Index

Accent lighting, 195–196, 200–201. See also Lighting

Accessible design
bathrooms, 219–223
bathtubs, 221–222
cooking center layout, 217
counter heights, locations, 216
grab bars, 222–224
kitchen sink center, 216–217
kitchens, 215–217
knee space, 215, 220–221
lavatory layout, 220–221
lighting in kitchens, 217
 pocket doors in baths, 219, 223
refrigerator work center, 217
roll-in shower, 221–222
storage areas, 216
toilet space, 221
wheelchair turning space, 215, 222–223

Acid rain, and copper flashing, 7

Acoustical sealant, 190, 193

Acrylic
sealants, 40
sinks, 252–253
tubs and showers, 253, 255

ACZA (ammoniacal copper zinc arsenate), 136–137, 147. See also Pressure-treated wood

Adhesives
comparison chart, 41
drywall, 160–163
epoxy, 41
exterior, 40–42
laminate flooring, 179
low-VOC, 179
plastic moldings, 34–36, 185
polyurethane, 41
resilient flooring, 171
roofing tile, 69–70
yellow glue, 40–41

Agglomerates, stone tile, 230–232, 239

Air cleaners, 269, 277–281
applications, 269
comparison chart, 279
effectiveness and particle size, 278–281
effectiveness in real-world, 281
electronic, 278–280
gas removal, 278, 280
HEPA filters, 278–281, 282
mechanical filters, 278–279
negative-ion generators, 280
particles vs. gases, 277–278
portable, 281
radon removal, 278
turbulent flow precipitators, 280

Air conditioning, biological pollutants from, 282, 289

Air infiltration
effect of sheathing wraps, 3
effect on wall drying, 1

Air leakage, window ratings, 104, 113, 117
Air pollution, effect on flashings, 7, 82.
See also Indoor air quality

Air quality. See Indoor air quality

Air space
under cedar shingles, 15
double-layer building paper, 4
draining housewraps, 4–5
in rain-screen wall, 2–3
reducing extractive bleeding, 5
under wood siding, 5, 10
between wood siding and foam, 3

Air-to-air heat exchangers.
See Energy-recovery ventilators, Heat-recovery ventilators

Algae
on low-slope roofing, 94
on metal roofing, 74
resistance to, asphalt shingles, 53
on wood roofing, 87, 93
See also Mildew

Aluminized steel, metal roofing, 82–83

Aluminum
corrosion of, 137, 146
effects of salt spray, 7, 82, 84–85
exposed-fastener panels, 74–76
fascia details, 23
metal roofing, 82–83
modular shingles, 74, 80–81
moldable pipe flashing, 72, 77
siding nails, 11
standing-seam roofing, 78
wall flashing, 7

See also Lighting

American Architectural Manufacturers Association (AAMA), 107, 109–111

Americast, bathtubs, 254–255
Amowrap, permeance rating, 4
ANSI, grab bar guidelines, 222–224
Antiscald protection, 219, 258–259
Arches, drywall, 163–164
Architectural shingles, 52–53. See also Asphalt shingles
Argon, gas fill for windows, 112
Armacryl, tubs and showers, 255
Asbestos, 284, 292
in fiber-cement, 19

ASHRAE
air cleaner standards, 279–280
formaldehyde standard, 288
ventilation standards, 269–271

Asphalt felt
ASTM standard, 3–4
corner splines, 13
effect on wet siding, 2
interlayment for shakes, 88–90
properties, 2, 4
roofing underlayment, 54, 66–69
sealing around windows, 122
underlayment for sidewall shingles, 15
See also Underlayment

Asphalt roofing cement
incompatible with metal roofing, 84
incompatible with modified bitumen, 96
sealing shingles, 53, 57, 59–61
sealing tile roofing, 71–74

Asphalt shingles
algae resistance 53
leaves flashing, 54–56
fastening, 58–59
flushing, 59–61
high-wind installation, 58
installation 57–62
installation temperature, 57
laminated, 52–53
low-slope installation, 59
manual sealing, 57
offsets, 57
organic vs. fiberglass, 51–52
quality, 51
reroofing with, 62
steep-slope installations, 59
types, 51–52
underlayment for, 54–55
valleys, 59–61
warranties, 53–54
wind resistance, 53

Asthma, and indoor air quality, 268–269, 282, 288–289, 293–294

ASTM
asphalt felt standard, 4
asphalt shingle standards, 53
building paper standard, 3–5
galvanized steel standards, 141, 143
roofing tile standards, 63
sealant standards, 39
stainless-steel standards, 141, 143
Awnings, shading with, 118–119

Awnings windows, 105

Backdrafting, 270–272, 293–296
effects of range hoods, 263
effects of ventilation systems, 270, 273, 275
preventing, 293, 295–296
testing for, 296

Backer rod, use in caulk joints, 38–39, 237

Backerboard
cement, 232–239, 256
gypsum, 235
See also Ceramic tile

Back-priming
fiber-cement siding, 21
wood siding 5, 9–10, 45
Balusters, fastening, 148, 150

Bamboo floors, 175

Band joist
connection to ledger, 144–146
flushing, 6, 145
stucco control joints at, 26
INDEX

See also

Asphalt felt

Bark-side down, wood trim, 31
Bath fans, 261–262

Build-up roofing (BUR), 87, 94–95
Butyl flashing tapes
compatibility with sealants, 6
vs. modified bitumen, 5
See also Flashing types
Butyl sealant
characteristics, 38, 40
sealing metal roofs, 78, 80, 84
Butyl tape, sealing metal roofs, 78, 80, 84
Byrne, Michael, tile consultant, 237–238

Cabinets. See Casework; Kitchen cabinets
Callbacks
avoiding on low-slope roofs, 54
ceramic tile, 227
rare with EPDM, 96
water-leakage related, 1
Cambara, decking, 139, 142
Capillary action, through siding, 1
Capillary break
in EIFS, 29
in rain screen, 2
from termite shields, 7
Carbon monoxide, 290, 293–294, 295–296
Carpet and Rug Institute (CRI), 182
Carpeting
comparison chart, 181
Green Tag program, 292
health effects, 183, 292
installation, 182
material choices, 180–181
paddin types, 181–182
pollution source if wet, 289
sound control with, 189, 193
Casement windows, 103–105, 107, 117
Casework
material options, 186
with MDF, MDO, 186
with particleboard, 186
shelving spans, 186
with veneer-core plywood, 186
Cast iron. See Enamed cast iron
Cast polymer
composite sinks, 252, 253
countertops, 248–250
Caulking
acrylic latex, 40
bond breakers, 38–39, 237
comparison chart, 38
exterior trim, 36–37
failures cause leakage, 1
joint design, 37, 39
required by MEC, 3
types described, 37–40
windows and doors, 13
See also Sealants
CCA. See Chromated copper arsenate
Cedar Breatherv87–88, 90–91
Cedar Shake and Shingle Bureau, 15, 86, 92
Cedar
deciking, 138–139, 142
degrading building paper, 2
degrading housewrap, 5
effects on copper flashing, 7, 92
extractive bleeding of, 10, 46
paintability of, 31
reaction with galvanized nails, 11, 13
roofing shingles, shingles, 85–86
siding shingles, 15–19
siding nails, 11, 17–18
siding, 9–14
unfinished shingles, 19, 47
unfinished siding and trim, 47
See also Shakes; Wood shingles
Cellular PVC, trim, 35–36
Cement backerboard, for tile, 232–239, 243, 256
Central vacuum systems, 269, 289, 292
Ceramic coatings, for deck fasteners, 141
Ceramic tile
bisque characteristics, 227
over cement backerboard, 232–239, 256
comparison chart, 229–230
over concrete slabs, 235
countertop details, 233–235, 250
crack isolation, 237–238
over Dens-Shield, 235
over drywall, 235
over existing surfaces, 235
flooding pros and cons, 225
framing requirements, 232, 235
glazed vs. unglazed, 227–228
grouting, 241–242
over gypsum backerboard, 235
isolation membranes, 232, 237
leveling compounds, 235–236
medium-set installation, 240
mosaic, 228
pavers, 228–230
porcelain, 228–229
quarry tile, 229, 230–231
selecting tile, 227–231
setting compounds, 237–240
setting-compound comparison chart, 239
shower pans, 241–243
slip protection, 228
strength and water absorption, 227
subflooring requirements, 232
substrates for 232–236
thinset installation, 239–240
waterproofing membranes, 236, 242–243
wear ratings, PEI scale, 228
Chandeliers. See Pendants
China, sinks, 252, 253
Chromated copper arsenate
health concerns, 135–136
phase out, 135
Clad windows, 105–107, 120
aluminum, 107
fiberglass, 107
vinyl, 107
Cladding
leakage in, 1, 8–10, 12, 37
in rain screen, 2
See also EIFS; Siding; Shakes; Stucco; Vinyl siding; Wood siding; Wood shingles
Clear finishes
exterior, 46–47
interior, 188–189
Closet lighting, 203
Color temperature, of common lamps, 199
Color-rendering index. See CRI
Combustion appliances, 293–296
chimney problems, 295
fireplaces, 269, 272, 278, 293–296
health effects, 293–294
induced-draft, 295
power-vented, 29
sealed-combustion, 295
woodstoves, 269, 278, 293–296
Compact fluorescents, 195, 197–199, 201–203, 206
INDEX

Composite decking, 138, 140–141
screws for, 141–142
Concrete, substrate for flashing membranes, 6
Concrete slabs
installing wood flooring on, 168–170
radiant heating with, 175
Condensation, on windows, 117–118
Connectors, for exterior decks, 141, 143, 147–149
Control joints
EIFS, 29
cement, 38
drywall, 161
polyurethane sealant for, 38, 40
tile crack isolation, 237–238
See also Expansion joints
Cooktops
accessible work center, 217
work center, 211–212
Copper
corrosion from cedar, 7, 92
effects of salt spray, 84–85
metal roofing, 83
modular shingles, 80
standing-seam, 78
tile roof flashings, 72–73, 75
tile roofing nails, 68
twisted wires, 69–70
use in algae-resistant shingles, 53
use to protect wood roofing, 93
wall flashing, 7
Copper azole (CBA-A, CA-B), 135–137,
139–141, 146. See also Pressure-treated wood
Copper nails
staining wood siding, 11
for tile roofs, 68
Copper naphthenate, 94
Copper octoate, 94
Copper quat (ACQ), 135–137, 139, 141,
146–147. See also Pressure-treated wood
Cork flooring, 177–179, 226
in kitchens and baths, 226
Corner boards
fiber cement, 34
LVL, 33
PVC, 35
rain-screen type, 37
for vinyl siding, 24
wood siding, 8, 13
Corners
shake and wood shingle, 17–18
vinyl siding, 24
wall flashing for, 8, 13
Corrosion
and wood preservatives, 137, 141, 143, 146
of copper flashing, 7, 92
of metal roofing, 76, 79, 83, 84
Countertops
accessible, 216
cast polymer, 248–250
ceramic tile, 250
comparison chart, 249
cultured marble, 248–250
design guidelines, 210–212, 248
for eating areas, 212–213
engineered stone, 250
high-pressure laminate, 248
material options, 247–248
natural stone, 250
solid surfacing, 250
stain-resistance of, 248
substrate for tile, 233–235
Cove lighting, 201
Crack isolation, ceramic tile joints,
237–238
CRI
of fluorescents, 198, 203
rating explained, 200
Cultured marble
countertops, 248–250
sinks, 252–253
Cunapsol, on wood roofing, 94
Cupping
of flat-sawn lumber, 31
resistance to, 32
Cuprinol Clear Wood Preservative, 45
Cutting
fiber-cement, 20–21
interior doors, 187
metal roofing, 76, 82
Dap Woodlife, 45
Decay resistance
of cedar, 9, 138–139
of cypress, 9,
of deck material, 138–140
of redwood, 9, 138–139
of tropical hardwoods, 139–140
wood species chart, 31, 47
of younger, smaller trees, 30
Decking
composite, 138, 140–141
decay-resistant wood, 138–140
fastener schedule, 142
finishes for, 154–155
hardwood, 138, 139–140
hidden fasteners for, 142–143
porch floor, 151
pressure-treated, 138–139
for rooftop decks, 151
vinyl and plastic, 138, 140–141
See also Decks
Deckmaster deck fasteners, 143
Decks, 135–151, 153–155
bracing for, 147
decking comparison chart, 138
decking materials, 137–141
framing materials, 135–137, 138
freestanding, 146
ledger connections, 144–146
ledger flashing, 8, 145–146
lumber comparison chart, 136
plastic lumber for, 137
posts and beams for, 146–147
railing for, 147–150
roof top, 150–151
span charts, 148
structural connectors, 143–144
See also Decking; Porches
Dehumidifiers, source of biological pollution,
282, 289
Dens-Shield, 235
Diagonal wood siding, 9–10
Doors
drywall trim, 163
flushing tapes for, 5
vinyl siding trim, 23
See also Interior doors; Exterior doors
DOP, HEPA filter rating, 280
Double nailing
of fiber-cement, 20
of wood siding, 12
Douglas fir
extractive bleeding of, 46
decay resistance of, 47
pressure treated, 135–138, 148
paintability, 45
Downlights, 195, 197, 200, 204–205. See also Recessed lights
DrainagEIFS, 28–29. See also EIFS
Drainage plane
in rain screen, 2
behind stucco, 24–25
behind wood siding, 10
Draining housewraps
chara cters, 5
with shakes and shingles, 15
under trim, 37
See also HomeSlicker
Drawers
construction of, 248
slides for, 248
Drip edge
with eaves membranes, 55–57
placement when reroofing, 62
shingle overhang at, 56
with underlayment, 54, 56
Dry-set mortar, for ceramic tile, 238
Drywall, 159–163
adhesives for, 160–161
arches, 163–164
corner bead, 161
curves in, 161–162
fasteners, 160–161
fire-resistant, 159
floating corners, 161
framing for, 160–161
installation, 160–162
moisture-resistant, 159
specialty trims, 162–163
substrate for ceramic tile, 235
taping and finishing, 162
trimming windows, doors with, 163
Ductwork
cleaning, 289
sealing from radon entry, 287
sizing for bath fans, 262
sizing for range hoods, 263
Duradek, 96–97
Dust mites, 278, 282, 289, 292
Dust-spot efficiency, of air cleaners,
279–280
Eaves flashing
installation, 54, 56
low-slopes, 54–55
at skylights, 56, 126–127
for wood roofing, 89
E-Ty deck fasteners, 143
EIFS
drainage type, 28–29
failures in barrier type, 28–29
Electronic air cleaners, 278–280.
See also Air cleaners
Enamel ed cast iron
bathtubs, 253–254
sinks, 252–253
Enamed steel
bathtubs, 253–254
sinks, 252
End grain, sealing at corners, joints,
8, 13–14, 31, 37, 45
Kraft paper.

Knee space, accessible, 215, 219, 221

Kitchen ventilation. See Range hoods; Whole-house ventilation

Knee space, accessible, 215, 219, 221

Kraft paper. See Grade D building paper

Kraton

Kynar, metal roof coating, 82, 85

Krypton, gas fill for windows, 112

Lamp types, 197–198, 201–202

Laminated-veneer lumber, trim, 33–34

Lamp types, 197–198, 201–202

Latex paint application, 44–45

on cedar shingles, 19

expected service life, 43

on fiber-cement, 21

vs. oil, 44

sprayed on ceilings, 160

Latex-modified thinset, for tile, 227–228, 231, 233, 238, 240–244

Lauan finishing characteristics, 32

underlayment for resilient flooring, 177–178

Lavatories accessible, 220–221

clearances for, 217

Lawsuits, water-leakage related, 1

Lead health effects, 284, 291

wall flashing, 7

Lead-based paint, 291–292

Lead-coated copper, 7

Leakage. See Air infiltration; Air leakage

Water leakage

Ledgers, for exterior decks, 8, 143–146.

See also Decks

Leveling compounds for ceramic tile, 235–236

for wood floors over concrete, 169

Light tubes, 123–124

Lighting, 194–206

accent, 195

ambient, 194–195, 203

bathroom, 205–206, 219

brackets, 201

closet, 203

color temperature, 199–200

color-rendering index (CRI), 200

cove, 201

direct, 200–201

fixtures (see Lighting, luminaires)

glossary of terms, 195–196

indirect, 201

kitchen, 203–205, 213–214, 217

lamp types, 197–198

low-voltage, 198–199, 201–202, 204

luminaires, 200–201

pendants and chandeliers, 200, 204–205

recessed, 196, 201–205

recommended levels, 196–197, 203–205

task, 195, 204

track 196, 201–203

undercabinet, 195, 197–198, 204–205

wall sconces, 200

wall washing, 195, 197, 200, 202, 204

See also Recessed lighting; Track lighting

Limestone, flooring, 231

Linoleum, 179

Low-E glass, 112, 114–118, 125

choosing by climate type, 115–116

spectrally selective, 115–118, 123, 125

Low-slope roofing, 94–96

asphalt shingles, 59

BUR, 95

comparison chart, 95

EPDM, 96

metal, 74

modified bitumen, 95–96

roll roofing, 94

skylight installation, 127

tile, 66–68

underlayment, 54–55

wood roofing, 86–87

Low-voltage lighting, 198–199, 201–202, 204

Lumber for deck structures, 135–137

plastic alternatives, 137

See also Pressure-treated wood

LVL. See Laminated-veneer lumber

Mahogany decking, 139

flooring, 166

Marble countertops, 226, 229–231, 239

flooring, 229, 231, 248, 250

Mastic for ceramic tile, 227, 237–240

for ducts, 262, 287

MDF, for casework, 184–187, 244

MDO, for casework, 186

Medex, formaldehyde-free MDF, 184

Melamine finish on cabinets, 186, 244–246

in high-pressure laminate, 179, 244, 248

MER, air cleaner rating, 280–281

Metal lath, under stucco, 26

Metal roofing, 74–85

comparison chart, 83

cutting, 76, 82

exposed-fastener, 74–78

foot traffic, 74, 81

flashing, 76–77, 80

galvanic corrosion, 76, 79, 83–84

galvanized steel, 82

incompatible materials, 84–85

installed on battens, 76, 81, 87–89

metal choices, 81–83

modular shingles, 80–81

paints and coatings, 85

panel movement, 75–76, 78–80

slope requirements, 74

standing-seam, 78–80

Metal shingles. See Metal roofing: Modular metal shingles

Miami-Dade County, window standards, 111

Mildew

on composite decking, 140

health effects, 282

on metal roofing, 74

moisture levels and, 269, 289

oil-based paint and, 44

removal before painting, 46–47

on unfinished wood, 47

on wood roofing, 87, 93

See also Algae

Mildewcide, in wood sealers, 45

Mirrors

height, 217

lighting at, 205–206

Mixing valves, 258–259. See also Scald protection

Model Energy Code sheathing wrap requirements, 3

and whole-house ventilation, 269

Modified bitumen

flushing membranes, 5

flushing tapes, 5

roofing, 95–96

Modular metal shingles, 80–82

Moisture

biological pollutants and, 269, 289

effect of HRVs and ERVs on, 277

effect on formaldehyde, 269

spot ventilation of, 269

See also Bath fans; Range hoods

Moisture content and painting, 42

of radiant slabs, 175

of wood flooring, 167–168

of wood siding, 9

Moisture-cured urethanes, 171–172

Mold

and air cleaning, 277–279, 281

causes, 269, 282, 289

health effects, 268, 282, 289

in HRVs, 276

Moldable flashing, 5, 121–122, 126–127

Moldings

flexible polyester, 185–186

urethane foam, 185

Mothballs, and air quality, 291

Mothballs, and air quality, 291

Mold

and air cleaning, 277–279, 281

causes, 269, 282, 289

health effects, 268, 282, 289

in HRVs, 276

Moldable flashing, 5, 121–122, 126–127

Moldings

flexible polyester, 185–186

urethane foam, 185

Mothballs, and air quality, 291

Nailing

asphalt shingles, 58–59

drywall, 160–161
exterior decking, 141–142
fiber cement siding, 20
shake and shingle siding, 17–18
tile roofs, 68–69
underlayment for resilient flooring, 177–178
vinyl siding, 22
wood floors, 169–170
wood roofing, 89, 91
wood siding 11–12
Nails
aluminum, 11, 17, 23, 89
for drywall, 160–161
galvanized and redwood, 11, 13
for shakes and shingles, 17, 89
stainless steel, 11, 13, 17, 20, 23, 36, 68, 89
stains from copper, 11
for wood siding, 11
National Fenestration Rating Council (NFRC) 112–113
Negative ion generators, 280
Net free vent area, 97
Nitrogen dioxide, 293–295
Net free vent area, 97
Negative ion generators, 280
National Fenestration Rating Council (NFRC) 112–113
Paintability, by wood species, 30–32
Paint
application, 44–45
for decking, 154–155
effect of air barrier, 2
expected service life, 43
failures over foam sheathing, 2, 10
finish for cabinets, 245
interior trim substrates for, 183–186
latex, 21, 43–45
latex vs. oil, 44
lead-based, 284, 291–292
for metal roofing, 85
oil-based, 19, 43–45
reflective, 81, 85
vs. stain, comparison chart, 43
Paintability, by wood species, 30–32
Painting
fiber-cement siding, 21–22
finger-jointed trim, 31–32
hardboard trim, 32
polymer trim, 35
pressure-treated wood, 45
rough vs. smooth side, 42–43
sealing and priming, 44–45
weathered wood, 43
wood species and, 43–44
wood trim, 30–31
Pan flashing
at doors, 130–131
at windows, 120–121
Panelized shingles, 18
Particleboard, for casework, 186, 255
Passive air inlets, 270–273
Passive solar design
fixed overhangs, 119
selecting glazing, 112, 114–116, 118
shading, 118–119
Passive vents, for radon removal, 286–287
Peel-and-stick membranes. See Flashing membranes
Penofin, decking finish, 139, 154
Permeance
of asphalt felt, 4
of plastic housewrap, 4–5
of plywood, 3
of sheathing wraps, 3
Pesticides, 290–291
Pets, and indoor air, 289
PVC
cellular, 35–36
compatibility with flashing tapes, 6
window material, 108
Q-Lon weatherstripping, 130
Radiant barriers, 98
Radiant heating
with engineered wood floors, 172–174, 175–176
panel systems, 175
staple-up systems, 175
subfloor over, 169–170
suitability of floor coverings, 225–226
thin slab method, 175–176
wood flooring over, 175–176
Radon, 285–287
effect of air cleaners, 278
effects of ventilation systems, 270–272
health effects, 268, 282, 285
measuring, 285
remediation, 285–287
and tobacco smoke, 285
Railings, 147–151
code requirements, 147
manufactured, 147, 150
post connections, 147–150
for rooftop decks, 96–97, 151
wood, details, 148–150
Rain screen
defined, 2
double layer felt paper, 4
trim detail, 36–37
wood siding performance and, 10
Raindrop Housewrap, 5
Range hoods, 262–263
downdraft fans, 263
duct sizing, 263
effect on backdrafting, 263
fan sizing, 263
island hoods, 27
noise levels, 263
optimal location, 211–212
Recessed lighting, 201–205
insulation contact, 201
in kitchens, 203–205
recommended levels/placement, 197, 203–205
spacing, 202
trims, 201–203
typical performance, 202, 205
Redwood
copper flashing and, 7
damage to housewrap from, 2, 5
decay resistance, 137
decking, 138–139, 142
extractive bleeding, 10, 46

INDEX 305
Redwood (Continued)
nails for, 11, 13
paintability, 31
siding, 9
unfinished trim, 47

Refrigerators
accessible work center, 217
work center, 212–213

Relative humidity, effect on wood flooring, 164, 167–168

Reroofing
with asphalt shingles, 62
metal over asphalt, 76, 80
wood shakes and shingles, 91

Resilient channel
drywall fastening schedule, 161
installation, 193
sound isolation strategy, 190
STC, IIC ratings, 191–194

Resilient flooring
cork, 177–179, 226
installation, 177
linoleum, 179, 226
sheet vinyl tile, 176, 225
solid vinyl tile, 176–177, 225
underlayment requirements, 177–178

Respirable particles, 277–280

Ridge vents
attic ventilation, 98–99
metal roofing, 76–77
wood roofing, 90, 92

Rigid foam. See Foam sheathing
Rigid thermofoil (RTF), cabinets, 245

Roll roofing, 94

Roof flashing
asphalt shingles, 59–61
membrane for trouble spots, 66
membrane valley lining, 59–61, 75, 77
metal roofing, 76–77, 80
skylights, 56, 92, 126–127
tile roofs, 72–73, 75
valleys, 59–61, 72–73, 75, 76–77, 82
wood roofs, 89, 92–93
See also Eaves flashing; Valleys

Roof ventilation, 97–100
cathedral ceilings, 99–100
code requirements, 97
around skylights, 100

Roofing
asphalt shingles, 51–62
low-slope, 94–97
metal, 74–85
tile, 62–74
ventilation of, 97–100
wood, 85–94
See also Asphalt shingles; Low-slope roofing; Metal roofing; Tile roofing; Wood roofing

Roofing cement
improves shingles wind resistance, 53
incompatible with metal roofing, 84
incompatible with modified bitumen, 96
manual sealing of shingles, 57, 59
sealing valleys, 60–61

Roof top decks, 150–151. See also Foot traffic
RTF. See Rigid thermofoil
Rubber tiles, kitchen flooring, 226
R-Wrap, permeance, 4
Salt air
and cedar shingles, 19
and clay tile, 63
and unfinished wood, 47
Salt spray
and aluminum, 7, 82, 84–85
and copper, 84–85
and galvanized steel, 82, 83
and stainless steel, 84
Scalp protection, 258–259
retrofit, 258
Sconces, wall lights, 200
Screening
manufactured systems, 152
porch enclosures, 151–153
Screws
for composite decking, 141–142
for drywall, 160–161
for exterior decks, 141–142
gasketed for metal roofs, 76
Sealants
butyl, 40
comparison chart, 38
compatible with metal roofing, 84
for EIFS, 29
for metal roofs, 77–78, 80
for radon remediation, 287
polyurethane, 40
silicone, 39–40
types, 37–40
See also Caulks
Sealers
undercoating for paint, 45–46
Secondhand smoke. See Tobacco smoke
Seismic zones, tile roofing in, 59–61
Shaking
with awnings and shutters, 118–119
with fixed overhangs, 118
with shades screens, 119
to reduce solar gain, 118–119
of skylights, 123
Shakes
finishing, 19
grades, 15–16
sidewall installation, 15–19
roofing installation, 85–94
self-ventilating, 2
Sheathing wrap
code requirements, 3
installation, 5
performance characteristics, 3–5
sealing around doors, 130–131
sealing around windows, 119–123
types, 4–5
at water table, 8
See also Asphalt felt; Building paper; Plastic housewrap
Sheetrock. See Drywall
Shelving
accessible design, 216
allowable spans, 186
in kitchen cabinets, 246
Shingles. See Asphalt shingles; Modular metal shingles; Wood shingles
Shower pans
mortar-bed, 242–243
prefab, 242
Showers
acrylic, 253, 255
fiberglass, 253–255
jetted tubs as, 255
lighting of, 206
material comparison chart, 254
mixing valves, 258–259
scald protection, 258–259
See also Shower pans
Siding. See Cladding; Vinyl siding; Wood siding
Silicone
incompatible with metal roofing, 84
sealants, 39–40
weatherstripping, 130
Silicone-modified polyesters, 85

Sinks
acrylic, 252–253
china, 252–253
composite, 252–253
cultured marble, 252–253
eamed cast-iron, 252–253
eamed steel, 252
faucet sets, 257–258
flush-set (tile-edge), 251
materials comparison chart, 252
self-rimming vs. undermount, 252–252
solid surfacing, 252–253
stainless-steel, 252–253
work center layout, 211

Skylights, 123–127
condensation on, 125–126
controls, 123
eaves flashing/underlayment, 56, 126–127
energy performance, 125–126
flashing with asphalt shingles, 56, 126–127
flashing in wood roofing, 92
glare from, 124–125
glazing types, 123
installation, 126–127
kitchen lighting with, 213–214
low-slope installations, 127
roof ventilation around, 100
shades and screens, 123
sizing for daylighting, 124
spaced wells, 125
steep-slope installations, 127
ventilation from, 125
Slabs on grade
radiant, 175
under wood floors, 168–170

Slate countertops, 250

SmartDeck, railing system, 148

Snow
buildup at skylights, 56, 126–127
buildup on roofs, 54, 97–98
on low-slope roofs, 94
metal roofs and, 78
protecting siding from, 6, 9
protecting deck ledgers from, 146
tile roofs and, 64–65, 67–69, 72, 75
wood roofs and, 87–89, 92
Soaking tubs, 255–257. See also Jetted tubs
Soapstone countertops, 250

Softfis
venting details, 98–100
vinyl and aluminum, 23

Solar design. See Passive solar design
Solar-heat-gain coefficient, 116
Solid surfacing
characteristics, 249–250
countertops, 250
sinks, 252–253
Sones, fan noise rating, 261, 263, 271
Sound control, 188–194
flanking paths, 190–193
INDEX 307

floor STC, IIC ratings, 193–194
materials and workmanship, 193–194
plumbing noise, 193
principles, 189–190
recommended levels, 192–193
wall STC ratings, 190–192
Spaced sheathing, for wood roofs, 87–89
Splashback
and flashing membranes, 6
staining wood shingles, 19
and wall flashing, 9
and wood sidings, 1, 10, 47
Spruce, as siding material, 9, 31–32, 43–45, 47
Stainless steel
ASTM standards, 141, 143
for exterior decks, 141, 143
nails for fiber-cement, 20
nails for shakes and shingles, 17
reaction with galvanized, 141
roofing nails, 68, 89
salt spray and, 84–85
siding nails, 11, 13
sinks, 252–253
twisted wires, 69–70
Stains
for decking, 154–55
and dyes, 188
effect of air barrier, 2
semi-transparent oil-based, 46, 154–55
solid-color, 44–45, 154–155
for wood shakes and shingles, 19
Standing seam roofing
clip vs. flange systems, 78, 80
roofing panels, 78–80
Step flashings
installation, 8
integrated with housewrap, 2
wood roofing and, 92–93
wood siding and, 14
Stone
countertops, 249–250
kitchen and bath flooring, 226, 229–232
tile installation, 231–241
sealers for, 232
See also Agglomerates; Engineered stone;
Granite; Limestone; Marble
Storm-resistant windows, 111–112
Stucco
bonding to building paper, 25
degrading building paper, 2
drainage plane, 24–25
thin-coat, 28
two-coat, 25–28
underlayment for, 4
weather and application, 27–28
weep screeds, 24–26, 28–29
See also EIFS
StuccoWrap, 5
Subflooring
for ceramic tile, 232
for resilient flooring, 178
for stone tile, 231
for wood flooring, 168
Sulfur dioxide, 293–295
Supply-only ventilation, 272–275
forced-air supply, 270, 273–274
multiport supply, 270, 274–275
Swedish floor finishes, 171
Sweeps, at exterior doors, 130
Synthetic decking. See Composite decking;
Plastic decking
Tables, kitchen seating, 213
Tannins, in redwood, cedar, 2, 11, 46, 92, 94.
See also Extractive bleeding
Task lighting, 195, 204. See also Lighting
Telegraphing, of finger-jointed trim, 31
Termite shields, 7
Thinset
setting compounds, 237–239
tile installation, 239–240
Tile nails, roofing tiles, 69
Tile roofing
broken tiles, 74–75
clay tile, 63–64
cement tiles, 64–65
cement-efficiency, 64, 72, 81, 85, 98
fastening, 68–71
fiber-cement tile, 65–66
flashings, 72–73
foot traffic, 63–64, 73
high-wind installation, 67, 69–71
installation on battens, 67–69, 72
installation on solid sheathing, 67–72
layout and stacking, 68
seismic installation, 69–71
sheathing types, 66–68
slope requirements, 66–69
types, 62–64
underlayment, 66–67
TimberTech decking, 140
Tobacco smoke, 268–269, 277–280, 280, 282, 287, 290, 294
Toilets, 259–261
gravity-flush, 259
installation, 260–261
low-flow comparison chart, 259
power-assisted, 259–260
sweating of, 260
vacuum-assisted, 260
Track lighting, 196, 201–203
Trex decking, 140
Trim. See Exterior trim; Interior trim
Tropical hardwoods
decking, 138, 139–140
flooring, 164, 166
Tubs. See Bathubs
Turbulent flow precipitators, 280
Twisted wires, roofing tile, 69–70
Tyle-Tye, 69
Tyvek
Flex-Wrap, 6
permeance, 4
water resistance of, 3
See also Plastic housewrap
U-factor, window ratings, 112–113
Ultraviolet (UV) radiation
effects on asphalt felt, 4
effects on exteriors, 19, 35, 42, 44–47
effects on fading, 114–115, 117, 123
effects on sealants, 38–40
effects on vinyl, 21, 36, 108–109
effects on wood roofing, 94
Undercabinet lighting, 195, 197–198, 204–205
Underlayment
for asphalt-shingle valleys, 59–60
for asphalt shingles, 54
for low-slope roofs, 54–55
for resilient flooring, 177
for sideward shingles, 15
around skylights, 126
for tile roofs, 66–67
for wood roofs, 87
venting type, 87–88, 90, 91
Unvented roofs, 98
Urea-formaldehyde. See Formaldehyde
Urethane
floor finishes, 171–172
foam moldings, 185
sealant for metal roofs, 78, 80, 84
See also Polyurethane
UV-cured urethanes, 171
Valley flashing
asphalt shingles 59–61
metal roofs, 76–77
tile roofs, 72–73
wood roofs, 92–93
Valleys
asphalt shingles comparison chart, 60
closed-cut, 60
open type, 61
roof ventilation and, 99–100
woven type, 60
Vapor barriers, cold side, 6
Veneer plaster, 163–164
Ventilation
bathroom, 261–262
from casement windows, 105
effective window area, 103
kitchen, 262–263
from skylights, 115
See also Roof ventilation; Whole-house ventilation
Vertical wood siding
horizontal joints, 14
moisture problems, 9
nailing for, 12
water leakage in, 2
Vikrell, FRP composite tubs, 255
Vinyl
compatibility with flashing membranes, 6
finish on cabinets, 245
Vinyl siding, 21–24
installation, 22–24
materials, 21–22
nailing, 22
self-ventilating, 2
trim details, 22–24
water leakage in, 2
Wood trim and, 24
Vinyl windows
clad type, 107
installation, 109
solid type, 107–109
Visible transmittance, window ratings, 116–117
VOCS, 170, 179, 269, 282–283, 287, 290–292
in adhesives, 179, 292
in carpeting, 292
in floor finishes, 170
health effects, 283, 290
in new homes, 269
reducing exposure, 290
sources, 283, 289–290
See also Formaldehyde; Pesticides
Volatile organic compounds. See VOCS
Vycor Deck Protector, 142
Wall flashing
aluminum, 7
copper, 7
details, 7–9
materials, 6
Warm edge spacers, for window, 114
Water damage to EIFS, 28–29
to hardboard trim, 32–33
Water leakage in brick veneer, 2
in claddings, 2
in diagonal wood sidings, 9–10
in EIFS, 28–29
through exteriors, 1–2, 8–10, 12, 37
splashback, 2, 10, 12
in vertical wood sidings, 9–10, 12
Water resistance of Grade D building paper, 4
of plastic housewrap, 4
of sheathing wrap, 3
tests for, 3
Water table, detail, 7–8
Water-based paints. See Latex paint; Paints
Water-based stains, 188
Water-based paints
Water-bornes
Water-based paints
Water table, detail, 7–8
Waterproofing membranes for ceramic tile, 236, 238–239
in shower pans, 242–243
Water-repellant preservatives as clear finish, 46–47
for decking, 139, 154–155
vs. paint, stain, 43
to seal end grain, 13
as sealer, 45
in wood window construction, 106
Water-resistant barrier, code requirements, 1, 3
Wax, floor finishes, 171–172
Waxing, wood floors, 172
WeatherBest decking, 140
Weatherstripping as clear finish, 46–47
for decking, 139, 154–155
Waxing, wood floors, 172
WeatherBest decking, 140
Weatherstripping as clear finish, 46–47
for decking, 139, 154–155
vs. paint, stain, 43
to seal end grain, 13
as sealer, 45
in wood window construction, 106
WeatherBest decking, 107, 110
Weatherstripping
Weep holes, in rain screen, 2
Weep screed, in stucco, 24–26, 28–29
Wheelchairs
White cedar shingles, 15–17, 19
Whole-house ventilation balanced systems, 270, 275–277
comparison chart, 270
exhaust-only, 271–272
forced-air supply, 270, 273
installation, 271
sizing, 270–271
supply-only, 270, 272–275
Wood shingles
Wood siding
Woodwork
Yellow glue, water-resistant, 40–41
Zinc
Zinc coatings
Galvalume, 83