protein fiber: they are water-resistant, or hydrophobic. A property which is a great advantage for critical installation situations, such as when greater amounts of condensation form. And sheep wool offers yet another advantage: as a protein fiber, it does not create any breeding ground for molds. Sheep wool therefore is protected against molds by its very nature.

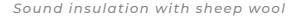




SETTING QUALITY AND SAFETY STANDARDS.

Fire protection with sheep wool

When it comes to fire protection, ISOLENA offers the highest level of safety thanks to its high flash point. This is also confirmed by the new fire protection classification in category C & D*.



Equipping acoustic ceilings with the special ISOLENA acoustic fleeces or simply with ISOLENA sheep wool felts and holding important conversations undisturbed.

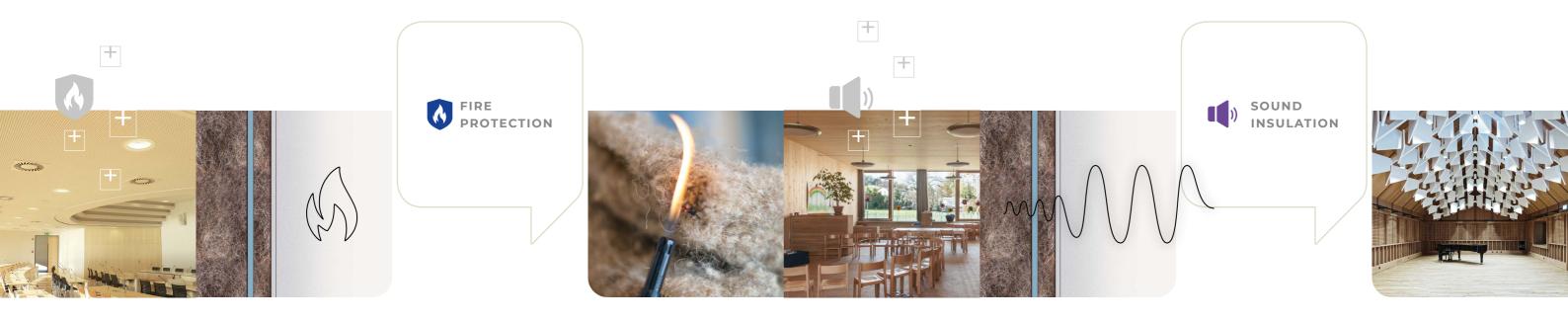








There is a good reason why ISOLENA acoustic products are increasingly being used by modern architects, building engeneering physicists and clients in kindergartens and schools, office buildings and event locations, as well as in private houses, as an acoustic insulation material in installation levels and suspended ceilings.

















FIRE CLASSIFICATION

*Due to the consistent use of 100% virgin sheep's wool, the special ISOLENA processing technology and the innovative, biocide-free wool protection IONIC PROTECT®, our sheep's wool insulation achieves a fire classification of C or D – depending on the product – according to EN 13 501-1.

Classification of the fire behavior of an acoustic ceiling element:

- Perforated plasterboard panel, Thickness 12 mm, perforation 18/18 -5 mm diameter
- ISOLENA Optimal, Thickness 40 mm, Density 18 kg/m³ 60 mm back

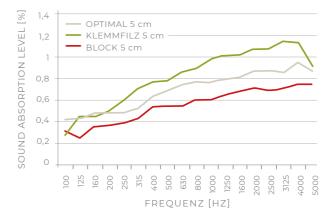
Compliant with Austrian standard EN 13501-1, the construction product described is classified B s1, d0 with regards to its fire behavior. ISO-LENA is thoroughly and continously inspected by the accredited authorities.





The natural fiber of sheep's wool has a self-ignition temperature of 560 - 600 °C. This is about twice as high as wood (270° C). It melts away from any heat source without dripping.

CERTIFIED SOUND ABSORPTION.





SOUND INSULATION.

Due to the different fiber fineness, sheep wool has very good sound absorption properties for many acoustic situations with higher demands.

ROOM ACOUSTICS WITH ISOLENA.

When walking, the footsteps echo. When talking on the phone, an echo of the voice can be heard. In an open-plan office, there is often a lack of peace and privacy to work.

ISOLENA offers the perfect solution for such situations. With its thermal and sound insulation products even the loudest voice in the next room will be silent.



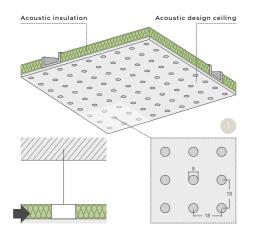
SCAN QR CODE FOR THE **ACOUSTIK CALCULATOR!**

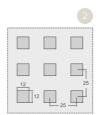
TESTED CONSTRUCTION

Measurement of sound absorption in reverberation rooms according to DIN EN ISO 354

No.	Board	Acoustic lining	Acoustic fleece	Assessed sound absorption level*	Sound absorber class					
Vogl Deckensysteme										
	Acoustic design panel 8/18R Thickness 12,5 mm	OPP22 Thickness 30 mm	AV2010	αW = 0,75	С					
2	Acoustic design panel 12/25Q Thickness 12,5 mm	OPP22 Thickness 30 mm	AV2010	αW = 0,80	В					
Heradesign®										
	Heradesign® Superfine 25 mm	OPP22 Thickness 30 mm		αW = 0,75 (LH)	С					
4	Heradesign® Superfine 25 mm	OPP22 Thickness 60 mm		αW = 0,80 (LH)	В					
	Heradesign® Superfine 25 mm	OPN50 Thickness 25 mm		αW = 0,80 (L)	В					

*According to ÖNORM EN ISO 11654.





1 Hole pattern 8/18R

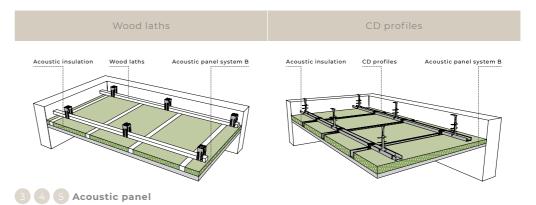
Perforated ceiling panel according* Plate Thickness: 12,5 mm Area based size: 8,50 kg/m² Perforated area percentage: 15,5 %



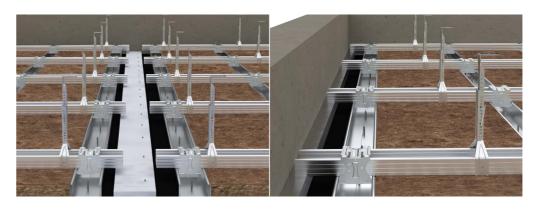
Perforated ceiling panel according* Plate Thickness: 12,5 mm Area based size: 7,70 kg/m² Perforated area percentage: 23,0 %

*To Din EN 14190





1-ply magnesite bonded wood wool acoustic panel (fibre width app. 1 mm) in combination with ISOLENA Optimal Plus.





THE PLUS IN SUSTAINABILITY.

ISOLENA is the insulation material of today and tomorrow for environmentally-conscious people who think about their ecological impact. This is because only the wool of living sheeps is suitable for the production of insulation materials with such high quality standards. Only this wool is so elastic, full and alife, and also remains so, which is necessary for it to fulfill the many roles of an insulation material.











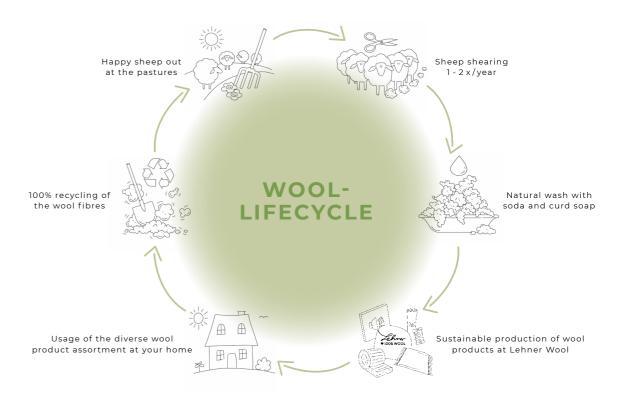




WOOL ORIGIN

Our sheep wool comes straight from nature – more specifically – from sheeps from Central Europe. As the only natural insulation material, it is 100% integrated into natural cycle. 100% virgin sheep's wool = 100% natural.





UTILIZE CO₂ SAVINGS POTENTIAL.



Using 1 t of ISOLENA 100% sheep wool can save more than 1.6 t of ${\rm CO_2}$ compared to conventional insulation materials.



Our goal at Lehner Wool has always been to use the natural properties of our raw material 100% sheep's wool and to demonstrate its positive effects. In times of global climate change with massive effects also on the building industry, we want to show the CO_2 saving potential directly in the application.

Ecological parameters	100% sheep wool ISOLENA 18 kg/m³ – 0,038 W/(mK) Natureplus® balance		Glass wool 18 kg/m³ – 0,038 W/(mK) <i>Value from "baubook"</i>		Rock wool 28 kg/m³ – 0,044 W/(mK) Value from "baubook"	
	per KG	per FE	per KG	per FE	per KG	per FE
Global warming potential GWP total [CO ₂ eq.] incl. CO ₂ storage	0,83	0,57	2,45	1,68	1,93	2,38
House with 60 m³ insulation area 1 t sheep wool ≙1 t glass wool ≙1,59 t rock wool	830 kg CO ₂		2.450 kg CO₂		3.069 kg CO ₂	
CO ₂ savings with the use of sheep's wool			1,6	2 t	2,2	4 t

In the following, a comparison of insulation materials at the level of the same functional unit (FE), in this case thermal resistance, was carried out for a house with 60 m³ insulation area. The conversation factor on 1 kg is calculated by multiplying the bulk density, thermal conductivity, thermal resistance and area: $\rho[kg/m^3]*\lambda[W/mK]*R0[m^2K/W]*A0[m^2]$ with R0 = 1 m²K/W and A0 = 1[m²]. As a result of averaging based on production quantities, the average gross density for **ISOLENA** insulation materials is 18 kg/m³.

Source: Natureplus® LCA as part of the product review of Isolena 2016, ecoinvent 2.2 data basis.

THE INNOVATIVE WOOL PROTECTION.

IONIC PROTECT® is the most valuable invention since virgin sheep wool has been used as an insulating material. It is a trademark-protected process developed by ISOLENA to protect the wool from all wool pests. Biocide-free and long-term tested according to EAD/CUAP.

The two major advantages of this method:

- No chemical additives are required
- Plasma treatments are permanent i.e. once made they are irreversible and serve their purpose as long as the base material (virgin sheep wool) exists



















With the long-term testing and the ISOLENA product assurance easily downloadable for the builder on the website, you can rely on ISOLENA sheep wool insulation with a clear conscience.





Treating the wool fibres with a plasma-ion treatment protects them from all negative external factors that could arise in the building. Moths and insects have no chance. In addition, our products can be stored indefinitely due to the wool protection.

INSTALLATION OF ISOLENA SHEEP WOOL INSULATION MADE EASY.

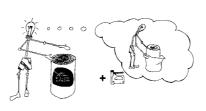
ISOLENA sheep wool insulation is delivered ready-made to size and is easy to process. The rolls are easy to carry and no dust mask or protective clothing is required. During further processing, the sheep wool proves to be very kind to the skin and health.

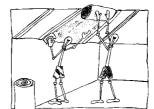
PROFESSIONAL INSTALLATION

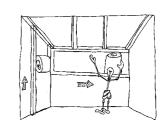
Cutting to length is possible by hand without tools. Insert the insulation rolls from the bottom up and fix the sheep's wool to the rafters at the sides by stapling. Additional time savings are offered by the Premium insulation rolls with new strength and high insulation thicknesses, single layer up to 300 mm.

METAL PROFILES

Insert the insulation rolls in the same way from the bottom to the top, but fix them to the rear planking at regular intervals by stapling.









GET VALUABLE TIPS & TRICKS HERE!



THE INSTALLATION VIDEOS!



Sheep wool provides the necessary security. Due to the spinning technology, ISOLENA products contain sheep wool fibers with a minimum length of approx. 20 mm. Since the fleece rolls are cut at the side edges for assembly, it is possible that shorter fibers occur and that these come loose during assembly activities. When installed, no more fibers come out and thus, fiber contamination of the room air can be ruled out.

MULTIPLE APPLICATION.





ISOLENA OPTIMAL

Thermal conductivity: λ_{tr} 0,038 W/mK Fire behaviour: D-s2, d0 Length-related flow resistance $r = 4,1 \text{ kPa s/m}^2$ Thickness: 30 - 140 mm



ISOLENA PREMIUM

Thermal conductivity: λ_{tr} 0,035 W/mK Fire behaviour: D-s2, d0 Thickness: 80 - 300 mm



SCAN QR CODE FOR THE **PRODUCTS**!





ISOLENA OPTIMAL PLUS Thermal conductivity: λ_{tr} 0,035 W/mK Fire behaviour: D-s2, d0 Superstructure testing: weighted sound absorption coefficient $\alpha W = 0.80 (LH)$ Thickness: 30 - 80 mm





Thermal conductivity: λ_{tr} 0,033 W/mK Fire behaviour: D-s2, d0 Length-related flow resistance $r = 10,2 \text{ kPa s/m}^2$ Thickness: 30 - 80 mm



ISOLENA ACOUSTIC UNDERLAY **ROLL WITH BREATHABLE PAPER**

Impact sound improvement up to 21 dB Thermal resistance: 0,1m² K/W Thickness: 3,5 mm





ISOLENA ACOUSTIC UNDERLAY FELT

Fire behaviour: C-s2, d0 Length-related flow resistance $r = 29,5 \text{ kPa s/m}^2$ Thickness: 9 & 18 mm



ISOLENA ACOUSTIC PERIMETER STRIPS

Fire behaviour: C-s2, d0 Length-related flow resistance $r = 29,5 \text{ kPa s/m}^2$ Thickness: 9 mm



ISOLENA WINDOW FILLER

Fire behaviour: D-s2, d0 Sound reduction index: $R_{s,w}(C; C_{tr})$ ≥ 62 (-2; -5) dB



ISOLENA LOOSE WOOL Vapour diffusion resistance factor











FLOOR APPLICATION



ROOF APPLICATION



ACOUSTIC CEILING



FACADE APPLICATION





WOODEN FRAME



BLOCK PLANKING



GREATEST POSSIBLE SAFETY IN HANDLING.















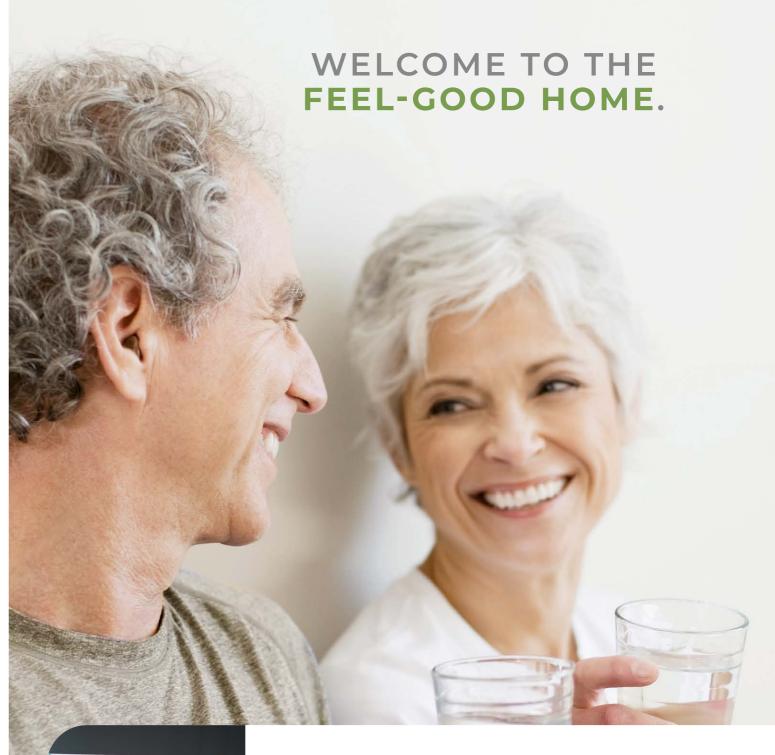
- ✓ Wool equipped with wool protection IONIC PROTECT®: EAD/CUAP tested
- ✓ Internal quality inspection: weight, dimensions, density and voluntary inspection in accordance with the criteria of the ETA (European Technical Approval)
- ✓ Unique ISOLENA permanently monitored density
- ✓ Every square meter of ISOLENA insulation material carries our personal certificate; we guarantee the best quality and processing for your well-being

ISOLENA sheep wool insulation is delivered in precisely cut sizes. So it's easy to use. No dust mask or protective clothing required. With further processing, wool exhibits skin-friendliness and health benefits.

ISOLENA provides premium quality insulation materials for facades, floors, walls, ceilings and roofs for new constructions as well as renovation projects. The PREMIUM insulation rolls with new stability and high insulation strengths can save you even more time - single-layer up to 300 mm and with no artificial additives.









EXCELLENT ADVICE.

Enthusiasm connects

















FOUND IN THE BEST HOUSES.

Wellbeing houses of all kinds



BLOCKHOUSE ABENDROT, AT

Modern and light-flooded is this blockhouse with its numerous windows, ISOLENA sheep wool insulation is used for thermal insulation

PLANNING & IMPLEMENTATION - SCANDINAVIAN BLOCKHAUS BAU GMBH



HARREITHER/PRAMREITER FAMILY HOME, AT

In the light-flooded, modern bungalow in timber construction, sheep's wool insulation is in the ceiling, walls, floor and roof. The impressive house was awarded with the 2016 Lower Austrian Timber Construction Prize.

CLIENT - ELISABETH & THOMAS HARREITHER ARCHITECT - PHILIPP BERKTHOLD



TRADITIONAL YURT, AT

This traditional yurt is located in a quiet area at the edge of the forest. Among the natural building materials, our sheep's wool is also used as insulation

PLANNING & IMPLEMENTATION - JONATAN VERHELST, jonat.at



VAN CONVERSION, AT

Sandra and Joriën live in a van and have insulated it with ISOLENA sheep wool insulation. In an interview they talk about the conversion and give tips for prospective van couples.

VAN CONVERSION - SANDRA AND JORIËN



KINDERGARDEN MONDSEE, AT

The well-being of the children is the focus of the Montessori Forest Kindergarten. The new building, constructed in 2008, is completely insulated with healthy ISOLENA sheep wool

CLIENT - MONTESSORI FOREST KINDER-

ARCHITECT - DI DAVID EBNER EXECUTOR - JAKOB EBNER BAU GMBH
APPLICATION - TOTAL PROJECT WITH SHEEP



SURFPOINT TINY HOUSE, IT

At Lake Idro, "surf point.it" takes care of everything that has to do with surfing and biking. The base station for this is the mobile Tiny House, completely insulated with ISOLENA Optimal.

CLIENT - SURFPOINT.IT ARCHITECT - LISA POSCH EXECUTOR - FLORIAN RADNER, radner.org



DACHSBERG HIGH SCHOOL, AT

In the new gymnasium of the Dachsberg Gymnasium, a ceiling with Heradesign acoustic panels ensures good sound. The sound insulation is supported by a ceiling structure with healthy

CLIENT - DACHSBERG GRAMMAR SCHOOL ARCHITECT - MATULIK ARCHITECTS



BREGENZ FESTIVAL HALL, AT

In the Festspielhaus Bregenz, talented artists provide for harmonious sounds, but also an acoustic ceiling with ISOLENA sheep's wool

CLIENT – OFFICE OF THE PROVINCIAL CAPITAL ARCHITECT - DIETRICH/UNTERTRIFALLER ARCHITEKTEN ZT GMBH

EXECUTOR - TROCKENBAU MÜNCHEN GMBH

APPLICATION - SOUND INSULATION (ACOUSTIC CEILING)



CLIMATE PROTECTION SUPERMARKET, AT

With its climate protection stores, the traditional company Spar has set new standards in the construction of its supermarket branches. The store in Linz-Froschberg stands out for its wall insulation with healthy sheep's wool.

CLIENT - SPAR ÖSTERREICHISCHE WARENHAN-

ARCHITECT - ARCH. DI REINHOLD KROH EXECUTOR - SECCO CONSTRUCT GMBH
APPLICATION - SHEEP WOOL INSULATION WALLS



SCHOOL FELBEN-WELLHAUSEN, CH

Sustainability played a decisive role in the new construction of the Oberstufenzentrum Ost in Felben-Wellhausen. After commissioning, a nasty discovery was made: far too high formaldehyde levels in the interior rooms! By using sheep's wool, a costly and time-consuming deconstruction or demolition could be avoided.

CLIENT – UPPER SCHOOL MUNICIPALITY

APPLICATION - SHEEP WOOL INSULATION IN CEILINGS AND WALLS FOR AIR PURIFICATION AND POLLUTANT REMEDIATION



PASSIVE HOUSES/

made with sheep's wool.

CLIENT - FAMILY AICHHOLZER

AICHHOLZER KLEIN ZT OG

ARCHITECT - MAGK ARCHITECTURE

SINGLE FAMILY HOUSES, AT

These single-family houses near Vienna present

themselves in a modern way. The wall insulation and ceiling insulation of the passive houses were

EXECUTOR - CARPENTRY PROKSCHWEILGUNI

COMMUNITY CENTER LUDESCH -HOUSE OF THE FUTURE, AT

The house was built as part of the ecologically and sustainably oriented "House of the Future" program. Partition walls and acoustic ceilings are insulated with healthy ISOLENA sheep's wool.

CLIENT - MUNICIPALITY LUDESCH ARCHITECT – ARCHITEKTURBÜRO DI HERMANN KAUFMANN

EXECUTOR - ARGE WUCHER BAUUNTERNEH MEN GMBH & CO KG AND SUTTER HOLZBAU

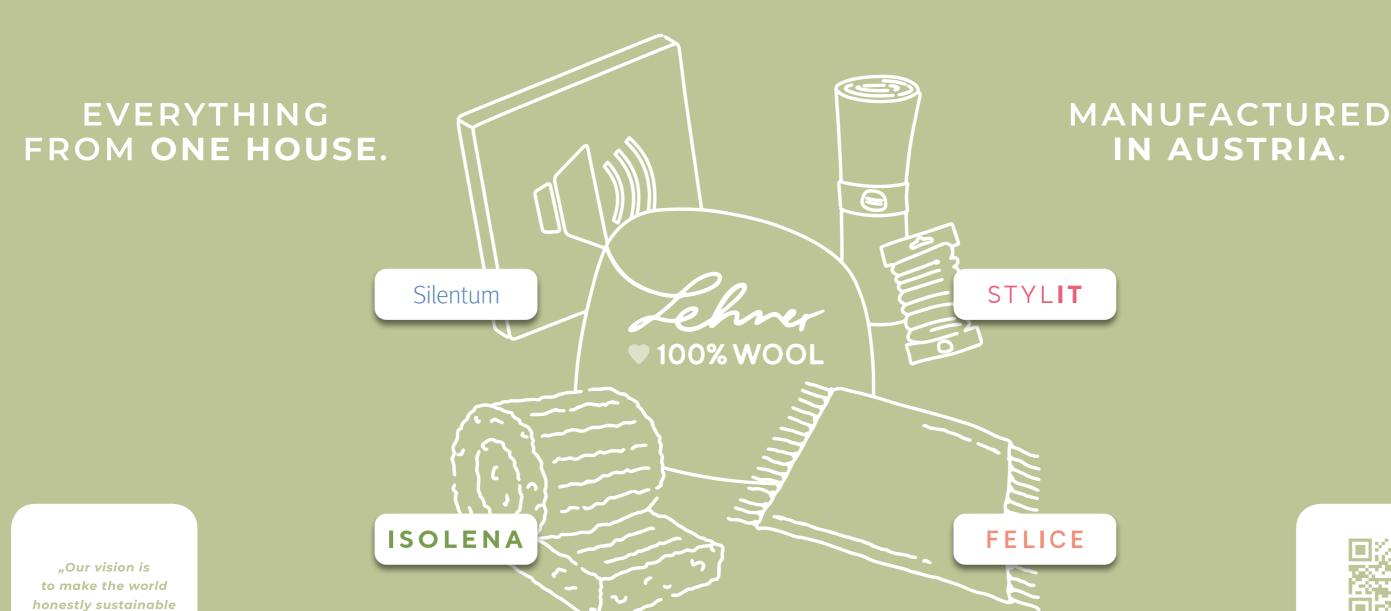
APPLICATION - SHEEP WOOL INSULATION BETWEEN WALLS, SOUND INSULATION (ACOUSTIC CEILING), INSTALLATION LEVEL



SCAN QR-CODE HERE!

FOR MORE KNOW-HOW, **EXCITING INTERVIEWS** AND INTERESTING FACTS!





CAN QR CODE FOR OUR **BRANDS**!

through sheep wool."

We love 100% virgin sheep's wool: that is what we stand for, that is our signature, our conviction, our drive. Since the foundation of our company in 1969 with the carpet weaving mill, inspired by the in-house spinning mill and a wide variety of partners, a multitude of business fields

have developed from this.

The versatile use of sheep wool shows our love for product development. Thus, we also produce **wool products for the garden**, **mattress fleeces**, **foodpackaging**, **polishing discs** and much more.













FOR REGULAR INFORMATION SUSCRIBE TO OUR **NEWSLETTER**!



SCAN QR-CODE HERE!

