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There are 2 regulatory systems that specify requirements for clothing with thermal protection: CE - Personal protective equipment and SOLAS - Maritime equipment on vessels that operate in international waters.

CE

EN 15027:2001 - Classification of constant wear suits according to their thermal protection

The table shows the estimated thermal protection in hours based on the protection class and the water temperature.

Protective Clothing Class		A	B	C	D
		Thermal Protection (hrs)			
Water temperature (5 °C)	< 5	6	2,5	1,5	1
	5 - 10	9	4,5	2,5	1,5
	10 - 15	15	7	4	2
	> 15	24	15,5	6	3

Actual protection time will vary, depending on the physical condition of the person and the environment

EN 15027: Overall, the system of rating the performance of immersion suits is quite conservative. As many assumptions have had to be made in drawing up these guidelines, attempts have been made to underestimate predicted protection where there are possibilities of error, but above all, to provide values which are realistic.

Class D suit systems will mainly cover a wide variety of designs such as wet suits, one layer suits and protective aids.

Ki-Suit and Ki-Jacket together with Ki-Pants are classified as thermal protective clothing in class D = 1 hr protection in ice water (< 5 °C).

Note: In the current version of the standard, EN 15027:2015, the lowest water temperature for thermal tests is 15 °C.
Ki-Suit and Ki-Jacket + Ki-Pants are tested in ice water (< 5 °C) according to the previous version of the standard, EN 15027:2001.

SOLAS / MarED

LSA-Code - Classification of immersion (anti-exposure suits) according to their thermal protection

Suit class	Immersion suits			
Water temperature (°C)	insulated			not insulated
0 - 2	6			
5				1

Comparison

The test procedures are very similar.

Test clothing

- both use underwear, long sleeve shirt, cotton trousers, woollen socks
- EN 15027 uses 1 woollen long sleeved pullover
- the LSA-code uses 2 pullovers for non-insulated suits

Body temperature - both systems require that the core body temperature does not fall more than 2 °C.

Type of suit

- EN 15027 - both wet suit or dry suits are accepted as long as they fulfil the requirements for thermal insulation
- LSA-code - limits the amount of water in the suit thereby eliminates wet suits, even though they might have the required thermal insulation