



Cold Water Thermal Protection

The Switlik U-Zip-It™ Anti-Exposure Dry Suit is designed to keep you dry. When combined with proper wicking thermal undergarments, the U-Zip-It™ provides optimum protection against hypothermia in case of a cold water immersion.

The relationship between water and air temperatures combined with clothing insulation will determine the survivability of an individual, subject to variables including body fat, age and health, as well as adverse weather conditions.

When to Wear a Dry Suit:*

| Water Temp (W) | | Air Temp (A) | Clothing |
|--|-----|-----------------------------|-------------------|
| $W \geq 70^{\circ}\text{F}$ | and | Any | Standard clothing |
| $60^{\circ}\text{F} \leq W < 70^{\circ}\text{F}$ | and | $A \geq 85^{\circ}\text{F}$ | Standard clothing |
| $60^{\circ}\text{F} \leq W < 70^{\circ}\text{F}$ | and | $A < 85^{\circ}\text{F}$ | Dry Suit |
| $W < 60^{\circ}\text{F}$ | and | Any | Dry Suit |

*USCG Operations Manual COMDTINST M3710.1F

Moisture caused by perspiration can also affect survivability rate. Choose wool, fleece or other breathable, wicking, thermal undergarments. Cotton does not retain heat once wet.

U-Zip-It Dry Suit™ thermal values when combined with thermal undergarments:

| Clothing Layers Worn Under U-Zip-It™ | Immersed Clo* |
|--|---------------|
| Integrated Merino Summer Weight Thermal Liner* and Standard Clothing: Merino Wool short sleeve t-shirt and boxer briefs Long sleeve buttoned cotton shirt, denim jeans, and wool socks Neoprene hood/gloves and Inflatable life jacket | 0.559 |
| Integrated Merino Summer Weight Thermal Liner* and Merino Wool Undergarments: Merino Wool short sleeve t-shirt and boxer briefs Merino Wool long sleeve pullover top, long john bottoms, and wool socks Neoprene hood/gloves and Inflatable life jacket | 0.577 |
| FREE Thermal Undergarment System: Silk boxers and T-Shirt Mid weight long sleeve shirt and pant, Fleece long sleeve shirt and pant, Fire Chief socks, Leather boots, neoprene hood/gloves, Air Warrior PSCG and OCG | 0.896 |
| Integrated Polartec® Winter Weight Thermal Liner* and Merino Wool Undergarments: Merino Wool short sleeve t-shirt and boxer briefs Merino Wool long sleeve pullover top, long john bottoms, and wool socks Neoprene hood/gloves and Inflatable life jacket | 1.121 |

CORD Group Reports R10-02, R13-07 and R14-016

*The Integrated Thermal Liner is provided as an option to the U-Zip-It Dry Suit™. The resultant values were achieved with the liner properly installed in the dry suit.

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| Estimated Survival Times at Varied Water Temps* | | | | |
|---|---------|---------|----------|----------|
| Immersed Clo | <41°F | 41-50°F | 50-59°F | >59°F |
| 0.75 | 6.0 hrs | 9.0 hrs | 15.0 hrs | 24.0 hrs |
| 0.50 | 2.5 hrs | 4.5 hrs | 7.0 hrs | 15.0 hrs |
| 0.33 | 1.5 hrs | 2.5 hrs | 4.0 hrs | 6.0 hrs |
| 0.20 | 1.0 hrs | 1.5 hrs | 2.0 hrs | 3.0 hrs |

* ISO 15027-1

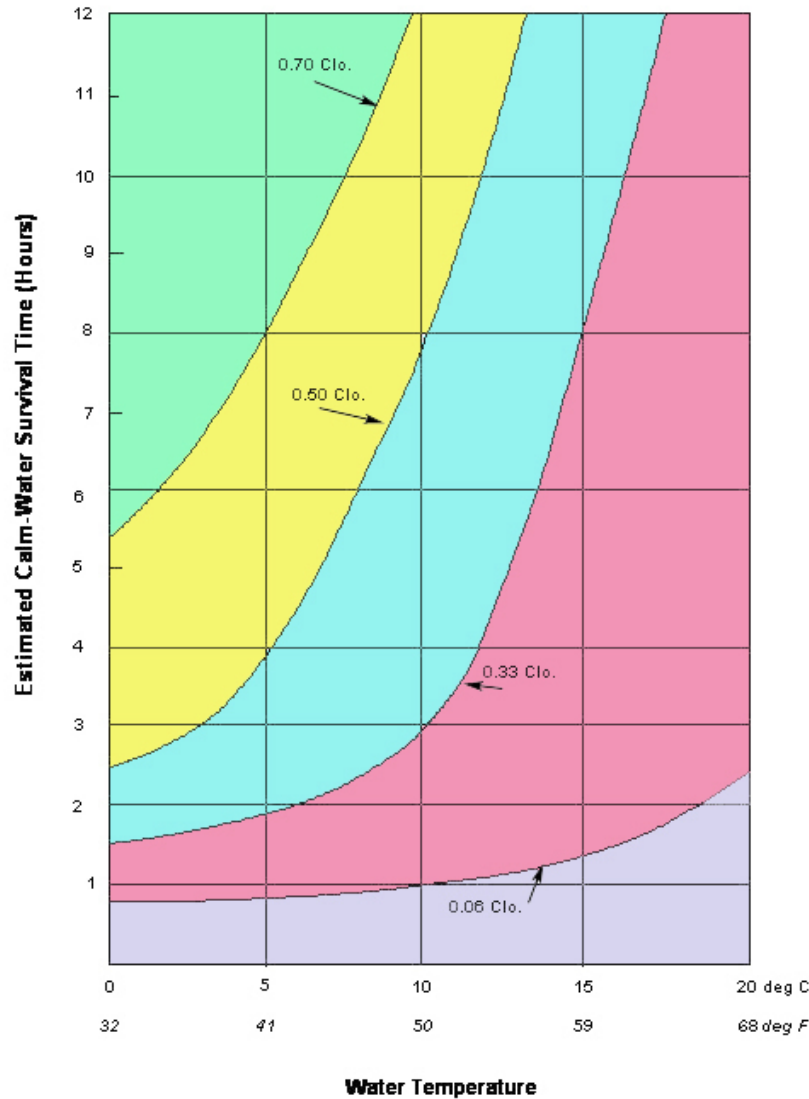


Figure 5. Estimated Survival Times per the Joint Aviation Authorities JAR-OPS3 (Predicted Survival Curve derived from Professor Eugene Wissler's Cold Water Survival Model and published by Hayes, P.A., et al: Further Development of a Mathematical Model for the Specification of Immersion Clothing Insulation. RAF IAM Report No, R653, 1987).