

THERMAL MANAGEMENT SYSTEM AND SURVIVABILITY

MUSTANG SURVIVAL WE SAVE LIVES FOR A LIVING



With the introduction of a light and mid-weight base layer, a complete four season Thermal Management System can now be achieved in combination with the Mustang Survival waterproof breathable dry suits. Key benefits include:

- **Wicking control:** Optimal moisture propagation critical to breathable garment systems
- **Versatility:** Modular and scalable depending on conditions and mission profile
- **Best-in-class comfort:** Carefully designed with performance in mind

By increasing versatility with this system, the operator is better able to keep their eyes on the mission without “fighting” their PPE.



THERMAL BASE LAYER MID-WEIGHT TOP (MSL602) AND BOTTOM (MSL603)

- Made from a combination of Polartec® Power Grid™ and water repellent Polartec® Wind Pro®
- INDUSTRY FIRST Water repellent Polartec® Wind Pro® panels prevent wicking and water pick up on wrist, neck and crotch
- Optimal compatibility with Mustang Survival dry suits
- Immersed Clo 0.45 when worn with Sentinel™ Series Dry Suit
- Immersed Clo 1.12 when worn with the MSL 600 and Sentinel™ Series Dry Suit.
- Comfortable, form-fitting boxer brief style compatible with front dry suit relief zipper
- **SIZES:** Mobility Based Sizing™ (Regular sizes only)



THERMAL BASE LAYER MID-WEIGHT TOP (MSL604) AND BOTTOM (MSL605)

- Made from Polartec® Power Dry® Fabric
- Optimal compatibility with Mustang Survival dry suits
- Immersed Clo 0.30 when worn with Sentinel™ Series Dry Suit
- Immersed Clo 0.75 when worn with Sentinel™ Series Dry Suit and Mustang Survival Fleece Thermal Layer (MSL60)
- Comfortable, form-fitting boxer brief style compatible with front dry suit relief zipper
- **SIZES:** Mobility Based Sizing™ (Regular sizes only)



SENTINEL™ SERIES DRY SUIT LINER (MSL600 GS / MSL601 GS)

- This dry suit liner provides extra insulation protection when in cold water and also helps reduce the thermal burden out of the water.
- A combination of Polartec® Classic 200 fleece and Polartec® Power Stretch 4-way stretch fleece with a durable, smooth outer layer that is abrasion resistant, and a soft inner layer that pulls moisture away from the skin
- Less bulky fit as a result of stretch fleece integration in lower back, arms and legs
- Specifically designed to work with Sentinel™ Series dry suits and is compatible with any Mustang Survival dry suit
- Fitting straps at the thumbs and ankles
- Machine washable
- **SIZES:** Mobility Based Sizing™

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How long a person can survive in cold water primarily depends on the water’s temperature, exposure time, and the thermal insulation of the victim’s protective clothing. To create the most effective protection attainable, we begin by evaluating the clothing’s insulation (measured with the unit “Clo”). We determine the rate at which heat is lost from the body, as well as the difference in temperature between the skin and the water. From these values, predictions can be made of the rate at which a person’s body temperature will drop in cold water.

ESTIMATED CALM WATER IMMERSSED SURVIVAL TIME [HOURS]*

WATER TEMP F°	NUDE	MSL604+ MSL605+ MSD6XX	MSL602+ MSL603+ MSD6XX	MSL604/605+ MSL602/603+ MSD6XX	MSL604/605+ MSL602/603+ MSD6XX	MSL602/603+ MSL600+ MSD6xx	MSL604/605+ MSL602/603+ MSL600+ MSD6xx
32	0.65	1.25	2	4.5	6.25	9	9.25
41	0.8	1.75	3.5	6.5	9	10+	10+
50	1	2.75	7.5	10	12+	12+	12+
55	1.25	4.75	10	12+	12+	12+	12+
59	1.4	7.75	12+	12+	12+	12+	12+
68	2.5	12+	12+	12+	12+	12+	12+

Testing ensemble also included wool socks, combat boots, MD3183 inflatable PDF, MA7348 survival hood & inflatable survival mitts. Testing was performed by a DOD recognized lab and survival times are based on the best survival models available today. Many variables, like sea state, BMI, injury, etc. can affect your immersed survival time.

*calculated to the estimated onset of mild hypothermia

MEASURING CLO

“Clo” is a measurement of the thermal comfort of a suit or device. One Clo represents the thermal comfort of an average person in business clothing in a room temperature indoor environment. Fractions of this thermal comfort are what are perceived when worn in the water.

The use of a Thermal Management System greatly improves thermal comfort. With the introduction of our new base layers, CLO value can be achieved that are even higher than our previous best using the Mustang Survival Ice Commander Rescue Suit.

See below for comparisons.

PROTECTION	CLO VALUE
NUDE	.060
CLOTHED	.100
ICE COMMANDER RESCUE SUIT (IC9002v02)	.960
MSD624 + MSL602/603 + MSL600	1.120