

DATA SHEET

SE-shield CBRN protective suit for SE400



Updated: 30 Apr 2006

Description:	Chemically impermeable protective suit, specially made for use with SE400 positive pressure demand respirator. Disposable, single-use suit. The SE400 is fitted with a pressurisation hose which maintains a slight positive pressure inside the suit.
Product name:	SE-shield
Use:	Used to protect the entire body while wearing the SE400 respirator. Protects against particles and gases. Protects against chemical and biological materials including CBRN warfare agents.
Material:	Military grade Tyvek F® material
Weight of material:	509 g/m ²
Suit construction :	<p>Seams: Lap welded for extra strength .</p> <p>Visor seal: Fits tightly around the rim of the full face mask.</p> <p>SE400 hose: A hose sleeve fits around the entire length of the hose.</p> <p>SE400 filters: Sealed off from the interior of the suit by two threaded sealing rings.</p> <p>Gloves: Chemically impermeable gloves are fastened to the rigid sleeve rings with an airtight seal. The gloves are designed to be worn inside regular working gloves or rubber, leather or other materials. <i>NOTE: The supplied gloves are impermeable and impregnable, but are not designed for mechanical wear and tear. Heavy-duty outer gloves of butyl rubber, leather or similar must be worn over the inner gloves.</i></p> <p>Booties: Booties are permanently welded to the suit legs. The booties slip easily into regular outer heavy-duty boots or shoes. A special skirt covers the bootleg for further protection.</p> <p>SE400: The SE400 fan unit is worn on a balanced, convenient back-pack inside the suit.</p>
Fabric characteristics :	<p>Burst resistance: 227 kPa</p> <p>Puncture resistance: 30.9 N</p> <p>Flex crack resistance: 2500 cycles</p> <p>Air permeability: Impermeable</p> <p>Water vapour permeability: Impermeable</p> <p>Exposure to high temperature: Seams open at +98°C (208.4F)</p> <p>Exposure to low temperature: Flexibility down to -70°C (-94F)</p>

How pressurisation works:



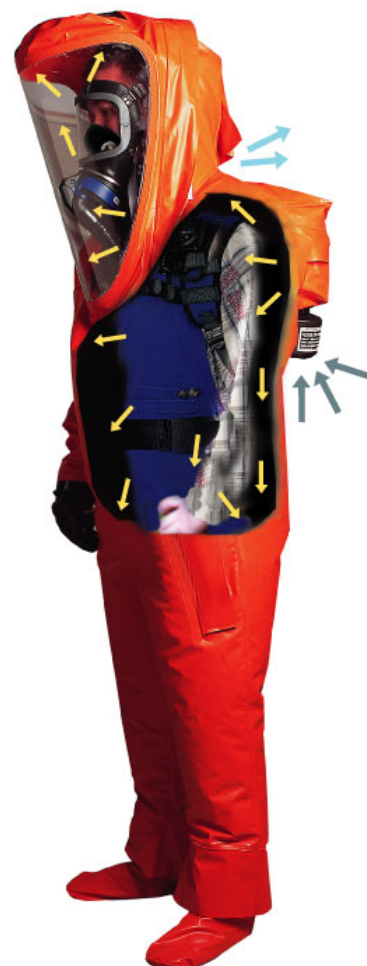
Fitted with a special breathing hose featuring a bleed valve, the fan unit of the SE400 inflates the suit with clean air and maintains a positive pressure inside the suit.

The wearer always has priority over pressurisation. When you are not breathing in air, the suit is inflated.

This not only contributes to the perceived cooling and ventilation of the suit, but also keeps inward leakage down to 0.1% typically.



Bleed valve on the breathing hose



Chemical breakthrough times :

(Tested in accordance with ASTM F739-1991)

Compound	Breakthrough time (min)
Acetone	>480
Ammonia	79
Carbon disulfide	>480
Chlorine	>480
Dichloromethane	5
Diethylamine	>480
Ethyl acetate	>480
Ethylene glycol	>480
Ethylene oxide	65
Hexane	>480
Hydrogen chloride	>480
Methanol	77
Methyl chloride	>480
Monoethanolamine	>480
NaOH concentrate	>480
Sulfuric acid	>480
Tetrachloroethylene	>480
Toluene	>480
Xylene	>480
Mustard gas	>480@+37° C(98.6F) *
Lewisite/Mustard (2:1)	>480@+37° C(98.6F) *
VX	>480@+37° C(98.6F) *

**) Tested by TNO, the Netherlands*

Inward leakage:

One unique feature of the SE-SHIELD suit is that it can be used with a pressurisation hose which turns the suit into a positive pressure suit. Inward leakage into the suit if using pressurisation hose is typically 0.1%

Storage period:

5 years in vacuum-sealed bag