

Subject Index

A

AAtrex Nine-O, 481
 Abrasion resistance, 754
 Aerosol particle counters, 742
 Aerosol test, virus, 49
 Aerosol protection, 3, 162
 Airborne particulates, 3, 742
 Air cooling vest, 583
 Aircrew chemical protective clothing, 583
 Air ventilated jacket, 597
 Alberta Occupational Health and Safety, 496
 Alcohol penetration testing, 83
 Alpha-cellulose finish, 481
 Aluminum gravimetric cup cells, 363
 Aluminum, molten, 252, 692, 698
 Ambersorb, 529
 American Association of Textile Chemists and Colorists, 83
 American National Standards Institute, 675
 Anthropometric analysis
 gloves, 634
 test mannequin, 604, 717, 734
 Aramid fibers, 266, 754
 Asbestos, 515, 660
 ASTM standards (See also Standards), 1008
 C 177: 399
 C 518: 399
 C 1114: 399
 F 739: 153, 189, 339, 363
 F 903: 58, 65, 123, 427
 F 1154: 311
 draft biological fluid resistance test, 83
 Atrazine residue, 481, 830

B

Bacteriophage
 Phi-X174, 38, 49, 65

Battledress overgarment, 507
 Biological liquids, 38, 49, 58, 65, 83
 clothing standards, 322
 Blade sharpness, 17
 Bleach pretreatment, 799
 Blood, 58, 65, 83
 Bonding, thermal, 442
 Boots, 322, 544, 793
 Borax treatment, 252
 Breakthrough time, 363, 382
 Butyl, 114, 867

C

Carbonaceous adsorbent coated fabric, 529
 CEN (See European Committee for Standardization)
 Chain saw protective clothing, 703
 Challenge, 956
 5100, 894
 5200, 894
 Chemical fill test, 99
 Chemical protective clothing (See also Pesticide resistance)
 aircrew, 583
 contamination, 785
 cost of use, 972
 disposable, 311
 dive suits, 427
 ethylene glycol dinitrite resistance, 153
 exercise heat stress, 507
 F 1154: 311
 fluoropolymer-based, 894, 956
 gloves, 99, 114, 141, 634, 867
 hazardous waste, 849
 heat resistance, 583
 heat stress, 507, 557
 hood and overgarment, 557
 National Fire Protection Assn. standards, 322, 908
 nitroglycerin resistance, 153
 permeation cup test, 363, 382

1018 PERFORMANCE OF PROTECTIVE CLOTHING

- resistance tests, 123
- spill response, 9

- Chemicals, nonvolatile, collection
 - method for, 339

- Chemrel Max, 785

- Chilton-Colburn j-factors, 604

- Chinese State Standards, 1008

- Chlorobenzilate, 529

- Chlorobutyl, 785

- Chlorpyrifos, 799

- Chromatography

- gas, 153, 189, 339, 363, 481

- high performance liquid, 418, 529

- Chrome dying, 692

- Clean room fabrics, 742

- Clothing systems, layered, 399

- perspiration accumulation in, 281

- pesticide resistance, 210

- thermal protection, 221, 616

- Cold protection, 281, 297, 399

- boot, 544

- glove, 350

- semipermeable membrane, 616

- Cold storage, clothing protection, 297

- Collection procedures, 339

- Commission of the European Community, 1001

- Compression testing, 26

- Contamination control, clean room, 742

- Cost, protective clothing use, 972

- Cotton

- bleach pretreatment, 799

- blend, pesticide residue removal, 818

- borax treatment, 252

- flame-resistant, 266, 754, 766, 775, 840

- gauze particulates, 742

- molten aluminum protective clothing, 698

- pesticide resistance, 210, 481

- Coveralls

- decontamination, glyphosate, 811

- design, disposable, 660

- sizing, 675

- Cracking pressure test, 427

- Cryolite, 252

- Cutting effects method, 17

- Cutting resistance, glove, 17

D

- Decontamination, protective clothing, 849, 972

- asbestos, 515

- atrazine, 830

- chemical, 785

- glyphosate, 811

- methyl parathion, 174, 818

- nitrile, 153

- Degradation, 464, 754, 766, 775, 799

- Denim, pesticide resistance, 210, 529

- Deposition

- aerosols, 3

- Detector tubes, 785

- Detergent, 818

- Dichloropentane, 114

- Dicofol, 418, 529

- Dip test, 141

- Disposable protective clothing, 311, 972

- applicators, 481

- asbestos abatement, 660

- coveralls, 675

- Dive suits, chemical protective, 427

- Dry test method, 49

- Dynamite, 153

E

- Education and awareness program, 496

- Elbow lean test, 65, 83

- Electric arc tester, 221

- Electrolyte, molten, 252

- Encapsulated ensembles

- emergency response, 956

- fire fighting, 311

- Engineering Anthropometric Clothing Design Model, 634

- Environmental Health Directorate, Health and Welfare Canada, 189

- Ergonomics issues, protective devices, 651

- Ethylene glycol dinitrate, 153

Etridiazole, 418
 European Committee for
 Standardization, 237
 draft standards, 982, 1001
 European Economic Community
 standards, 982, 990, 1001
 Evaporation, perspiration, 281,
 507, 557, 583, 597
 Exhaust valves, testing, 427
 Explosives, 153
 Extended wear protective
 clothing, 464

F

Federal Insecticide, Fungicide,
 and Rodenticide Act, 481
 Field test kit, 382
 Filtration, 3
 Fire fighting suits, 857
 decontamination, 785
 disposable, 311
 selecting, 885
 standards for, 322, 885
 ventilation, 629
 Fire/flame resistance, 908
 chemical, for fabric, 692, 698
 clothing, 221, 496
 durability, 754, 766, 775, 840,
 867
 fabrics, 252, 266, 754, 766, 775
 gloves, 867
 repellency treatments, 840
 rubber, 114
 standards, 982
 workwear programs, 496
 Fire, flash
 accident, 266, 496
 test mannequin, instrumented,
 717
 Fire, flashovers
 clothing resistance to, 221, 908
 Fit, 867
 coveralls, 675
 effect on use, 946
 helmets, 651
 static, gloves, 634
 Flex abrasion, 742, 775
 Flexor, glove material, 350
 Fluorocarbon treatment, wool, 692
 Fluorochemical treatment, 840

Fluoropolymers
 fiber-reinforced, 894
 films, 956
 Foam finishing, 442
 Footwear
 boots, standards for, 322
 chain saw protective, 703
 cold-wet responses, 544

G

Gas dilution technique, 629
 Gas penetration
 F 739: 153, 189, 339, 363
 Glass jar, gravimetric permeation
 test, 363
 Gloves
 anthropometrics, 634
 chemical resistance, 114, 867
 classification, 26
 cold protection, 350
 contact heat protection, 237
 cutting resistance, 17
 dip test, 141
 flame-resistant, 867
 hand and wrist injuries, 924
 leak test, 38, 99
 leather, 350
 liquid penetration resistance,
 58
 medical, 38, 99
 permeability, 141
 pesticide resistance, 189, 198
 puncture resistance, 26
 standards for, 322, 1001
 tensile strength, 99
 wet protection, 350
 Glyphosate, 811
 Gowns, surgical, 83
 Gravimetric method, 363, 382
 Gravimetric permeation cells, 363

H

Hand and wrist injuries, 924
 Hazardous waste, equipment
 decontamination, 849
 Heat flux, 717
 C 177: 399
 C 518: 399

1020 PERFORMANCE OF PROTECTIVE CLOTHING

Heat insulation measurement,
221, 237

Heat loss, 281, 583

Heat-mass transfer analogy, 604

Heat resistance standard tests,
252, 982

Heat-resistant fabrics, 221, 754,
775

cotton, 266

Kevlar, 266

molten metal, 252

Nomex, 266

wool, 266

Zirpro fabric, 252, 692, 698

Heat stress, 507, 557, 597, 629,
857, 885

Heat transfer, 604

Helicopter, protection
ensembles, 583

Helmets, industrial, 651

Helsasafe, 529

Herbicide, 481

Hexane, 529

Hood, butyl, 557

Hospitalization, New Zealand,
data base, 924

Hydrocarbon liquids, 114

Hydrodynamic pressure
distributions, 3

Hygrometry, automatic dew
point, 557

Hypobaric environments, 604

I

INDURA fabric, 775

Industrial Safety Equipment
Assn., 675

Inflation, air, testing, gloves, 99

Institut Textile de France, 17

Insulation prediction, clothing, 604

International Organization for
Standardization, 982,
1001, 1008

Iron, molten cast, 252

K

Kermel/viscose, 840

Kevlar, 266

Kinetic permeability test, 141

Kiss roll coating, 443

L

Laminates

nonwoven, 442

plastic film, 198, 867

Latex gloves, 38

Laundering procedures, 153,
174, 818

asbestos protective clothing,
515

atrazine, effect on, 830

bleach pretreatment, 799

cold water, glyphosate, 811

flame-resistant fabric, effect
on, 754, 766, 775, 840

Lawn care, protective clothing, 933

Leak tests

exhaust valves, 427

gloves, 38, 99

Leather

boot, wet-cold resistance, 544

F 739: 153, 189, 339, 363

F 903: 58, 65, 123, 427

glove, Flexor, 350

Leg protection, 703

Lycra/polycotton, 840

M

Manitoba Electric Arc thermal
protective performance
tester, 221

Mannequin, 266, 281

instrumented test, 604, 717,
734

Masks, respiratory, 557

Mason jar test, 83

Matrix contamination, 849

Meat packing industries, 297

MEAT tester, 221

Mechanical stability, 162

Melt blown/spunbond material, 481
nonwoven laminates, 442

Metal, molten, 252, 692, 698, 857

Methyl parathion, 174, 210, 818

Microbial test method, 49

Mixers/loaders, 481

Modeling

aerosol protection, 3

economic, 972

permeation, 894, 956

Moisture barrier, 885

Movement analysis
 effect on use, 946
 protective analysis, 660

N

Naphthalene sublimation, 604
 National Fire Protection Assn.,
 322, 908
 Neoprene, 189, 867
 puncture resistance, 26
 Nitrile, 153, 867
 Nitrile butyl rubber, 189
 Nitroglycerin, 153
 Nomex, 266, 775
 Nomex/Kevlar, 840
 Nuclear bacteriological chemical
 clothing, air ventilated, 597
 Nuclear biological chemical
 (NBC) clothing, 464
 Nylon, temperature rise, 237

O

Occupational Safety and Health
 Administration, 65, 849
 asbestos protection, 515
 Oxygen bleach pretreatment, 799

P

Pads, chain saw protection, 703
 Pants, fire fighting, 629
 Particulate shedding, 742
 Permeation cells, 363
 Permeation, computer
 prediction, 956
 Permeation cup test, 363, 382
 Perspiration accumulation, 281,
 297
 Perspiration transmission, 616
 Pesticide removal, 799, 811,
 818, 830
 Pesticide residue, 174
 bleach pretreatment, 799
 Pesticide resistance, 162, 189,
 198, 418, 933
 atrazine, 481, 830
 gloves, fit, 634
 glyphosate, 811
 helsasafe, 529

intermittent collection
 procedure, 339
 methyl parathion, 174, 210, 818
 Vision, 811

Phi-X174 bacteriophage, 38, 49, 65
 Plastic film laminates, 198
 Polar liquids, 114
 Polybenzimidazole, 840
 Polyester, 840
 Polypropylene, 481
 knit, pesticide resistance, 210
 laminates, 442
 Polyvinyl chloride, 189, 198, 785,
 867
 Pore contamination, 849
 PROBAN flame retardant, 775
 Programs, protective equipment,
 496, 857
 increase use, 946
 Puncture resistance, gloves, 26

R

Radiant heat flux, 221
 Radiant reflectivity, 908
 Repellent finish, 442, 840
 Residue, pesticide, 174, 799
 Respiratory masks, 557
 Robotics, test mannequin, 266,
 281, 604, 717, 734
 Roller coating, 442
 Rubber, 544, 785
 natural, 189, 198

S

Seams, effect on pesticide
 penetration, 418
 Sharpness, blade, 17
 Sizing problems
 effect on use, 946
 gloves, 634
 Skin simulant sensors, 717
 Soil, 754
 oily, 174
 particulate, 174
 Soft tissue simulation, 734
 Solid absorbent collection method,
 339
 Solubility parameters, 894

1022 PERFORMANCE OF PROTECTIVE CLOTHING

Solvents

- collection procedure, 339
- glove resistance, 141, 198

Sontara FC test, 481

Splash collection method, 339

Splash protective clothing, 123

Sponge, surgical, 65

Spunbond, melt blown, laminates,
442, 481

Standards (See also ASTM
Standards)

- chain saw leggings and
footwear, 703

Chinese, 1008

ergonomics, 651

European Committee for
Standardization,
237, 982, 1001

European Economic
Community, 982,
990, 1001

fire fighting equipment, 885

International Organization
for Standardization,
982, 1001, 1008

National Fire Protection
Assn., 322, 908

protective equipment program,
857

protective gloves, 237

sizing, coveralls, 675

Sweat accumulation, 281, 297, 583

Sweat transmission, 616

T

Tear strength, flame-resistant
fabrics, 775

Tensile strength, 99

flame-resistant fabrics, 754, 775

Terrazole, 529

Thenar eminence, pain threshold,
237

Thermal bonding, 442

Thermal comfort, 583

boot, 544

effect on use, 946

gloves, 350

semipermeable membrane, 616

tests, 162, 297, 557, 629, 924

Thermal mannequin, 266, 281,
604, 717

Thermal protection, 698

boot, 544

glove, 237, 350

hypobaric, 604

performance, clothing, 221, 266

rating, 221, 266, 775, 908

semipermeable membrane, 616

test methods, 399, 717, 734

Thermal stripping, 785

Thermal transmission properties

C 177: 399

C 518: 399

C 1114: 399

Thermo-Leg evaluation system, 266

Thermo-Man evaluation system, 266

Thermoregulation, 597

Tissue simulation, soft, 734

Triethyl phosphate, 114

Trimethylpentane, 114

Toluene, 114

Trenchfoot, 544

U

Ultraviolet light, 189

U.S. Coast Guard, 956

U.S. Environmental Protection

Agency, 198, 382, 515, 972

U.S. Fire Administration, 382

U.S. Navy, 867

V

Vapor protective suits, 427
standards, 322

Ventilation, clothing, 583, 597,
629

Vertical flame test, 775

Vest, air cooling, 583

Vinyl taped suits, 597

Virus transmission, 38, 49, 58,
65, 83

Viscose blend, flame-resistant, 754
viscose/pbi, 840

Vision, 811

Viton, 189, 867

Viton/chlorobutyl, 785

W

Wash durability, flame-resistant
cotton, 754, 766

Water fill test, 99
 Water leak test, 38
 Waterproof gloves, 350
 Water, effects on flame-resistant fabrics, 754, 766, 775
 Water hardness, effect on residue removal, 818
 Wear effects
 bleach pretreatment on cotton, 799
 flame-resistant fabrics, 754, 766, 775
 Wet protection
 boot, 544
 glove, 350
 semipermeable membrane, 616
 Wood pulp/polyester/spunlaced, 481

Wool
 finishing, molten metal adhesion to, 692
 flame-resistant, 266, 754
 sweat accumulation, 281
 smelting protection, 252
 Wrist injuries, New Zealand, data base, 924

Z

Zinc, molten, 692
 Zippers, effect on pesticide penetration, 418
 Zirpro fabric, 252, 692, 698