



U SeaProtect Slab

Slabs unfaced – density from 20 to 100 kg/m³

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ULTIMATE mineral wool provides a unique high-performance profile: it combines safety, comfort and ease of handling.



Effective fire protection

ULTIMATE provides effective fire resistance, but also very good performance in reaction to fire.



Excellent Thermal insulation

Excellent thermal insulation combined with unique efficiency.



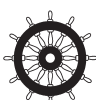
Optimal acoustic performance

Improved acoustic comfort due to its excellent sound absorption and sound insulation properties.



Light weight

Increase insulation – reduce weight. ULTIMATE combines high fire & thermal performance with very low weight.



ISOVER
SAINT-GOBAIN

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| Characteristic | Symbol | Unit | Quantities and measured values | | | | | | | Standard |
|--|-----------------|-------------------------|---|-------|-------|-------|-------|-------|-------|-------------------------------------|
| Application fields | - | - | Thermal insulation, acoustic insulation and fire protection constructions in shipbuilding. | | | | | | | - |
| Material | - | - | Mineral wool with quality mark RAL by the Gütegemeinschaft Mineralwolle e.V., unrisky regarding health according to German decree on dangerous substances, decree on prohibition of chemicals and to guideline EU 97/69 Nota Q. | | | | | | | - |
| Thermal conductivities | T | [°C] | 10 | 50 | 100 | 150 | 200 | 300 | 400 | DIN EN 12 667 |
| U SeaProtect Slab 24 | $\lambda_{N,p}$ | [W/(m·K)] | 0,034 | 0,040 | 0,049 | 0,062 | 0,080 | 0,124 | - | |
| U SeaProtect Slab 36 | $\lambda_{N,p}$ | [W/(m·K)] | 0,032 | 0,037 | 0,045 | 0,055 | 0,069 | 0,104 | 0,153 | |
| U SeaProtect Slab 46 | $\lambda_{N,p}$ | [W/(m·K)] | 0,032 | 0,036 | 0,042 | 0,051 | 0,060 | 0,086 | 0,122 | |
| U SeaProtect Slab 48 | $\lambda_{N,p}$ | [W/(m·K)] | 0,032 | 0,036 | 0,042 | 0,051 | 0,060 | 0,086 | 0,122 | |
| U SeaProtect Slab 56 | $\lambda_{N,p}$ | [W/(m·K)] | 0,031 | 0,036 | 0,041 | 0,049 | 0,057 | 0,078 | 0,104 | |
| U SeaProtect Slab 66 | $\lambda_{N,p}$ | [W/(m·K)] | 0,031 | 0,035 | 0,040 | 0,047 | 0,054 | 0,072 | 0,096 | |
| U SeaProtect Slab 76 | $\lambda_{N,p}$ | [W/(m·K)] | 0,031 | 0,035 | 0,040 | 0,047 | 0,054 | 0,072 | 0,096 | |
| U SeaProtect Slab 86 | $\lambda_{N,p}$ | [W/(m·K)] | 0,031 | 0,035 | 0,040 | 0,046 | 0,054 | 0,070 | 0,091 | |
| U SeaProtect Slab 90 | $\lambda_{N,p}$ | [W/(m·K)] | 0,031 | 0,035 | 0,040 | 0,046 | 0,054 | 0,070 | 0,091 | |
| U SeaProtect Slab 100 | $\lambda_{N,p}$ | [W/(m·K)] | 0,031 | 0,035 | 0,040 | 0,046 | 0,054 | 0,070 | 0,091 | |
| Thermal behaviour | - | [°C] | ≤ 650 by pure thermal stress (U SeaProtect Slab 40 – 100) ≤ 600 by pure thermal stress (U SeaProtect Slab 24 – 40) U SeaProtect Slab: The thickness of the insulating layer has to be correctly dimensioned so that the faced side is exposed to a maximum of 100 °C. From 150 °C on the binder starts to volatilise. | | | | | | | AGI Q 132 |
| Behaviour in fire | - | - | Melting point according to DIN 4102, part 17: ≥ 1000 °C. Non combustible according to IMO-Resolution MSC.61(67)-(FTP- Code), IMO MSC/Circ. 1120. Homologated for shipbuilding according to EC Type Examination Certificate Nr.: 114.477 U SeaProtect Slab 90: certified construction for A 60 (floating floor) 100.185; top-layer only according to static calculation | | | | | | | DIN 4102 IMO |
| Thermal coefficient of expansion | α | 1/K | No change in dimensions within the application field. | | | | | | | - |
| Water vapour diffusion resistance factor | μ | - | $\sim 1,0$ | | | | | | | EN 12086 |
| Specific thermal capacity | c | [kJ/(kg·K)] | $\sim 1,0$ | | | | | | | - |
| Dynamic stiffness | s' | M·N/m ³ | U SeaProtect Slab 90: ≤ 7 U SeaProtect Slab 100: ≤ 8 | | | | | | | - |
| Air flow resistivity | σ | [KPa·s/m ²] | U SeaProtect Slab 24: 15 U SeaProtect Slab 66: 60 U SeaProtect Slab 90: 100 U SeaProtect Slab 36: 30 U SeaProtect Slab 76: 80 U SeaProtect Slab 56: 50 U SeaProtect Slab 86: 90 | | | | | | | DIN EN 29053 |
| Sound absorption value | α_w | - | U SeaProtect Slab 24 50 mm: 1,00 U SeaProtect Slab 56 70 mm: 1,00 U SeaProtect Slab 76 25 mm: 0,65 U SeaProtect Slab 36 70 mm: 1,00 U SeaProtect Slab 66 30 mm: 0,85 U SeaProtect Slab 86 50 mm: 0,95 U SeaProtect Slab 48 100 mm: 1,00 U SeaProtect Slab 66 50 mm: 1,00 U SeaProtect Slab 90 50 mm: 0,95 U SeaProtect Slab 56 30 mm: 0,80 U SeaProtect Slab 76 20 mm: 0,55 | | | | | | | DIN EN 29053 |
| Chemical behaviour | - | - | Sulphide free Low chloride content on demand. Water repellent content on demand.. | | | | | | | - |
| Instruction for transformation | - | - | Can be cut and punched. Due to the differentiation of density optimal delivery forms are possible for each application field. | | | | | | | - |
| Miscellaneous | - | - | ISOVER is certified according to DIN EN ISO 9001 and DIN EN ISO 14001. | | | | | | | DIN EN ISO 9001 DIN EN ISO 14001 |

| Delivery form* | | | |
|----------------|--------|----------|--------------------------------|
| | Width | Length | Thickness |
| Slab 24-36 | 600 mm | 1.200 mm | 30, 40, 50, 60, 70, 80, 100 mm |
| Slab 46-66 | 600 mm | 1.200 mm | 30, 40, 50, 60, 70, 80 mm |
| Slab 76-86 | 600 mm | 1.200 mm | 20, 25, 40, 50 mm |
| Slab 90-100 | 600 mm | 1.200 mm | 30, 40, 50, 60 mm |

* on some products, minimum order quantities are requested
 **Further dimensions on request

www.isover-technical-insulation.com

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