

Subject Index

A

AATCC Committee RA-106, 14
 Abrasion effects, nonwoven liquid barrier properties, 282
 Acetone, 377
 Adhesion, 464
 surface, 251
 Adhesive coverage, microporous films, 87
 Aerosolized asbestos fibers, 141
 Aerosolized polystyrene latex spheres, 155
 Aerosolized silica particles, 130
 Agricultural workers, chemical protective clothing performance, 102
 American National Standards Institute, 62
 ANSI/ISEA Draft 103, 62
 Asbestos fibers, chrysotile, 130, 141
 Aspergillosis, 251
Aspergillus niger, 251
 ASTM Committee D-13 on Textiles, 14
 ASTM Committee F-23 on Protective Clothing, 365
 ASTM standards
 F 739, 365, 377, 409
 F 1060, 312
 F 1291, 233
 F 1342, 74
 F 1383, 409
 F 1407, 377
 F 1939, 312
 F 1670, 181, 423
 F 1671, 423
 F 1819, 181, 423
 Atrazine, 45

B

Barrier fabrics, 423
 Barrier laminate, 354

Barrier properties, 181
 abrasion effects on, 282
 effectiveness, 130, 141, 155
 microporous films, 87
 shell fabrics, 297
 efficiency, 269
 polyurethane membranes, 190
 resistance, 45, 130, 141
 Battle dress overgarment, 329
 Bench scale testers, 393
 Biaxial tension, 437
 Blood, synthetic, penetration test use, 87
 F 1670, 181, 423
 F 1819, 181, 423
 Boots, fire fighter safety, 74
 Burn injury potential, 33
 decrease, 546
 design change impact on, 224
 Butyl rubber, 437

C

California Department of Forestry and Fire Protection, 546
 Capillary penetration tests, 45
 Capillary transport, 464
 Carbon, activated, containing fabric, 329
 Carbon black, 437
 Cellulosic, 251
 CEN, 62
 Center for Research on Textile Protection and Comfort, 519
 Challenge chamber, 365
 Chemical barrier materials, 297
 Chemical permeation test cells, 365
 Chemical protective clothing, 62, 102, 464
 ASTM F 1383, 409
 gloves, 162, 354
 pesticide residue distribution, 269

resistance to liquid
 permeation
 ASTM F 739, 365, 377, 409
 ASTM F 1407, 377
 spray resistance of fabrics, 45
 treatment, fluorochemical
 finish, 342
 treatment, ultraviolet
 protective, 14
 U.S. Army battle dress
 overgarment, 329
 Chemical warfare, 329
 Chlorinated polyethylene, 409
 Chlorpyrifos, 342
 Chromatography
 gas, 102
 high performance liquid,
 102, 409
 Chrysotile asbestos fibers, 141
 Cloropel, 409
 Cold protective clothing, 233
 Comfort indices, microporous
 films, 87
 Composite barrier, 437
 Composites, 437
 spunbonded polypropylene
 fabrics, 141
 Conductive heat resistance,
 312, 557
 Constant flow valve, 342
 Continuous contact, liquid
 permeation resistance
 under
 F 739, 365, 377, 409
 Core temperature, 481
 Cotton, 342
 fungal spore retention, 251
 pesticide residue distribution,
 269
 Coveralls, 437
 Cut resistance, 74
 Cyclohexane, 377
 Cylindrical geometry, 393

D

Decontamination, 102, 354
 Degradation test cell, 365
 Discriminator test, two-point,
 162

Distribution pattern, 269
 Durability, fire fighter protective
 clothing fabric, 117, 504

E

Elastomer barriers, 437
 Electronic sensor, 423
 Endosulfan, 102
 European Committee on
 Normalization, 62

F

Field test, fire fighter protective
 clothing, 481
 Filter preparation, 130
 Fire Department of New York,
 224
 Fire fighter protective clothing,
 3, 33, 312, 519
 field evaluation, 481
 glove dexterity, 162
 heat stress, 535
 jackets, radiation heat
 protection, 212
 knee areas, thermal insulative
 performance, 312
 safety boots, 74
 thermal insulation, 557
 thermal performance, 393
 uniforms, 224
 useful lifetime methods, 117
 wildland, 504, 546
 Flame bonded fabric, 329
 Flash fire exposure, wear and fit
 conditions, 224
 Flashspun polyethylene fabrics,
 130, 141
 Fluorochemical finish, 342
 cotton-containing fabric, 282
 Friction, coefficient of, 74
 Functional properties, protective
 clothing, 203
 Function test, hand, for glove
 dexterity, 162
 Fungal spore retention on
 textiles, 251

G

Gas chromatography, 342, 354

Gas industry workers, thermal protective clothing performance, 393
 Gloves, 437
 chemical resistant, 354, 377
 dexterity, 162
 Granular pesticide, 354
 Gravimetric aerosol monitor, 251
 Gravimetric test cell, 102
 Guarded sweating hot plate, 519, 535

H

Hand dexterity, 3, 162
 Hazardous material glove dexterity tests, 162
 Heart rate, 481
 Heat flux, 312, 546
 Heat loss, 519, 535
 Heat loss, effect on comfort, 535
 Heat loss test, total, 481
 Heat resistance, 212, 437
 conductive, 312, 557
 radiant, 557
 ASTM F 1939, 312
 Heat stress, 3, 481, 519, 535
 Heat transfer, 312, 393, 557
 convective, 233
 moisture effects on, 33
 Hot plate, guarded sweating, 519, 535
 Human solar heat load, 14
 Hunting gear, insulation values, 233
 Hydrazine, 409
 Hydrostatic test, 423
 modified, 181
 Hypalon rubber coated material, 312

I

Image analysis, 269, 297
 India, pesticide protective clothing, 342
 Industrial Safety Equipment Association, 62
 ANSI/ISEA Draft 103, 62
 Infrared thermometry, 15
 Insulation, dynamic, 233

Insulative performance, fire fighter clothing knee areas, 312
 Intermittent contact, clothing permeation resistance F 1383, 409
 International Standards Organization, 62
 ISO Standard 6530, liquid penetration resistance, 102
 ISO Standard 13997, cut resistance, 74
 Isobutylene-isoprene copolymer-based composite barrier, 437

K

Knapsack sprayer, 342
 Knee reinforcements, fire fighter protective clothing, 312

L

Laminates, 87, 155, 423
 Laser particle counter, 155
 Laundering, 354
 Leather jackets, fire fighter, 212
 Lifetime, useful, fire fighter clothing, 117

M

Management system, protective clothing, 117
 Manikin testing, 203
 cold weather, 233
 fire fighter clothing, 212, 224
 thermal, 546
 M-cresol, 377
 Mechanical pressure technique, synthetic blood penetration test, 181
 Mechanical test, 423
 Melt blow, 329
 Methanol, 102
 Microporous films, 87, 282
 Moisture barriers, 519, 535
 Moisture content, effects on fabric, 251
 Moisture effects, 437, 557
 on heat transfer, 33, 212

Moisture evaporation, 504
Multilayer fabric systems,
transport properties, 504

N

National Research Council of
Canada, 117
Neoprene, 74, 354, 377
Nitrile, 354
Nitrobenzene, 377
N-methyl-2pyrrolidinone, 377
Nonwoven fabrics, 329
abrasion effects on, 282
barrier resistance, 45
particulate penetration
screening, 155
Nylon, 102
tricot knit, 329

O

Oil industry workers, thermal
protective clothing
performance, 393
Optical porosity, 297

P

Particulate penetration
screening, 155
Particulate soil, 251
Pegboard test, 162
Penetration, abrasion effect on
liquids on nonwovens, 282
Penetration, liquid, surfactants
effect on, 464
Penetration pressure, fabrics
tested in compression, 423
Penetration resistance,
protective clothing
agricultural workers, 102, 342
liquid, 282
sprayed Atrazine, 45
sun, 14
synthetic blood, 87, 181
Permeability, air, 504
Permeability, microporous films,
87
Permeation cup method
ASTM F 1407, 377
Permeation rate, 102

Permeation resistance
chlorinated polyethylene, 409
fiber content effects, 464
Permeation tests
ASTM F 739, 365, 377, 409
test apparatus, 297
cells, chemical, 365
Pesticide residue
distribution patterns, 269
gloves, 354
Pesticide applicator protective
clothing, 342
glove materials, 354
Petrochemical industry workers,
thermal protective
clothing performance, 393
Phase Change Material, 3
Pin pickup test, 162
Planar geometry, 393
Plasticization, 437
Polyester/cotton fabric, chemical
protection, 102
Polyester fabric, fungal spore
retention, 251
Polyethylene, chlorinated, 409
Polyethylene fabrics, 130, 141, 269
Polyethylene glycol, 190
Polymeric membranes, 377
Polypropylene, 329
Polystyrene, 155
Polyurethane, 190, 329
Polyvinyl chloride fabric, 102
Porosity, 297
Pressure penetration tests, 45
Pressure ramp rates, 423
Propellant concentrations, 409
Puncture resistance, 74
Pyranometers, 14
PyroMan Thermal Protective
Clothing Analysis System,
224

R

Radiant heat protection, 212
Radiant heat resistance, 312, 557
Radiant protective
performance, 504
Regression analyses, 481
Residue distribution, 269
Run-off test method, 102

S

Scanning electron microscopy, 130, 141, 190, 269
Shell fabrics, barrier effectiveness, 297
Silica particles, aerosolized crystalline, 130
Single layer fabric testing for thermal protection, 393
Skin temperature, 481
Ski wear, 233
Solar radiation, total
Solvents, protective glove resistance to, 377
Spray absorption resistance, 45
Spray pattern nozzle, 45
Sprayer, knapsack, 342
Spunbond-meltblown-spunbond nonwoven fabric, 45
Spunbonded polypropylene composite fabric, 130
Standards (See AATCC; ASTM standards; International Standards Organization), 62
Steel mill worker protective clothing, 3
Stored energy test, 33
Sun protective clothing, 14
Surface adhesion, 251
Surface tension, 464
Surface wetting, 282
Surfactant concentration, 464
Surgical gowns, 87, 181, 190, 423
Swelling technique, 377

T

Tefluthrin, 354
Telemetry system, 481
Terbufos, 354
Thermal comfort, 437
Thermal energy, stored, fire fighter protective clothing, 33
Thermal manikin testing, 546
Thermal protective clothing, cold weather, 233
Thermal transfer, 212
Thermodynamic character, sun protective clothing, 14

Thicknesses, garment layer, 233
Threshold time, 312
Tolerance time, 557
Total solar radiation transmission, 14
Trichloroethylene vapor adsorption, 329
Turnout gear (See Fire fighter protective clothing)
Two-way analysis of variance, 546

U

Ultraviolet detection, 102
Ultraviolet protective chemically treated clothing, 14
U.S. Army battle dress overgarment, 329
U.S. Army Research Institute for Environmental Medicine, 14
U.S. Forest Service, 546

V

Valve, constant flow, 342
Vapor adsorption capacity, 329
Vapor diffusion, fabric resistance to, 297
Vapor transmission rate, 409
Viral assay, 423
Viscosity, 464
Volumetric technique, 377

W

Water vapor transmission, 190
Wear trails, controlled, 203
Wettability, 464
 surface, 87
Whelan's equation, 297
Wicking, 464
Wildland fire fighters, 504, 546
Work clothing, insulation values, 233
Woven fabrics, particular penetration screening, 155

X

X-ray photoelectron spectroscopy, 190