

ARCHITECTURAL GENERAL SPECIFICATIONS:

6.3 THERMAL AND MOISTURE PROTECTION - EXTERIOR INSULATION AND FINISH SYSTEM (E.I.F.S.):

PART 1 - GENERAL
1.01 SUMMARY
A. PROVIDE EXTERIOR INSULATION AND FINISH SYSTEMS.
1. APPLICATIONS OVER EXTERIOR FIRE RETARDANT TREATED PLYWOOD SHEATHING.
2. APPLICATIONS OVER FIBERGLASS REINFORCED EXTERIOR SHEATHING.
3. APPLICATIONS OVER MASONRY OR CONCRETE SUBSTRATES.
1.02 SUBMITTALS
A. NONE REQUIRED UNLESS SUBMITTING FOR APPROVED EQUALS.
1.03 QUALITY ASSURANCE
A. COMPLY WITH GOVERNING CODES AND REGULATIONS.
B. INSTALLER SHALL HAVE BEEN TRAINED AND APPROVED IN INSTALLATION OF SYSTEMS BY MANUFACTURER PRIOR TO BIDDING AND SHALL HAVE PERFORMED AT LEAST THREE INSTALLATIONS OF SIMILAR SIZE, SCOPE, AND COMPLEXITY IN EACH OF PAST TWO YEARS.
1.04 TEST PROCEDURES AND PERFORMANCE
A. SYSTEM SHALL HAVE BEEN TESTED TO MEET OR EXCEED THE FOLLOWING:
1. PHYSICAL TEST
a. ABRASION RESISTANCE: (ASTM D 968) NO DELETERIOUS EFFECTS AFTER 114 GALLONS OF SAND.
b. ABSORPTION FREEZE: (ASTM C 6781).
c. ACCELERATED WEATHERING: (ASTM G 23) 5,000 HOURS, NO DETERIORATION.
d. IMPACT RESISTANCE: (ASTM E 695) NO CRACKS UP TO 6 FT.
e. MILDEW RESISTANCE: (MIL STANDARD 9108) NO GROWTH.
f. SALT SPRAY RESISTANCE: (ASTM D 2247) 5% CONCENTRATION FOR 300 HOURS, NO DELETERIOUS EFFECTS.
g. WATER INFILTRATION: (ASTM E 547) FULL SCALE MOCK-UP TEST.
h. WATER VAPOR TRANSMISSION: (ASTM E 96) WATER METHOD PROCEDURE.
2. STRUCTURAL TEST:
a. FULL SCALE STRUCTURAL TEST: (ASTM E 330).
3. FIRE TEST:
a. ASTM E 84, ON COATING AND INSULATION BOARD
1). FLAME SPREAD RATING: 25 OR LESS.
2). SMOKE DEVELOPMENT RATING: 450 OR LESS.
b. MODIFIED ASTM E 136 (OVERPASS FIRE TEST).
c. ASTM E 119 (STANDARD METHODS OF FIRE TEST OF BUILDING CONSTRUCTION AND MATERIALS).
d. MULTISTORY FIRE TEST (FULL SCALE, END USE CONFIGURATION TEST).
PART 2 - PRODUCTS
2.01 MATERIALS
A. MANUFACTURERS: DRYVIT, DVT, OR BASF (NO SUBSTITUTES).
WEATHER BARRIER COMPONENTS: TYPE AND COMPONENTS AS RECOMMENDED BY EIFS MANUFACTURER FOR PROJECT SUBSTRATE CONDITIONS. WHERE INCLUDED, INSTALLATION SHALL COMPLY WITH SECTION "WEATHER BARRIERS" ON THIS SHEET.
B. FINISH COATING OVER MOLDED POLYSTYRENE BOARD.
1. TYPE: EMA CLASS PB.
2. ADHESIVE BASE & FINISH COATS: SINGLE COMPONENT OF SYNTHETIC COMPOSITION MODIFIED POLYMER AND PORTLAND CEMENT IN 1:1 RATIO, REINFORCED, AIR CURING. PRODUCTS TO BE FROM SINGLE MANUFACTURER.
a. PORTLAND CEMENT: MEET REQUIREMENTS OF ASTM C 150.
b. SILICA SAND:
1). BASE COAT: MEET REQUIREMENTS OF ASTM C 897, DRY AND LUMP FREE.
2). FINISH COAT: MEET MINIMUM REQUIREMENTS OF BASE COAT EXCEPT FOR GRADATION OR OTHER SPECIAL REQUIREMENTS OF SYSTEMS MANUFACTURER.
3). REINFORCING: CHOPPED FIBERGLASS AS SUPPLIED BY MANUFACTURER.
4). LIQUID: ACRYLIC OR OTHER POLYMER AS SUPPLIED BY MANUFACTURER.
5). COLOR: AS SCHEDULED ON DRAWINGS, TO BE FACTORY MIXED.
6). TEXTURE FINISH: AS SCHEDULED ON DRAWINGS.
3. THERMAL INSULATION
a. MANUFACTURERS: AMOCO, DOW CHEMICAL, U.C. INDUSTRIES, OR APPROVED EQUAL.
b. MOLDED BEAD RIGID CELLULAR POLYSTYRENE (ASTM C578, TYPE IV) WITH "R" VALUE OF 3.7 PER INCH OF THICKNESS, COMPRESSIVE STRENGTH 10 PSI MINIMUM, WATER ABSORPTION 4% BY VOLUME (ANSI/ASTM D2842), FLAME SPREAD RATING LESS THAN 25 AND SMOKE DEVELOPMENT RATING LESS THAN 450. BOARD SIZE 24 X 48 INCH, EDGES SQUARE.
4. ATTACHMENT, ADHESIVE AND MECHANICAL ANCHORS
a. ADHESIVE: AS RECOMMENDED BY MANUFACTURER FOR SPECIFIC SUBSTRATE ATTACHMENT.
b. MECHANICAL ANCHORS: AS RECOMMENDED BY MANUFACTURER FOR SPECIFIC SUBSTRATE ATTACHMENT. NON-RUSTING, SELF TAPPING SCREWS APPROPRIATE FOR SUBSTRATE, OR NAILS SPECIFICALLY DESIGNED FOR SYSTEM. 5/16" OR 3/4" INCH APPROVED NYLON OR CORROSION-PROTECTED METAL WASHERS, SEPARATE OR FORMING INTEGRAL PART OF FASTENER. PLACE AT SPACING AS RECOMMENDED BY MANUFACTURER.
5. TRIM ACCESSORIES: PROVIDE CASING BEADS, CORNER BEADS, STARTER TRACK, EXPANSION JOINT ASSEMBLIES, AND CONTROL JOINT ASSEMBLIES PER MANUFACTURER'S RECOMMENDATIONS.
a. COMPLY WITH ASTM C 1063.
b. MATERIAL: VINYL, CONFORMING TO ASTM D 1784.
c. MATERIAL: ZINC ALLOY, CONFORMING TO ASTM B 89.
d. GALVANIZED STEEL, CONFORMING TO ASTM A 653/A 653M.
6. REINFORCING FABRIC:
a. STANDARD WEIGHT: GLASS-FIBER FABRIC, 4.3 OUNCES PER SQUARE YARD. (OVER 6'-0" ABOVE FINISH FLOOR).
b. HEAVY WEIGHT: HIGH-IMPACT TYPE GLASS-FIBER FABRIC, 15.0 OUNCES PER SQUARE YARD. (FROM BELOW FINISH FLOOR TO 6'-0" ABOVE FINISH FLOOR).
c. CORNER MESH: GLASS-FIBER FABRIC, 7.2 OUNCES PER SQUARE YARD, TREATED FOR COMPATIBILITY WITH OTHER EIFS MATERIALS. (PROVIDE PER MANUFACTURER'S RECOMMENDATIONS).
PART 3 - EXECUTION
3.01 INSTALLATION
A. COMPLY WITH SYSTEM MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF SYSTEM FOR SPECIFIC JOINT CONDITIONS. ADMIXTURES SHALL NOT BE USED. INSPECT SUBSTRATE AND VERIFY UNSATISFACTORY CONDITIONS IN WRITING. BEGINNING WORK MEANS ACCEPTANCE OF SUBSTRATE.
B. ENVIRONMENTAL REQUIREMENTS:
1. AMBIENT AIR TEMPERATURE SHALL BE 40° F MINIMUM AND RISING AT TIME OF INSTALLATION AND FOR 24 HOURS THEREAFTER.
2. TEMPERATURE OF SUBSTRATE SHALL BE ABOVE 40° F DURING APPLICATION.
C. WEATHER BARRIER AND FLASHING SYSTEMS
1. WHERE INDICATED AND/OR RECOMMENDED BY EIFS MANUFACTURER FOR PROJECT SUBSTRATE CONDITIONS, VERIFY PROPER INSTALLATION OF WEATHER BARRIER AND FLASHING SYSTEMS PRIOR TO INSTALLATION OF EIFS SYSTEM, WHERE INCLUDED. INSTALLATION SHALL COMPLY WITH SECTION "WEATHER BARRIERS" ON THIS SHEET.
D. PLACE INSULATION HORIZONTALLY WITH JOINTS STAGGERED AND TIGHTLY BUTTED AND CORNERS INTERLOCKED. MECHANICALLY ATTACH TO DEGREE INDICATED BY MANUFACTURER.
1. MAKE "V" GROOVES AT CORNER JOINT LOCATIONS.
2. MECHANICALLY FASTEN REINFORCING MESH, AS RECOMMENDED BY MANUFACTURER, TO FIRMLY ATTACH MESH AND COMPLETELY COVER FINISH COATS ON BOARD.
3. DETAIL WORK TO CAREFULLY FOLLOW MANUFACTURER'S RECOMMENDATIONS.
E. EXPANSION JOINTS SHALL OCCUR:
1. AT EXPANSION JOINTS IN SUBSTRATE.
2. AT EXPANSION JOINTS IN BUILDING.
3. WHERE FINISH SYSTEM OVER OTHER MATERIALS.
4. AT FLOOR LINES AT WOOD-FRAMED CONSTRUCTION.
5. AT THE SUBSTRATE CHANGES.
6. CHANGES IN RIGID LINES, BEAMS, TRAP, OR STRUCTURAL SYSTEM.
F. CONTROL JOINTS SHALL OCCUR:
1. LOCATION TO LINE MONOLITHIC WALL AREAS TO 144 SQ. FT.
2. DIMENSIONS BETWEEN EITHER HORIZONTAL OR VERTICAL JOINTS SHALL NOT EXCEED 24 FEET.
3. AT HIGH STRESS AREAS SUCH AS CORNERS OF OPENINGS AND PENETRATIONS SUCH AS WINDOWS, DOORS, CHIMNEYS, ETC.
G. MINOR OPENINGS, WHERE OPENINGS ARE MINOR AND CONTROL JOINTS IMPRACTICABLE, REINFORCE CORNERS WITH MESH STRIPS AT 45 DEGREE ANGLES TO CORNERS.
H. PROVIDE REINFORCED BASE FINISH COATS TO PROVIDE A UNIFORM APPEARANCE. COMPLETELY PROVIDE INSULATION BOARD INCLUDING EDGES. INSTALL AREAS OF SPECIAL PATTERNS WHERE INDICATED ON DRAWINGS. ENSURE CONTINUOUS APPLICATION, FREE OF COLD JOINTS, SCAFFOLD LINES, TEXTURE VARIATIONS, ETC.
I. CLEAN AND PROTECT WORK AS RECOMMENDED BY EIFS MANUFACTURER.

6.4 THERMAL AND MOISTURE PROTECTION - FLASHING AND SHEET METAL:

PART 1 - GENERAL
1.01 SUMMARY
A. PROVIDE FLASHING AND SHEET METAL (WORK NOT INCLUDED IN SECTION 13 44 18) WHERE INDICATED.
1. SHEET METAL FLASHING, COPING, FASCIA, EXPOSED TRIM, EDGES, COUNTERFLASHING, CLEATS, CAPS, SILLS, DRIPS, ETC.
2. GUTTERS AND DOWNSPOUTS.
3. ELASTIC FLASHING.
4. SHEET METAL ACCESSORIES.
1.02 SUBMITTALS
A. NONE REQUIRED UNLESS SUBMITTING FOR APPROVED EQUALS.
1.03 QUALITY ASSURANCE
A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. STANDARDS: COMPLY WITH THE PROVISIONS OF THE FOLLOWING SPECIFICATIONS AND STANDARDS, EXCEPT AS OTHERWISE NOTED OR SPECIFIED, OR AS ACCEPTED OR DIRECTED BY THE ARCHITECT.
1. SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC.) ARCHITECTURAL SHEET METAL MANUAL (FIFTH EDITION).
2. AA (ALUMINUM ASSOCIATION), ALUMINUM CONSTRUCTION MANUAL-ALUMINUM SHEET METAL WORK IN BUILDING CONSTRUCTION.
PART 2 - PRODUCTS
2.01 MATERIALS
A. SHEET METAL:
1. PRE-PRIMED (FIELD PAINT) STEEL SHEETS: 24 GAGE HOT DIPPED GALVANIZED STEEL (G90) COMMERCIAL QUALITY, PRIMED ONE SIDE WITH COATING 1.0 MIL TOTAL DRY FILM THICKNESS, AND WITH WASH COAT ON REVERSE SIDE. FIELD PAINT, COLORS AS INDICATED ON DRAWINGS OR AS SELECTED BY ARCHITECT.
2. REFINISHED STEEL SHEETS: 24 GAGE HOT DIPPED GALVANIZED STEEL (G90) COMMERCIAL QUALITY, PRIMED AND FINISHED ONE SIDE WITH KYNAR BASE FLUOROPOLYMER COATING 1.0 MIL TOTAL DRY FILM THICKNESS, AND WITH WASH COAT ON REVERSE SIDE. COLORS AS SELECTED BY ARCHITECT.
3. ZINC-COATED STEEL: ASTM A 528, G90 HOT-DIP GALVANIZED, 20 GAGE (.032-INCH).
4. LEAD: ASTM B 749, TYPE L51121, COPPER-BEARING SHEET LEAD, MINIMUM 4 LB/50 FT.
5. SHEET MEMBRANE FLASHING: NON-REINFORCED FLEXIBLE BLACK ELASTIC RUBBER SHEET, 20 MILS THICK, FORMULATED FROM VIRGIN POLYVINYL CHLORIDE WITH PLASTICIZERS AND OTHER MODIFIERS TO REMAIN FLEXIBLE AND WATERPROOF IN CONCEALED APPLICATIONS.
C. AUXILIARY MATERIALS:
1. FASTENERS: SAME METAL AS FLASHING/SHEET METAL OR OTHER NON-CORROSIVE METAL AS SOLDER RECOMMENDED BY SHEET METAL MANUFACTURER. MATCH FINISH OF EXPOSED HEADS WITH MATERIALS BEING FASTENED.
2. SOLDER: ASTM B 32 50-50 TIN/LEAD SOLDER, WITH ROSIN FLUX.
3. ROOFING CEMENT: ASTM D 2822, ASPHALTIC.
4. BITUMINOUS ISOLATION COATING: SSPC-PAINT 12, SOLVENT-TYPE BITUMINOUS MASTIC, NOMINALLY FREE OF SULFUR COMPOUND FOR 15-MIL DRY FILM THICKNESS PER COAT.
5. METAL AND SIMILAR ACCESSORY UNITS AS REQUIRED FOR INSTALLATION OF WORK. MATCHING OR COMPATIBLE WITH MATERIAL BEING INSTALLED, NON-CORROSIVE, SIZE AND GAGE REQUIRED FOR PERFORMANCE.
6. EPOXY SEAM SEALER: 2-PART NON-CORROSIVE METAL SEAM CEMENTING COMPOUND. RECOMMENDED BY MANUFACTURER FOR NON-MOVING JOINTS INCLUDING RIVETED JOINTS.
7. POLYETHYLENE UNDERLAYMENT: 6 MIL CARBONATED POLYETHYLENE FILM.
8. REGLETS AND METAL ACCESSORIES: SHEET METAL CLIPS, CLEATS, STRAPS, ANCHORING DEVICES, AND SIMILAR ACCESSORY UNITS AS REQUIRED FOR INSTALLATION OF WORK. MATCHING OR COMPATIBLE WITH MATERIAL BEING INSTALLED, NON-CORROSIVE, SIZE AND GAGE REQUIRED FOR PERFORMANCE.
9. ADHESIVES: TYPE RECOMMENDED BY FLASHING SHEET METAL MANUFACTURER FOR WEATHERWEATHER RESISTANT SEAMING AND ADHESIVE APPLICATION OF FLASHING SHEET METAL.
10. PAPER SLIP SHEETS: 5-LB. ROSIN-SIZED BUILDING PAPER.
2.02 FABRICATION
A. FABRICATE FLASHING, COUNTER-FLASHING AND OTHER SHEET METAL WORK NOT EXPOSED TO VIEW OF ALUMINUM. FABRICATE FLASHING, GUTTERS, DOWNSPOUTS, CONDUCTOR HEADS, SPOUTS, DRIPS, CAPS, EDGES, TRIM, AND OTHER EXPOSED SHEET METAL WORK OF PRE-PAINTED, PRE-PRIMED AND FIELD PAINTED, STEEL SHEETS. USE LEAD AT DRAINS, VENTS, WHERE INDICATED, AND WHERE REQUIRED TO CONFORM TO COURSE OF ROOFING COMPONENTS AND ACCESSORIES.
B. FABRICATE FOR WATERPROOF AND WEATHER RESISTANT PERFORMANCE, WITH EXPANSION PROVISIONS FOR RUNNING WORK, SUFFICIENT TO PERMANENTLY PREVENT LEAKAGE, DAMAGE OR DETERIORATION OF THE WORK. FORM WORK TO FIT SUBSTRATES.
C. COVER EXPOSED SHEET METAL WORK WITHOUT EXCESSIVE CHANNING, BUCKLING, AND TOOL MARKS. TRUE TO LINE AND LEVELS AS INDICATED. THIN EXPANDED METAL SOLDER BACK TO FORM HEMS.
D. FABRICATE PRE-PAINTED STEEL WITH STROPPABLE FINISH IF SOLDERING IS NECESSARY, MECHANICALLY REMOVE COATING, TOUCH UP WITH MATCHED PAINT.
E. SEAMS: FABRICATE NON-MOVING SEAMS IN SHEET METAL WITH FLAT-LOCK SEAMS. FORM ALUMINUM SEAMS WITH EPOXY SEAM SEALER, RIVET JOINTS FOR ADDITIONAL STRENGTH WHERE REQUIRED.
F. EXPANSION PROVISIONS: WHERE LAPPED OR BURNET-TYPE EXPANSION PROVISIONS CANNOT BE USED, OR WOULD NOT BE SUFFICIENTLY WATERWEATHERPROOF, FORM EXPANSION JOINTS OF INTERMEDIARY HOLES, WHICH SHALL NOT BE LESS THAN 1-INCH DEEP, FILLED WITH MASTIC SEALANT (CONCEALMENT THIN JOINTS).
G. SEAM PROVISIONS WHERE MOVABLE EXPANSION TYPE JOINTS ARE INDICATED OR REQUIRED FOR ELASTOMERIC SEALANT.
H. SEPARATE DISSIMILAR METALS FROM EACH OTHER TO PREVENT ELECTROLYTIC ACTION BY PAINTING EACH METAL SURFACE IN AREA OF CONTACT WITH A HEAVY APPLICATION OF BITUMASTIC COATING, OR BY OTHER PERMANENT SEPARATION AS RECOMMENDED BY MANUFACTURERS OF DISSIMILAR METALS.
PART 3 - EXECUTION
3.01 INSTALLATION
A. FOLLOW RECOMMENDATIONS OF SMACNA AND AA MANUALS FOR SPECIFIC APPLICATION.
B. INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALL MATERIALS AND SYSTEMS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH UNIFORM APPEARANCE. COORDINATE WITH WORK OF OTHER SECTIONS.
C. ANCHOR UNITS OF WORK SECURELY IN PLACE BY METHODS INDICATED, PROVIDING FOR THERMAL EXPANSION OF METAL UNITS, CONCEAL FASTENERS WHERE POSSIBLE, AND SET UNITS TRUE TO LINE AND LEVEL AS INDICATED. INSTALL WORK WITH LAPS, JOINTS, AND SEAMS, WHICH WILL BE PERMANENTLY WATERTIGHT AND WEATHERPROOF.
D. UNDERLAYMENT: WHERE ALUMINUM IS TO BE INSTALLED DIRECTLY ON CEMENTITIOUS OR WOOD SUBSTRATES, INSTALL A COURSE OF PAPER SLIP SHEET AND A COURSE OF POLYETHYLENE UNDERLAYMENT.
E. BED COURSE OF WORK IN A THICK COAT OF BITUMINOUS ROOFING CEMENT WHERE REQUIRED FOR WATERPROOF PERFORMANCE.
F. SECURE EDGES OF FLASHING TO OTHER WORK WITH ANGLES AND BARS, AND SEAL WITH SEALANT AS INDICATED.
G. RETAINERS: WHERE INDICATED, PROVIDE SAW CUTS FOR METAL COUNTER-FLASHING SYSTEM USING METAL FLASHING RECEIVER AS DETAILED AND INDICATED.
H. SEAL EDGES OF METAL FLASHINGS TO SUBSTRATES WITH ROOFING CEMENT; INSTALL BED OR BEAD OF CEMENT IN MANNER, WHICH WILL MAINTAIN A WATERTIGHT SEAL.
I. REMOVE STRIPPABLE FILM FROM PRE-PAINTED STEELWORK. RESTORE DAMAGED COMPONENTS AND FINISHES. CLEAN AND PROTECT WORK FROM DAMAGE.

6.5 THERMAL AND MOISTURE PROTECTION - JOINT SEALANT:

PART 1 - GENERAL
1.01 SUMMARY
A. PROVIDE JOINT SEALERS AT INTERIOR AND EXTERIOR VERTICAL AND HORIZONTAL JOINTS. WORK INCLUDES JOINTS AROUND FRAMES OF DOORS, WINDOWS, LOUVERS, OR OTHER OPENINGS IN EXTERIOR WALLS, FLOORING JOINTS, JOINTS AT PENETRATIONS OF WALLS, DECKS, ROOFS, AND FLOORS BY PIPING AND OTHER SERVICES AND EQUIPMENT. JOINTS BETWEEN ITEMS OF EQUIPMENT AND OTHER CONSTRUCTION, JOINTS AT PLUMBING FIXTURES, JOINTS AT DISSIMILAR MATERIAL TRANSITIONS, EXPANSION AND CONTRACTION JOINTS OF MASONRY AND CONCRETE, AND OTHER JOINTS INDICATED TO BE SEALED.
1.02 SUBMITTALS
A. NONE REQUIRED UNLESS SUBMITTING FOR APPROVED EQUALS.
1.03 QUALITY ASSURANCE
A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
PART 2 - PRODUCTS
2.01 MATERIALS
A. COMPATIBILITY: PROVIDE JOINT SEALERS, JOINT FILLERS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY TESTING AND FIELD EXPERIENCE.
B. COLORS: AS SELECTED BY OWNER FROM MANUFACTURERS' STANDARD COLORS OR MATCH COLOR OF MATERIAL APPLIED, UNLESS OTHERWISE INDICATED.
2.02 ELASTOMERIC JOINT SEALANTS
A. PROVIDE MANUFACTURERS STANDARD CHEMICALLY CURING, ELASTOMERIC SEALANT OF BUTYL OR POLYMER INDICATED WHICH COMPLIES WITH ASTM C 920 REQUIREMENTS, INCLUDING TYPICAL GRADE CLASS, AND USES.
B. ONE-COMPONENT NONSAG URETHANE SEALANT: TYPE M, GRADE NS, CLASS 25, SONNEBERN "SONOLASTIC NP 1", TREMCO "DYMONIC", BOSTIK "CHEM-CALK 900", PECORA "DYNATROL 1", MAMECO "KEM 116", OR APPROVED EQUAL.
C. TWO-OR-MORE COMPONENT NONSAG URETHANE SEALANT: TYPE M, GRADE NS, CLASS 25, TREMCO "DYMICER", SONNEBERN "SONOLASTIC NP 2", BOSTIK "CHEM-CALK 800", PECORA "DYNATROL II", OR APPROVED EQUAL.
D. TWO-COMPONENT POURABLE URETHANE SEALANT: TYPE M, GRADE NS, CLASS 25, TREMCO "THC 900", SONNEBERN "SONOLASTIC SL-2", BOSTIK "CHEM-CALK 650", PECORA "NIPAL UREXPAN", OR APPROVED EQUAL.
E. ONE-COMPONENT POURABLE URETHANE SEALANT: TYPE S, GRADE P, CLASS 25, SONNEBERN "SL-1", BOSTIK "CHEM-CALK 550", PECORA "NIPAL UREXPAN", MAMECO "VULKEN 45", OR APPROVED EQUAL.
F. ONE-COMPONENT MILDEW-RESISTANT SILICONE SEALANT: TYPE S, GRADE NS, CLASS 25, GE "SCS 112", DOW CORNING "783", TREMCO "PROGLAZE WHITE", PECORA "863 8345", OR APPROVED EQUAL.
2.03 ACRYLIC EMULSION SEALANTS
A. ONE COMPONENT, NONSAG, ACETONE RESISTANT, MILDEW-RESISTANT, COMPLYING WITH ASTM C 834, TREMCO "ACRYLIC LATEX", SONNEBERN "SONOLAC", PECORA "AC-20", WOODMONT "CHEM-CALK 800", OR APPROVED EQUAL.
2.04 MISCELLANEOUS MATERIALS
A. JOINT CLEANER: TYPE OF JOINT CLEANING COMPOUND RECOMMENDED BY SEALANT MANUFACTURER FOR THE JOINT SURFACES TO BE CLEANED.
B. JOINT PRIMER/SEALER: TYPE RECOMMENDED BY THE SEALANT MANUFACTURER FOR THE JOINT SURFACES TO BE PRIMED OR SEALED.
C. BONDING TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE AS RECOMMENDED BY SEALANT MANUFACTURER, TO BE APPLIED TO SEALANT-CONTACT SURFACES WHERE BOND TO THE SUBSTRATE OR JOINT FILLER MUST BE AVOIDED FOR PROPER PERFORMANCE OF SEALANT. PROVIDE SELF-ADHESIVE TAPE WHEREVER APPLICABLE.
D. SEALANT BACKER ROD: COMPRESSIBLE ROD STOCK POLYETHYLENE FOAM, POLYETHYLENE JACKETED POLYURETHANE FOAM, BUTYL RUBBER FOAM, NEOPRENE FOAM OR OTHER FLEXIBLE, PERMANENT, DURABLE NON-ABSORPTIVE MATERIAL AS RECOMMENDED FOR COMPATIBILITY WITH SEALANT BY THE SEALANT MANUFACTURER. PROVIDE SIZE AND SHAPE OF ROD WHICH WILL CONTROL THE JOINT DEPTH FOR SEALANT PLACEMENT, BREAK BOND OF SEALANT AT BOTTOM OF JOINT, FORM OPTIMUM SHAPE OF SEALANT BEAD ON BACK SIDE, AND PROVIDE A HIGHLY COMPRESSIBLE BACKER TO MINIMIZE THE POSSIBILITY OF SEALANT EXTRUSION WHEN JOINT IS COMPRESSED.
E. JOINT FILLERS FOR CONCRETE PAVING: REFER TO "CONCRETE FLOOR SLAB" SECTION OF THE ARCHITECTURAL GENERAL REQUIREMENTS.
PART 3 - EXECUTION
3.01 JOINT TYPES AND USAGE
A. ACRYLIC EMULSION SEALANT: ALL INTERIOR JOINTS EXCEPT JOINTS WITH METAL, ALUMINUM, AND WET WORK.
B. ELASTOMERIC SEALANTS: USE SINGLE OR MULTI-COMPONENT URETHANE AT ALL EXTERIOR JOINTS AND ALL INTERIOR JOINTS WITH ALUMINUM OR METAL. USE MILDEW RESISTANT SILICONE SEALANT AT SINKS, PLUMBING FIXTURES, AND OTHER WET WORK. USE MINIMUM 35 SHORE A HARDNESS SINGLE OR MULTI-COMPONENT POURABLE URETHANE SEALANT FOR HORIZONTAL JOINTS SUBJECT TO PEDESTRIAN AND VEHICULAR TRAFFIC.
3.02 JOINT SURFACE PREPARATION
A. CLEAN JOINT SURFACES IMMEDIATELY BEFORE INSTALLATION OF SEALANT. REMOVE DIRT, INSECURE COATINGS, MOISTURE AND OTHER SUBSTANCES, WHICH WOULD INTERFERE WITH BOND OF SEALANT.
B. PERFORM PREPARATION IN ACCORDANCE WITH ASTM C804 FOR SOLVENT RELEASE OR ASTM C796 FOR LATEX BASE SEALANTS.
C. FOR ELASTOMERIC SEALANTS, DO NOT PROCEED WITH INSTALLATION OF SEALANT OVER JOINT SURFACE WHICH HAVE BEEN PAINTED, LAQUERED, WATERPROOFED, OR TREATED WITH WATER REPELLENT OR OTHER TREATMENT OR COATING. REMOVE COATING OR TREATMENT FROM JOINT SURFACES BEFORE INSTALLING SEALANT.
D. ETCH CEMENTITIOUS JOINT SURFACES TO REMOVE EXCESS ALKALINITY. ETCH WITH 5% SOLUTION OF MURIATIC ACID; NEUTRALIZE WITH DILUTE AMMONIA SOLUTION, RINSE THOROUGHLY WITH WATER AND ALLOW TO DRY BEFORE SEALANT INSTALLATION.
E. ROUGH JOINT SURFACES ON VITREOUS COATED AND SIMILAR NON-POROUS MATERIALS, WHEREVER SEALANT MANUFACTURER'S DATA INDICATES LOWER BOND STRENGTH THAN FOR POROUS SURFACES. RUB WITH FINE ABRASIVE CLOTH OR WOOL TO PRODUCE A DULL SHEEN.
3.03 INSTALLATION
A. INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALL MATERIALS AND SYSTEMS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH UNIFORM APPEARANCE. COORDINATE WITH WORK OF OTHER SECTIONS.
B. EXAMINE SUBSTRATE, REPORT UNSATISFACTORY CONDITIONS IN WRITING. BEGINNING WORK MEANS ACCEPTANCE OF SUBSTRATES.
C. CLEAN AND PRIME JOINTS, AND INSTALL BOND BREAKERS, BACKER RODS AND SEALANT AS RECOMMENDED BY MANUFACTURERS.
D. DO NOT APPLY SEALANT AT TEMPERATURES BELOW 40° F.
E. APPLY SEALANT WITH HAND-CAULKING GUN WITH NOZZLE OF PROPER SIZE TO FIT JOINTS. USE SUFFICIENT PRESSURE TO INSURE FULL CONTACT TO BOTH SIDES OF JOINT TO FULL DEPTH OF JOINT. EMPLOY ONLY PROVEN INSTALLATION TECHNIQUES, WHICH WILL ENSURE THAT SEALANTS WILL BE DEPOSITED IN UNIFORM, CONTINUOUS RIBBONS WITHOUT GAPS OR AIR POCKETS, WITH COMPLETE "WETTING" OF THE JOINT BOND SURFACES EQUALLY ON OPPOSITE SIDES. EXCEPT AS OTHERWISE INDICATED, FILL SEALANT RABBET TO A SLIGHTLY CONCAVE SURFACE, SLIGHTLY BELOW ADJOINING SURFACES. WHERE HORIZONTAL JOINTS ARE BETWEEN A HORIZONTAL SURFACE AND A VERTICAL SURFACE, FILL JOINT TO FORM A SLIGHT COVE, SO THAT JOINT WILL NOT TRAP MOISTURE AND DIRT.
F. INSTALL SEALANTS TO DEPTHS AS SHOWN OR, IF NOT SHOWN, AS RECOMMENDED BY THE SEALANT MANUFACTURER BUT WITHIN THE FOLLOWING GENERAL LIMITATIONS, MEASURED AT THE CENTER (THIN) SECTION OF THE BEAD:
1. FOR SIDEWALKS, PAVEMENTS, AND SIMILAR JOINTS SEALED WITH ELASTOMERIC SEALANTS AND SUBJECT TO TRAFFIC AND OTHER ABRASION AND INDENTATION EXPOSURE, FILL JOINTS TO A DEPTH EQUAL TO 75% OF JOINT WIDTH, BUT NEITHER MORE THAN 5/8-INCH DEEP NOR LESS THAN 3/8-INCH DEEP.

6.5 THERMAL AND MOISTURE PROTECTION - JOINT SEALANT (CONT.):

2. FOR NORMAL MOVING JOINTS SEALED WITH ELASTOMERIC SEALANTS, BUT NOT SUBJECT TO TRAFFIC, FILL JOINTS TO A DEPTH EQUAL TO 50% OF JOINT WIDTH, BUT NEITHER MORE THAN 1/2-INCH DEEP NOR LESS THAN 1/4-INCH DEEP.
3. FOR JOINTS SEALED WITH NON-ELASTOMERIC SEALANTS, FILL JOINTS TO A DEPTH IN THE RANGE OF 75% TO 125% OF JOINT WIDTH.
G. DO NOT ALLOW SEALANTS OR COMPOUNDS TO OVERFLOW OR SPILL ONTO ADJOINING SURFACES. USE MASKING TAPE OR OTHER PRECAUTIONARY DEVICES TO PREVENT STAINING OF ADJOINING SURFACES BY EITHER.
H. TOOL JOINTS IMMEDIATELY AFTER APPLICATION OF SEALANT IF REQUIRED TO ACHIEVE FULL BOND TO SUBSTRATE OR TO ACHIEVE SMOOTH SEALANT SURFACE.
I. CURE AND PROTECT SEALANTS AS DIRECTED BY MANUFACTURERS. REPLACE OR RESTORE DAMAGED SEALANTS. CLEAN ADJACENT SURFACES TO REMOVE SPILLAGE.
7.0 DOORS AND WINDOWS - STEEL DOORS AND FRAMES:
1.01 SUMMARY
A. PROVIDE STEEL DOORS AND FRAMES.
1. EXTERIOR AND INTERIOR STEEL DOORS.
2. HOLLOW METAL STEEL FRAMES.
1.02 SUBMITTALS
A. NONE REQUIRED UNLESS SUBMITTING FOR APPROVED EQUALS.
1.03 QUALITY ASSURANCE
A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. STANDARDS: COMPLY WITH THE PROVISIONS OF THE FOLLOWING SPECIFICATIONS AND STANDARDS, EXCEPT AS OTHERWISE NOTED OR SPECIFIED, OR AS ACCEPTED OR DIRECTED BY THE ARCHITECT.
1. ANSII/SKD 1.05 STANDARD SPECIFICATIONS FOR STANDARD STEEL DOORS AND FRAMES.
2. SDI 117 "MANUFACTURING TOLERANCES STANDARD STEEL DOORS AND FRAMES".
3. PRE-PAINTED ASSEMBLIES: ANSII/NFPA 80, AND ACCEPTABLE TESTING AGENCY LISTING.
4. RE-RATED ASSEMBLIES AT EXTERIOR: ASTM C518-10 STANDARD TEST METHOD FOR STEADY-STATE THERMAL TRANSMISSION PROPERTIES BY MEANS OF THE HEAT FLOW METER APPARATUS.
5. HIGH WIND AND IMPACT RESISTANCE ASSEMBLIES:
a. ANSII A250.13 TESTING AND RATING OF SEVERE WINDSTORM RESISTANT COMPONENTS FOR SWINGING DOOR ASSEMBLIES.
b. ASTM E1886-05 STANDARD TEST METHOD FOR PERFORMANCE OF EXTERIOR WINDOWS, CURTAIN WALLS, DOORS, AND STORM SHUTTERS IMPACTED BY MISSILE(S) AND EXPOSED TO CYCLIC PRESSURE DIFFERENTIALS.
c. ASTM E1996-12A STANDARD SPECIFICATIONS FOR PERFORMANCE OF EXTERIOR WINDOWS, GLAZED CURTAIN WALLS, DOORS AND STORM SHUTTERS IMPACTED BY WIND BORNE DEBRIS IN HURRICANES.
d. ASTM E330-02 (2010) TEST METHOD FOR STRUCTURAL PERFORMANCE OF EXTERIOR WINDOWS, CURTAIN WALLS AND DOORS BY UNIFORM STATIC AIR PRESSURE DIFFERENCE.
e. FLORIDA BUILDING CODE (FBC), TAS 201-94. LARGE MISSILE IMPACT TEST.
f. FLORIDA BUILDING CODE (FBC), TAS 202-94. UNIFORM STATIC AIR PRESSURE TEST.
g. FLORIDA BUILDING CODE (FBC), TAS 203-94. CYCLIC PRESSURE LOADING TEST.
PART 2 - PRODUCTS
2.01 MANUFACTURERS
A. MANUFACTURERS: BLACK MOUNTAIN DOOR, CECCO, CURRIES, MESKER, STEELCRAFT, REPUBLIC, TELL MANUFACTURING, DAYBAR, OR APPROVED EQUAL. B. PROVIDE METAL DOORS AND FRAMES FROM A SINGLE MANUFACTURER.
2.02 MATERIALS
A. FABRICATION: FABRICATE STEEL DOORS AND FRAMES RIGID, NEAT IN APPEARANCE AND FREE FROM DEFECTS, WARP, OR BUCKLE. PROVIDE CLEAN CUT, STRAIGHT, AND TRUE MOLDED MEMBERS, WELL FORMED AND ALIGNED MITERS. DRESSED AND GROUND SMOOTH, AND WHERE APPLICABLE, CONCEALED FASTENERS. REINFORCE AT CORNERS AS REQUIRED TO PREVENT SAGGING. ACCURATELY FORM METAL TO REQUIRED SIZES AND PROFILES INCLUDING ASTRAGALS. FIT, ASSEMBLE, AND WELD UNITS AT FACTORY OR SHOP.
B. ANCHORS, FASTENERS, ACCESSORIES: MANUFACTURERS STANDARD, HOT-DIPPED GALVANIZED AT EXTERIOR. PROVIDE NOT LESS THAN 3 ANCHORS PER JAMB.
C. FIRE RATED UNITS: AS ANSII/SKD-100 GRADE II, HEAVY-DUTY, MINIMUM 18 GAGE (0.358 INCH) COLD-ROLLED STEEL, 1/4" INCH THICK, PROVIDE ACOUSTICALLY IMPROVED DOORS WITH MINIMUM STC OF 33 (ASTM E90-99 AND ASTM E413-10) WHERE INDICATED.
D. CORES: CONTINUOUSLY REINFORCED WITH A FULL CORE OF RESIN-IMPREGNATED KRAFT HONEYCOMB WITH 1-INCH NESTED, HEXAGONAL-SHAPED CELLS. BOND CORE TO INSIDE OF BOTH FACE SHEETS OR POLYSTYRENE INSULATION.
E. CHANNEL FILLERS: FLUSH STEEL CHANNEL FILLERS FOR TOP CHANNEL OF EXTERIOR DOORS.
F. VISION PANELS: PROVIDE GLAZING STOP/MOLDINGS FOR GLAZED PANELS.
G. ASTRAGALS: PROVIDE T AND U ASTRAGAL FOR PAIRS OF EXTERIOR AND FIRE-RATED DOORS AND AS INDICATED ON DOOR SCHEDULE.
H. INTERIOR FRAMES:
1. EXTERIOR AND INTERIOR FRAMES: WELDED TYPE, 16 GAGE (0.598 INCH) SHEET STEEL OIL OR COLD ROLLED. AT EXTERIOR OPENINGS PROVIDE FRAMES WITH 660 ZINC COATING, MILL PHOSPHATIZED. JOINTS TO BE MITERED OR COPED CORNERS.
2. ACCESSORIES: DOOR SILENCERS AND PLASTER GUARDS, MINIMUM 3 ON STRIKE JAMB.
3. GLAZING FRAMES: PROVIDE MANUFACTURERS STANDARD STEEL CHANNEL OR TUBULAR STOPS, PREDRILLED FOR SCREWS AND FACTORY FINISHED AS SPECIFIED FOR DOORS AND FRAMES.
2.03 HARDWARE
A. PREPARATION: PREPARE HOLLOW METAL UNITS TO RECEIVE MORTISED AND CONCEALED FINISHED HARDWARE, INCLUDING TAPPING. IN ACCORDANCE WITH DOOR AND HARDWARE SCHEDULE AND TEMPLATES PROVIDED BY THE HARDWARE SUPPLIER. REINFORCE HOLLOW METAL UNITS TO RECEIVE SURFACE-APPLIED HARDWARE. DRILLINGS AND TAPPING FOR SURFACE-APPLIED HARDWARE WILL BE DONE ON THE JOB SITE.
B. LOCATION OF HARDWARE: LOCATE FINISH HARDWARE AS INDICATED IN DOOR HARDWARE SUPPLIER TEMPLATES AND/OR IN COMPLIANCE WITH DOOR AND HARDWARE INSTITUTE PUBLICATION "RECOMMENDED LOCATION FOR BUILDER'S HARDWARE".
2.04 FINISH
A. FINISH: FACTORY PRIMED AND FIELD FINISHED. PROVIDE MANUFACTURERS STANDARD RUST INHIBITIVE PRIMER COMPATIBLE WITH FINISH PAINT SPECIFIED IN SECTION 09 00 00. PROVIDE ASPHALT EMULSION SOUND DEADENING COATING ON CONCEALED FRAME INTERIORS. DO NOT PRIME OR PAINT TESTING AGENCY LABELS.
PART 3 - EXECUTION
3.01 INSTALLATION
A. INSTALL DOORS AND FRAMES IN COMPLIANCE WITH SDI-100. SET FRAMES ACCURATELY IN POSITION, PLUMB AND ALIGNED, AND SECURELY ANCHOR TO ADJACENT CONSTRUCTION.
B. INSTALL HARDWARE, AS REQUIRED AS NECESSARY TO PROVIDE SMOOTH AND PROPER OPERATION WITH SECURE LATCHING OR LOCKING.
C. ERECT FIRE DOORS AND FRAMES IN COMPLIANCE WITH ANSII/NFPA 80 AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
D. CLEARANCES: PROVIDE CLEARANCES OF NOT MORE THAN 1/8-INCH AT JAMBS AND HEADS, AND NOT MORE THAN 3/4-INCH FROM FLOOR OR 3/8-INCH FROM THRESHOLDS. EXTERIOR DOORS PROVIDE 3/8-INCH UNDERCUT FOR ACCESSIBILITY THRESHOLD STANDARDS.
E. TOUCH-UP DAMAGED COATINGS AND LEAVE READY TO RECEIVE FINISH PAINTING.

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