MICROCHEM® CFR

Applications

- Oil and petrochemicals
- Petroleum distribution and processing
- Utilities

MICROCHEM® CFR is a flame retardant material designed to be worn over woven thermal protective garments such as NOMEX® or PYROVATEX®, offering protection from particulates and pressurised liquid spray without compromising worker protection in the event of a flash fire*.

Features & Benefits

Protection - Flame retardant treated fabric with PVC barrier film offering wearers protection from liquid chemicals to EN Type 3 & 4

Versatile - In most applications where there is the need for protection from chemical spray without compromising wearer protection in the event of a flash fire

Optimized Body Fit - Improves wearer comfort and safety

Highly visible - Highly visible bright red colour to improve worker safety

*Must be worn over thermal protective garments, such as NOMEX® or PYROVATEX®, and never be worn next to the skin.

MICROCHEM® CFR

In high risk areas MICROCHEM® CFR is proven to protect

MICROCHEM® CFR offers wearers protection from liquid chemicals to EN Types 3 & 4 and peace of mind to workers in potentially explosive/flammable environments, by decreasing the risk of burn injury when worn over thermal protective workwear*

Wear over a thermal protective garment (EN ISO 14116 Index 2 or above) to provide chemical spray protection according to Types 3 and 4.

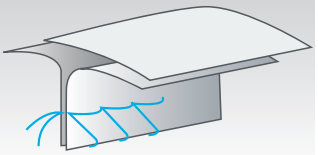
MICROCHEM® CFR Chemical Barrier Performance

Chemical Name	ASTM F903 Penetration (mins)	ASTM F739 Permeation (mins)
Acetone	>60	12
Carbon Disulfide	>60	7
Dichloromethane	>60	4
Ethyl Acetate	>60	16
Hexane	>60	>480
Sulphuric Acid	>60	10
Tetrachloroethylene	>60	>480
Toluene	>60	6

Protection Levels & Additional Properties

Stitched & Taped Seams

Increased strength and an effective liquid & particle barrier



Model 111

Suit Features
- 2 piece hood
- Elasticated hood, wrists and ankles
- Double zip closure

Sizes: S-3XL
Colour: Red

*MICROCHEM® CFR should never be worn in isolation for flame retardant protection. Always wear over the top of garments which achieve EN ISO 14116 Index 2 or above.

MICROCHEM® CFR Technical Data

MICROCHEM® CFR is extensively tested in accordance with statutory requirements, including physical performance attributes.

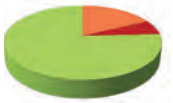
Test Method	Result	EN Class
EN 530 Abrasion (visual assessment)	>2,000 cycles	6 of 6
EN ISO 7854 Flex Cracking (visual assessment)	>15,000 <40,000	4 of 6
EN ISO 9073-4 Tear Resistance (MD)	30.2N	2 of 6
EN ISO 9073-4 Tear Resistance (CD)	45.6N	
EN ISO 13934-1 Tensile Strength (MD)	124N	2 of 6
EN ISO 13934-1 Tensile Strength (CD)	74N	
EN 863 Puncture Resistance	14N	2 of 6
EN 25978 Resistance to Blocking	No Blocking	-
EN 1149-5 Electrostatic Properties (surface resistivity)	Pass	-
EN ISO 14116 Limited Flame Spread	Index 1/0/0	-

MICROCHEM® CFR

Simulated flash fire test data

ASTM F 1930
Standard test method for evaluation of flame resistant clothing for protection against flash fire simulations using an instrumented manikin.

Body Burn Prediction
Flame Exposure Time: 3.5 seconds (data acquisition time 30 seconds)*
Mean heat flux: 2 cal/cm².sec



Clothing System A

- 3rd degree burns = 6.56%
- 2nd degree burns = 17.76%

% Total burn = 24.32%

Outer layer - MICROCHEM® CFR coverall
Mid layer – Inherently FR 6.0oz/yd² thermal protective coverall
Base layer – no underwear

Clothing System B

- 3rd degree burns = 30%
- 2nd degree burns = 23%

% Total burn = 53%

Outer layer – Single use 1.9oz/yd² microporous film laminate coverall
Mid layer – Inherently FR 6.0oz/yd² thermal protective coverall
Base layer – no underwear

Clothing System C

- 3rd degree burns = 18%
- 2nd degree burns = 21%

% Total burn = 39%

Outer layer – Single use 1.0oz/yd² spunbond polypropylene coverall
Mid layer – Inherently FR 6.0oz/yd² thermal protective coverall
Base layer – no underwear

Note: The burn injury results are expressed by calculating the percentage burn injury based on the total area of mannequin covered by the garments under test being 100%. For these tests the head, hands and feet were therefore not included in the calculations.

Technical Support

To test MICROCHEM® CFR with your flame retardant workwear, contact our technical team on
+44 (0) 1482 625444
or email
technical@microgard.com