Subject Index

A

Accelerated ageing, 66, 81
testing, 51, 197
Acrylic sealants, 22
Adherence, 251
Adhesion performance, 107
properties of sealants, 169, 243
tensile, 169
tests, 98
Air infiltration, 94
Aluminum, 107
Artificial weathering, 81
ASTM standards, 169, 288
C 24, 169
C 784-80, 107
C 794-80, 107
C 834, 22
C 920, 22
C 1248, 197, 210
C 1382, 169

B

Band-aid joint, 115, 129, 157
Birds, effect on sealants, 94
Bituminous membranes, 251
waterproofing systems, 251
Blister, 251
Boot, 142
Bridge deck, 251
Bridge sealant joint, 115, 129
Bridge seals
    cast-in-place, 115
    pre-cured silicone, 115
    hybrid methods, 115
Building roof sealants, 179
Building seals, 288

C

Cantilever slab stiffness, 98

Chemical spectroscopy, 66
Compatibility, sealants, 179
Compression molding, 115
Concrete core sampling, 98
Concrete substrates, 210
Concrete surface crack mapping, 98
Containment of spills primary, 277
secondary, 277
Curtain wall, 142, 157
Cyclic fatigue, 1
fatigue testing, 43, 51
movement, 66

D

Dual durometer systems, 219
Durability, 81
    exterior, 22, 169, 243
    laboratory, 22

E

EIFS (Exterior Insulation and Finish Systems), 22, 129, 169
Elastomeric sealants, 66, 219
Extremal analysis, 1
Extrusion, 142

F

Failure mode, 107
Fatigue
    cyclic, 1
    cyclic testing, 43, 51
    shear, 43
Finite element analysis (FEA), 219, 229
Fireproofing, 268
Fire retardant, 268
Firestop, 268
Floor deflections, 98
Fluid migration, 210
Free films, 66

G

Gaskets, 129
Glazing
design, 243
joint geometry, 243
seal, 219
Granite substrates, 210
Gumbel probability plot, 1

H

Heat-cured extruded silicone, 115

I

Injection molding, 157
International Organization for
Standardization (ISO)
11600, 22
Intumescence, 268

J

Joints, 229
adhesive failure, measuring,
107
band-aid, 115, 129, 157
bridge, 115
compounds, model, 66
movement, 22, 81, 129
openings, bird caused, 94
splice, 142

L

Limestone substrates, 210
Liquid injection molding, 157
Low slope roofs, 179

M

Maintenance of roof sealants, 179
Mapping, crack, 98
Marble substrates, 210
Membrane, bituminous, 251
Mini-specimens, 51

Modulus, 107, 169
Molding
injection, 157
pressure and heat cured, 157
Movement
architectural, 288
building sealant, cyclic, 1, 81
capabilities, 179, 243
joint, 22, 81, 129
shear joint, 43
structural, 288
systems, 288
Mullion
center, 142
side, 142
Multi-part urethane, 98

N

Natural weathering, 66
Non-linear structural materials,
229

O

Oil penetration, 197
Overhead glazing, 229

P

Peel test, 107, 251
Peeling measurement, 107
Performance oriented
thermography, 251
PJS, preformed joint seals, 129
Polymers, 277
Polysulfide sealants, 43, 169,
277
Polyurethane sealants, 22, 169,
197
Porous substrate, 197, 210
Preformed sealants, 129, 142,
157
Pressure-and-heat-cured
molding, 157
Primary containment, 277
Primer
bitumen, 251
epoxy, 251
Probe tests, 98
Pull-off test, 251
### Q

- Quality assurance, 179

### R

- Rail, 142
- Roof sealants, 179
- RTV silicone, 115

### S

- Sealing bead, 43, 229
- Secondary containment, 277
- Sensitive substrates, 129
- Shear fatigue, 43
- Shear test, 251
- Silicone preformed joint seals (PJS), 129
- Silicone sealants, 98, 169, 229
  - acrylic, 22
  - adhesive failure, 107
  - boots, 142
  - cyclic fatigue testing, 51
  - durability, 129
  - heat-cured extruded, 115
  - preformed, 157
  - RTV, 115
  - stone substrate staining, 197
- Skylights, 229, 288
- Spaceframes, 288
- Spectroscopy, chemical, 66
- Spill containment, 277
- Splice joint, 142
- Splice plate, 115
- Stain, 197, 210
- Steel reinforcement mapping, 98
- Stress strain analysis, 243
- Structural silicone, 229
- Substrate
  - combustibility of, 268
  - porous, 197, 210
- Surface roughness, 251
- Surface-sealed system, 157

### T

- Temperature behavior, 1
- Thermal coefficient of expansion, 1
- Thermoanalysis, 66
- Thermoplastic elastomer (TPE), 219
- Thermoplastic vulcanizate (TPV), 219
- Three-dimensional FEA model, 229
- Three-dimensional molded silicone parts, 115, 142, 157
- Through-penetration, 268
- Time compression factor, 66
- Two-dimensional bead model, 229
- Two-dimensional bridge joint, 142

### U

- Ultraviolet fluorescent test chamber (Q-U-V Weather-o-meter), 210
- Ultraviolet resistance, 179
- Urethane, multi-part, 98

### V

- Vapor retarder, 98
- Viscoelastic, 107

### W

- Water leakage, 94, 288
- Waterproofing systems, 251
- Weather-o-meter, 22, 210
- Weatherproofing, 129
- Weathering
  - artificial, 66, 81
  - natural, 81
  - outdoor, 81
- Weibull analysis, 51
- Weibull distribution, 51
- Wet seal, 142
- Window glazing performance, 243