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This PPE has been CE type approved by Centexbel, Montoyerstraat 24, B-1000 Brussels, Belgium (notified body 0493) according to the directive 89/686/EEC. Certificate number: 00101317.

We confirm that this PPE is identical to the one which has been subject to the type approval.



#00101317



Personal Protective Equipment for UHP Waterjet Operators

Specified performance results at all water pressures. Ask your pump manufacturer for details or visit www.waterarmor.com



#00101317

The TurtleSkin Advantage

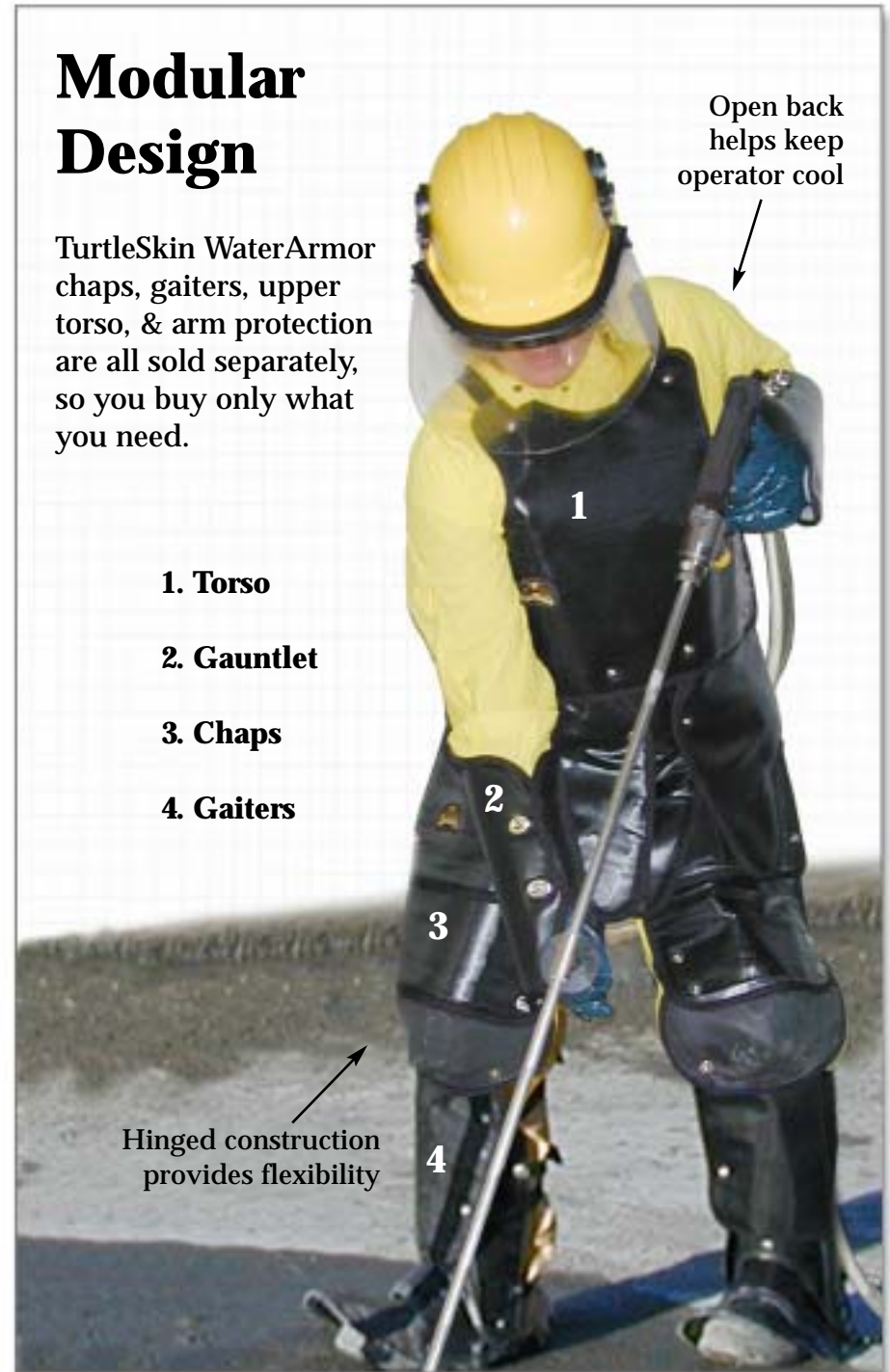
- **Protection up to 2800 bar or 40,000 psi**
TurtleSkin WaterArmor offers increased protection to UHP operators at all pressures at specified flow rates.
- **Tough Material That's Easy To Maintain**
Covering the WaterArmor system is a rugged outer layer that offers chemical resistance, and is easy to clean with soap and water.
- **Lightweight Suit Protects Without Tiring Operator**
TurtleSkin's patent for the tightest weave ever achieved with an aramid fiber allows WaterArmor to provide the highest levels of protection while remaining light and comfortable.
- **Hinged Panel Design For Greater Flexibility**
WaterArmor's patented fabric system bends with the body, while each panel moves independently, allowing for flexibility and comfort.
- **Built-in Knee Pads For Added Comfort**
TurtleSkin WaterArmor's chaps have cushioned built-in knee pads that protect knees from both UHP jet streams and hard concrete.
- **Open Back Keeps Operator Cooler Longer**
Waterjetting is demanding, physical work. WaterArmor's design allows extensive protection to the front of the operator while the open back gives increased air circulation, keeping the operator cool.



Modular Design

TurtleSkin WaterArmor chaps, gaiters, upper torso, & arm protection are all sold separately, so you buy only what you need.

1. Torso
2. Gauntlet
3. Chaps
4. Gaiters





Proven Performance

WaterArmor saved an operator in a recent accident when he swiped his foot at 36,000 psi (2,500 bar) with a rotating lance. There was no penetration to the backside of the gaiter.



Only first layer had any penetration.



Close-up of backside shows no penetration.



Only the toe panel needed to be replaced after the accident, saving both time and money. See more documented saves at www.waterarmor.com.

Replacement Panels

Keep your suit safe longer

If any panel becomes damaged or worn, it can be easily replaced with simple tools. This can save costly delays, as well as the expense of an entire new suit.



Part Name / Part

- | | | |
|-----|-------------------|-----|
| 1. | Vest Panel | V1 |
| 2. | Right Waist Panel | WR |
| 3. | Belt | B1 |
| 4. | Right Hip Panel | HR |
| 5. | Right Thigh Panel | TR |
| 6. | Right Knee | KR |
| 7. | Right Shin | SR |
| 8. | Left Waist Panel | WL |
| 9. | Groin Guard | G1 |
| 10. | Left Hip Panel | HL |
| 11. | Left Thigh Panel | TL |
| 12. | Left Knee | KL |
| 13. | Left Shin | SL |
| 14. | Right Gaiter Shin | GSR |
| 15. | Right Metatarsal | RM |
| 16. | Toe | T |
| 17. | Left Gaiter Shin | GSL |
| 18. | Ankle | A |
| 19. | Left Metatarsal | LM |

One Size Fits All

Patented design lets you lengthen or shorten thigh panels on chaps to fit any operator, whether tall, short, or in between.

Adjustable overlap on thigh panels



CHAPS FITTING INSTRUCTIONS

1. With chaps on front, clip waist.
2. Snap waist belt to the front of hip panel. Tighten chaps in place.
3. Adjust overall length with Velcro® overlap on top two panels so that built-in knee pad is directly over knee.
4. Snap 4 buckles along outside of leg. Tighten straps to fit comfortably.



TORSO FITTING INSTRUCTIONS

1. Slide Torso over your head; & place arms through the straps, tighten as desired.
2. Attach white buckle & fastener at your waist, and tighten as desired.
3. Attach black buckle & black fastener between your legs, and tighten as desired.
4. Adjustable shoulder pads slide easily along strap. Position as desired.



GAITER FITTING INSTRUCTIONS



1. Gaiters attach easily to your boots. First attach shin straps & pull tightly to a comfortable fit.
2. Attach the arch strap underneath your foot in front of the heel.
3. Once the gaiter is fitted to the boot it is not necessary to remove.

GAUNTLET FITTING INSTRUCTIONS

1. Clip in any style glove that fits your working environment.
2. Adjust the Velcro to fit the desired arm length.
3. The gloves may then be left attached to the gauntlet, for fast and easy removal.





**Read this information before using this garment.
It could save your life!**

PERFORMANCE LEVELS

The protective performance of WaterArmor depends on multiple factors such as pressure, water flow, nozzle diameter and construction, distance between jet and protective equipment and contact time (swipe speed of the jet). Under extreme circumstances (high pressure, high flow, close distance and low speed) WaterArmor may not provide full protection.

Never intentionally hit anyone with a stream of high-pressure water. This garment will not protect against a stationary blast. Garment is designed to lessen injury from a quick swipe only. It cannot prevent all injuries from high pressure water, even if worn properly.

If properly worn, garment may lessen severity of injury from accidental momentary (less than 1/2 sec.) exposure to a water jet. Injury severity will depend on water pressure, water flow rate, distance from nozzle, length of exposure time, and type of nozzle. Low pressure applications may be more dangerous than higher pressure applications, due to greater water flow.

TurtleSkin panels are intended to provide protection to front of worker's body; all other portions of garment offer no protection. Garment will not protect from jets originating from below, above, from the side or behind the operator, exposing unprotected areas.

- **INSPECT** garment before each use for damage or loss of protection.
- **Discontinue use** if fabric becomes worn, abraded, punctured or if fasteners break.
- **DO NOT** expose to pH below 5.5 or higher than 8.5.
Rinse immediately if exposed.
- **Wash or decontaminate** with soft cloth and mild detergent.
- **DO NOT** store garment in chemical atmosphere
- **DO NOT** use bleach

It is the user's responsibility to determine proper personal protective equipment needed in each circumstance. Garments should be worn in strict accordance with manufacturer's instructions. Information based on technical data Warwick believes to be reliable, subject to revision as additional knowledge & experience are gained. Warwick makes no guarantee of results and assumes no obligation or liability in connection with this garment. Failure to read & understand this information could result in severe injury or death.

TEST RESULTS: NO penetration occurred beyond protective system with waterjet traveling at 8 feet/second (2.4 meters/second), no closer than 3 inches (7.62cm) at these conditions:

Pressure PSI (bar)	Flow Rate GPM (lpm)	Orifice ID Inches (mm)	g° Nozzle, Single Orifice: Material	Efficiency Factor $\frac{\text{GPM/ \# of orifices}}{\text{orifice ID inches}^2}$ $\sqrt{\text{Pressure PSI}}$
40,000 (2,800)	5.5 (21)	0.035 (0.889)	Sapphire	22.4
36,000 (2,500)	5 (19)	0.035 (0.889)	Sapphire	21.5
20,000 (1,400)	11 (42)	0.051 (1.295)	Tungsten Carbide	29.9
10,000 (700)	16 (61)	0.073 (1.854)	Tungsten Carbide	30

For other conditions, call 1.603.878.1565

TurtleSkin Protection

TurtleSkin's patented protection is not only found in WaterArmor, it is also featured in these Warwick products:



Although no safety glove can withstand a direct waterjet blast, **TurtleSkin Safety Gloves** offer the highest level of protection against punctures, cuts & abrasion without sacrificing comfort or dexterity.



TurtleSkin Law Enforcement and Corrections Gloves are used by police officers to help protect from accidental needlesticks, cuts and life-threatening viruses like HIV and Hepatitis C.



TurtleSkin SnakeArmor chaps, pants, and reversible gaiters are the lightest, most comfortable snake, briar, and thorn protection that money can buy. SnakeArmor is tested with live rattlesnakes.



TurtleSkin SpinSkins have the tightest, lightest weave ever achieved for bicycle inner tube puncture protection.

For more information about these TurtleSkin products, or to order, visit www.turtleskin.com.

Puncture Performance

Warwick produces flexible composite materials for the aerospace, industrial and recreational markets. You'll find Warwick's products where quality, durability, and high performance matter most.



NASA's First Choice

You don't get second chances on missions to Mars. That's why NASA chose Warwick to develop the critical fabric needed to make the Mars *Pathfinder's* crash bags.