



## U SEAPROTECT®

A complete range of solutions  
for all your Marine & Offshore  
insulation needs



# Insulation applications ON A SHIP

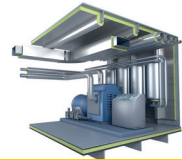
## Public Rooms

- › Acoustic ceilings
- › Acoustic floors
- › Draught stops
- › Linings
- › Suspended ceilings



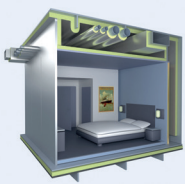
## Hvac System

- › Exhaust ducts
- › Main ducts
- › Piping



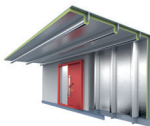
## Cabins

- › Acoustic floors
- › Cabin doors
- › Cabin ducts
- › Cabin walls
- › Suspended ceilings
- › Wall extensions



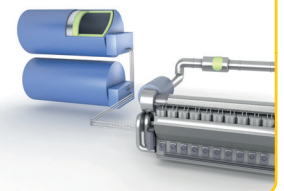
## Main Structures

- › Bulkheads
- › Corrugated bulkheads
- › Decks
- › Fire doors
- › Hull
- › Floating Floors



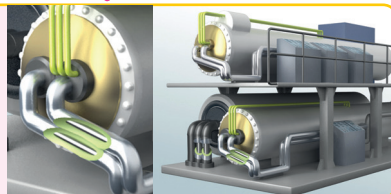
## Engine Room

- › Chimneys
- › Exposed surfaces
- › High/low temperature equipments
- › Tanks



## Technical Equipment

- › Exposed surfaces
- › High/low temperature equipments



At Isover, we understand that insulation is essential for enhancing comfort, safety, and efficiency in the maritime industry. Our insulation solutions are designed to meet the unique and demanding needs of the maritime and offshore sector.

Our **U SeaProtect**<sup>®</sup> range offers exceptional thermal performance, for energy efficiency and optimal comfort, and at the same time flawless fire protection, while being the lightest stone wool range on the market.

Adapting perfectly to each of your projects, our **U SeaProtect**<sup>®</sup> solutions improve comfort on board, ensure safety in the event of fire and help reduce the environmental footprint of your maritime projects.



## A-Class Steel Divisions

Steel is the main material used in ship structures due to its strength, durability, and structural integrity. However, its weight poses challenges for vessel design and operation.

Our **U SeaProtect®** range offers innovative lightweight insulation solutions that improve performance and safety in steel shipbuilding. These solutions reduce the vessel's overall weight, enhance fire protection, thermal insulation, and noise reduction, and contribute to operational efficiency and lower carbon emissions.



Fire Class	Plate		Stiffener		Total Weight	U-Value	Sound reduction
	Product	Thickness mm	Product	Thickness mm	kg/m <sup>2</sup>	W/m <sup>2</sup> K	Rw, dB
A-15 DECK	U SeaProtect® 24	50	No insulation		1,2	1,76	45
A-15 BULKHEAD	U SeaProtect® 46	30	No insulation		1,4	2,08	44
A-15 BULKHEAD A-30 DECK	U SeaProtect® 24	50	U SeaProtect® 24	50	2,0	0,72	46
			or		U SeaProtect® 76	20	2,3
A-30 BULKHEAD A-60 BULKHEAD RESTRICTED A-60 DECK	U SeaProtect® 36	70	U SeaProtect® 36	70	2,0	0,50	48
			or		U SeaProtect® 76	20	2,3
A-60 DECK A-60 BULKHEAD	U SeaProtect® 50	60	U SeaProtect® 76	20	4,1	0,74	47
	Product	Thickness mm	Compressive strength	Total floor thickness	kg/m <sup>2</sup>	W/m <sup>2</sup> K	Rw, dB
A-60, FLOATING FLOOR WITH STEEL TILES TOP LAYERS AND VISCO-ELASTIC	U SeaProtect® Slab 110	50	7 kPa	56	46,0	0,53	58
	U SeaProtect® CR-H Slab 110	50	25 kPa	56	46,0	0,61	51
A-60, FLOATING FLOOR TOP LAYER 25 MM WEBER MARINE ELASTIC 4660	U SeaProtect® t Slab 90	20	5kPa	45	47,0	1,10	57



**Most of the mentioned products are available in both slabs and rolls, featuring various types of facings (such as vapor barriers or aesthetic finishes) to meet the specific requirements of your project.**

## A-Class Aluminium Divisions ( $\geq 4\text{mm}$ )

Aluminium is a material of choice for shipbuilding due to its light weight, corrosion resistance, durability, and design flexibility. Insulation is crucial to ensure comfort on board, save energy and protect sensitive equipment. Aluminium vessels require a specific approach to insulation, due to the high thermal conductivity of the material and its sensitivity to vibrations.

Our **U SeaProtect®** range offers tested and approved solutions for A-Class aluminium divisions in 4 mm and 6 mm, providing weight and cost savings. Just as aluminium reduces vessel weight compared to steel, our **U SeaProtect®** insulation solutions lighten your insulation package, enhancing overall performance.



### A-CLASS ALUMINIUM DIVISIONS (4MM AND OVER)

	Plate		Stiffener		Total Weight	U-Value	Sound reduction
	Product	Thickness mm	Product	Thickness mm	kg/m <sup>2</sup>	W/m <sup>2</sup> K	Rw, dB
<b>A-30 Deck A-30 Bulkead Fire from insulated side</b>	U SeaProtect® Slab 66	50	U SeaProtect® Slab 66	50	5,6	0,675	36
<b>A-60 Deck A-60 Bulkead Fire from insulated side</b>	U SeaProtect® Slab 66	70	U SeaProtect® Slab 66	70	7,9	0,532	37
<b>A-60 Bulkhead Fire from either side</b>	U SeaProtect® Slab 66	70* *on both sides of the division	U SeaProtect® Slab 66	70	12,5	0,247	37

### A-CLASS ALUMINIUM DIVISIONS (6MM AND OVER)

	Plate		Stiffener		Total Weight	U-Value	Sound reduction
	Product	Thickness mm	Product	Thickness mm	kg/m <sup>2</sup>	W/m <sup>2</sup> K	Rw, dB
<b>A-60 Deck A-60 Bulkead Fire from insulated side</b>	U SeaProtect® Slab 66	First layer : min. 40 mm air gap or min. 40 mm non-combustible Isover insulation Second layer : U SeaProtect 66 in 60 mm (or 2 x 30 mm)	U SeaProtect® Slab 66	60 mm or 2 x 30 mm	6.73* with air gap	0,51* with air gap	* plan for 2025
<b>A-60 Bulkhead Fire from either side</b>	U SeaProtect® Slab 66	60mm (or 2 x 30 mm)* *on both sides of the division	U SeaProtect® Slab 66	60 mm or 2 x 30 mm	10,7	0,286	39



**Most of the mentioned products are available in both slabs and rolls, featuring various types of facings (such as vapor barriers or aesthetic finishes) to meet the specific requirements of your project.**

## B-15 Wall Extension System



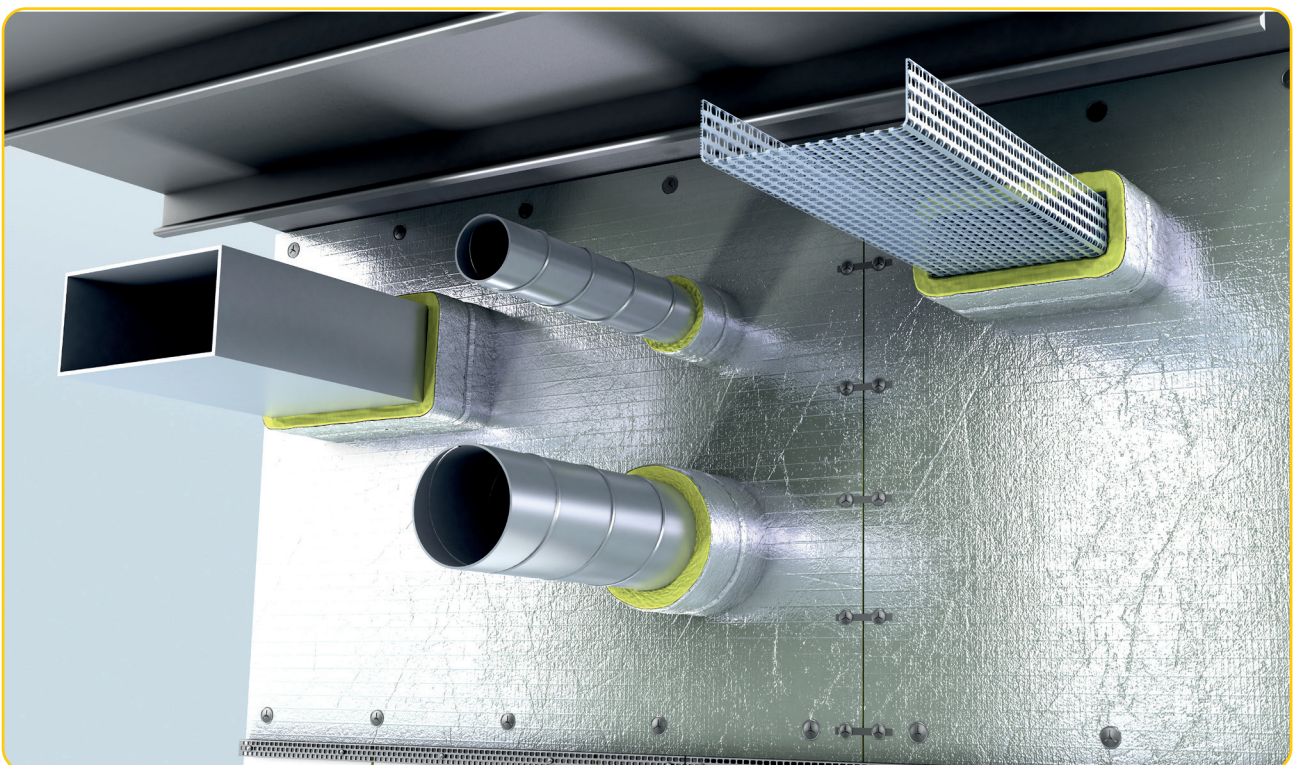
B-15 wall extensions are divisions installed between the cabin ceiling and the ship's structure, as extensions of the cabin walls. They prevent the spread of fire, smoke, and flames from one compartment to the other.

Due to the passage of technical services, B-15 wall extensions require particularly performant insulation solutions that are often complex to install. Where alternative solutions require metal reinforcements or a double insulation layer, our **SeaProtect®** solution for B-15 wall extensions is lightweight, easy to install and saves significant time during installation.

Only 2 products are needed to build the extension, including penetrations. For the extension, we recommend using U SeaProtect Slab 66 A-A to achieve optimal construction results.

### B-15 WALL EXTENSION SYSTEM

FIRE CLASS	EXTENSIONS		PENETRATIONS		
	PRODUCT	THICKNESS mm	PRODUCT	THICKNESS mm	TYPE
B-15	U SeaProtect® 66	50	U SeaProtect® Roll 46 AluI	30	Pipes, Ducts, Cable trays



## Thermo-Acoustic Applications

For maximum thermo-acoustic comfort, while saving valuable space, **U SeaProtect®** offer an optimal thermal performance/thickness ratio.

Additionally, our **U SeaProtect®** significantly reduce sound transmission, for quieter, more peaceful spaces on board your vessels.



	Plate		Stiffener		Total Weight	U-Value	Sound reduction*
	Product	Thickness mm	Product	Thickness mm	kg/m <sup>2</sup>	W/m <sup>2</sup> K	Rw, dB
SOLUTIONS USING U SEAPROTECT 24 $\lambda = 34 \text{ MW/M.K}$	U SeaProtect® 24	50	U SeaProtect® 24	50	2,0	0,72	46
		100		50	3,2	0,47	49
		100		100	4,1	0,39	49
SOLUTIONS USING U SEAPROTECT 36 $\lambda = 32 \text{ MW/M.K}$	U SeaProtect® 36	70	U SeaProtect® 36	70	4,3	0,50	48
	Product	Thickness mm	Compressive strength	Total floor thickness	kg/m <sup>2</sup>	W/m <sup>2</sup> K	Rw, dB
ACOUSTIC FLOOR (TOP LAYER : 25 MM WEBER MARINE ELASTIC 4660)	U SeaProtect® Slab 90	30	5 kPa	55	49,0	0,83	57



**For thermo-acoustic applications, alternative solutions to U SeaProtect® may be available using the GW SeaComfort range. Please contact your local representative for more information.**

# HVAC

## Applications



HVAC is responsible for up to 35% of a vessel's energy consumption. Insulation is a key element in controlling the energy consumption of HVAC systems.

HVAC insulation solutions include non-combustible and energy-efficient insulation solutions for all parts of the system, from heating and water pipes to smoke and exhaust pipes, from HVAC equipment to ventilation ducts.

APPLICATION		PRODUCT	WEIGHT Kg/m <sup>2</sup>	THERMAL CONDUCTIVITY λ (10°C)	W/m <sup>2</sup> K
FIRE RATED VENTILATION DUCTS*	HORIZONTAL DUCTS	U SeaProtect® 50 Alu1 in 60 mm or U SeaProtect® 50 B-Gl in 60 mm	3,0	31 mW/m.K	0,48
	VERTICAL DUCTS				
THERMO-ACOUSTIC OF AIR DUCTS		U SeaProtect® 46 Alu1 in 30 mm or U SeaProtect® 46 B-Gl in 30 mm	1,4	32 mW/m.K	0,91

\* solutions to be approved by classification bodies and / or flag state authorities

APPLICATION	PRODUCT	THICKNESS mm	INNER DIAMETER mm	THERMAL CONDUCTIVITY λ (50°C)
PIPE WORKS	U Protect® Pipe Sections Alu1 or U Tech Pipe Sections	20 to 120	15 - 273	37 mW/m. K

**DID  
YOU  
KNOW**

*Sea Climaver is an advanced insulation solution designed to replace insulated thin metal ducts, offering exceptional thermal and acoustic performance while ensuring fire safety and durability.*

## High Temperature Applications

In marine and offshore environments, high-temperature equipment such as engines, exhaust systems, and boilers requires effective insulation.

The primary function of insulation is to reduce heat loss, which in turn lowers energy consumption and cuts costs. Additionally, it ensures personal protection by minimising the risk of burns and enhancing safety on board.

Our **U SeaProtect®** insulation solutions are designed to withstand the demanding conditions of marine and offshore applications, delivering reliable performance and efficiency.



APPLICATION	PRODUCT	MAXIMUM SERVICE TEMPERATURE	THERMAL CONDUCTIVITY $\lambda$ (mW/m. K)				
			50°C	100°C	200°C	300°C	400°C
PIPES $\varnothing < 200$ mm	U Protect® Pipe Sections Alu1 U Tech Pipe Sections	ST(+) 620	37	43	62	92	N/A
CYLINDRICAL EQUIPMENT WITH DIAMETER $\varnothing \geq 200$ mm	U SeaProtect® Wired Mat 66	ST(+) 620	35	40	54	72	96
OTHER EQUIPMENT	U SeaProtect® Roll 24 to 56	Please refer to TDS of specific products.					

## OEM Applications

Marine Original Equipment Manufacturers (OEMs) specialise in producing pre-fabricated elements such as cabins, ceilings, wall panels, and other essential components for ships and offshore structures. These high-quality, ready-to-install elements streamline the construction and outfitting processes, ensuring consistency and reducing installation time.

Original Equipment Manufacturers require bespoke insulation solutions adapted to their specific requirements. Factors such as material properties, dimensions, and application environments vary significantly across projects and must be carefully considered during development.

At Isover, we offer expertise and support throughout this process, collaborating closely with OEMs to deliver customised insulation solutions that enhance thermal and acoustic performance while meeting stringent maritime standards.



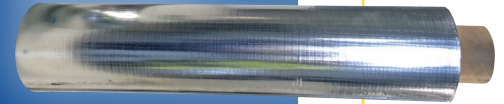
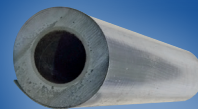
## U SEAPROTECT® - A COMPLETE RANGE OF PRODUCTS AND ACCESSORIES

**U SeaProtect®** is our comprehensive range of products and accessories designed specifically for marine and offshore applications. Our range meets various requirements, ensuring you find the ideal solution for your needs.



For personalised advice,  
reach out to your local  
Isover representative  
or visit our website at

**[www.isover-technical-insulation.com](http://www.isover-technical-insulation.com)**





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