

SECTION 01 60 00 PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. All material and equipment incorporated in the Work shall be:
  - 1. New, unless specifically noted otherwise in the Contract Documents.
  - 2. In condition acceptable to the University's Representative.
  - 3. Suitable for intended use.

1.2 UNIVERSITY FURNISHED ITEMS

- A. [INSERT TEXT AS APPROPRIATE]

1.3 TRANSPORTATION AND HANDLING

- A. Arrange for delivery of materials and equipment to minimize length of on-site storage prior to installation.
- B. All common carrier deliveries shall be marked for the Contractor. Identify location of Project site by Project name, street address, etc.
- C. University will not receive deliveries on behalf of the Contractor.
- D. Deliver manufactured products and materials in their original unbroken containers or bundles, clearly labeled with manufacturer's name, brand, and grade seal or model number and labels intact until time of use.
- E. Handle materials and equipment in a manner to avoid damage to products and their finishes.
- F. Promptly remove damaged or defective products from the Project site and replace at no additional cost to the University.

1.4 STORAGE AND PROTECTION

- A. Other than Project site, storage space may not be available.
- B. Store manufactured products in accordance with manufacturers' instructions and with seals and labels intact and legible.
  - 1. Keep materials clean, dry, and undamaged.
  - 2. Store products subject to damage by the elements in weathertight enclosures.
  - 3. Maintain temperature and humidity in accordance with manufacturers' recommendations.
- C. Exterior Storage
  - 1. Store materials and equipment above ground on blocking or skids to prevent soiling, staining, and damage.
  - 2. Cover products that are subject to damage by the elements with impervious protective sheet coverings. Provide adequate ventilation to prevent condensation.
  - 3. Store sand, rock, or aggregate material in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- D. Arrange storage to allow adequate inspection.
- E. Periodically inspect stored products to assure that products are maintained under specified conditions and are free from damage and deterioration.
- F. Protection After Installation
  - 1. Use protective materials and any methods necessary to prevent damage to installed materials and equipment from traffic, construction operations, weather, etc. Remove protection when no longer required.

2. Maintain temperature and humidity conditions in interior spaces for the Work in accordance with manufacturers' instructions for the materials and equipment being protected.

1.5 UNDERWRITERS' LABORATORIES LABEL

- A. Materials and equipment, for which Underwriters' Laboratories, Inc. (UL) standards have been established and their label service is available, shall bear the appropriate UL Label.

1.6 MANUFACTURERS' TRADE MARKS AND NAMES

- A. University's Representative reserves the right to review and request the removal or redesign of manufacturers' trade marks and names on items of materials and equipment which will be exposed to view in the completed Work. Such removal or redesign shall be at no additional cost to the University.

1.7 LEED AND ENVIRONMENTAL PERFORMANCE REQUIREMENTS

- A. Provide documentation described below for inclusion in the application for LEED Certification for environmental performance.
- B. Materials and Resources: Provide documentation of the environmental performance attributes listed below for products or materials specified with these attributes. Include documentation for the cost of the product or materials exclusive of labor.
  1. Recycled Content:
    - a. Products and materials required to have recycled content may include post- industrial and post-consumer recycled content. Recycled content shall be defined in accordance with ISO 14021 – Environmental labels and declarations - Self-declared environmental claims (Type II environmental labeling).
    - b. Provide product data on post-consumer recycled content and post-industrial recycled content as a percentage of the full product composite (based on weight).
    - c. Minimum recycled content values listed in the specifications shall mean the sum of post-consumer recycled content and one-half the post-industrial recycled content.
    - d. For salvaged and refurbished materials, provide product data or letter stating that material is salvaged or refurbished.
  2. Regional Materials:
    - a. Regional materials or products are extracted, harvested or recovered as well as manufactured at a facility within 500 miles of the Project.
    - b. If only a fraction of a material or product is extracted, harvested or recovered as well as manufactured regionally, document that percentage (by weight).
    - c. Document location of raw material extraction, harvest, or recovery (mine, quarry, plantation, forest, recycling center, etc.) as well as product manufacturing facility.
  3. Rapidly renewable materials:
    - a. These materials or products are made from plants that are typically harvested within a 10 year cycled or shorter.
    - b. Provide documentation identifying the percentage of rapidly renewable content in the material or product (based on weight).
  4. Certified wood:
    - a. These materials and products are certified in accordance with the Forest Stewardship Council (FSC) Principles and Criteria, for wood building components.
    - b. Provide wood certification documentation, including chain-of-custody documentation, from the manufacturer.
- C. Indoor Air Quality: For all materials listed below used in the interior of the building (within the exterior weatherproofing system) and applied on site, provide product data and Material Safety Data Sheets highlighting VOC and other applicable chemical emission test results and limits and include statements that prohibited chemical components were not used as ingredients in the manufacture of the products.

1. Adhesives and Sealants:

<b>Adhesives</b>	<b>VOC Limit g/L)</b>
Carpet Adhesive	50
Carpet Pad Adhesive	50
Wood Flooring Adhesive	100
Rubber Floor Adhesive	60
Subfloor Adhesive	50
Ceramic tile Adhesive	65
VCT and asphalt tile Adhesive	50
Dry wall and panel Adhesive	50
Cove Base Adhesive	50
Multipurpose Construction Adhesive	70
Structural Glazing Adhesive	100
Single Ply Roofing Membrane Adhesive	250
PVC welding	285
CPVC welding	270
ABS welding	400
Plastic cement welding	250
Adhesive primer for plastic	250
Contact Adhesive	80
Special Purpose Contact Adhesive	250
Structural Wood Member Adhesive	140
All others	250
<b>Aerosol Adhesives</b>	
General Purpose Mist	65% VOC by weight
General Purpose Web	55% VOC by weight
Special Purpose	70% VOC by weight
<b>Substrates</b>	
Metal to metal	30
Plastic foams	50
Porous material except wood	50
Wood	30
Fiberglass	80
<b>Sealants</b>	
Architectural	250
Nonmembrane Roof	300
Single Ply Roof Membrane	450
Other	420
<b>Sealant Primers</b>	
Architectural – nonporous	250
Architectural – porous	775
Modified Bituminous	500
Other	750

Requirements are from South Coast Air Quality District Rule 1168 (1/7/05) except for aerosol adhesive requirements which come from Green Seal Standard GS 36 (10/19/00) Applicable definitions apply.

- a. Prohibited Chemicals: the manufacturer shall demonstrate that the following chemical compounds are not used as ingredients in the manufacture of the product.
- (1) chloroform
  - (2) ethylene dichloride
  - (3) methylene chloride

- (4) perchloroethylene
- (5) trichloroethylene

2. Paints and Coatings:

<b>Interior Coatings</b>	<b>VOC Limit g/L)</b>
Non-flat	150
Flat	50

<b>Exterior Coatings</b>	
Non-flat	200
Flat	100

**Anti-corrosive Coatings (ferrous)**  
 Gloss, Semi-gloss and Flat 250  
 Requirements from Green Seal Standard GS 11 (10/19/00) and GC 03  
 (1/7/97). Applicable definitions apply.

<b>Clear Wood Finishes</b>	<b>VOC Limit g/L)</b>
Varnish	350
Lacquer	550
Shellac (clear)	730
Shellac (pigmented)	550
Stains	250

<b>Sealers</b>	
Waterproofing sealers	250
Sanding Sealers	275
Other Sealers	200
Floor coatings	100

Requirements are from South Coast Air Quality District Rule 1113 (1/1/04).  
 Applicable definitions apply.

3. Carpet Systems:

<b>Carpet*</b>	<b>24 hr Emission Factor Limit (mg/m<sup>2</sup>/hr)</b>
Acetaldehyde	0.02
Benzene	0.055
Caprolactam	0.12
2-Ethylhexanoic Acid	0.046
Formaldehyde	0.05
1-Methyl-2-Pyrrolidinone	0.3
Naphthalene	0.02
Nonanal	0.024
Octanal	0.024
4-Phenylcyclohexene	0.05
Styrene	0.41
Toluene	0.28
Vinyl Acetate	0.4
Total VOCs	0.5
Formaldehyde	0.05

**Cushion\*\***

PROJECT TITLE  
CONTRACT TITLE  
UNIVERSITY OF CALIFORNIA, DAVIS  
CITY, CALIFORNIA

PROJECT NO: 0000000

	Emission factor limit (mg/m <sup>2</sup> /hr)
Total VOCs	1.00
4 – Phenylcyclohexane	0.30
Formaldehyde	0.05
Styrene	0.05

**Adhesives**

See requirements for adhesives and sealants (above) for VOC limits.

\*Partial requirements (24 hour emission limits only). See Carpet and Rug Institute – Green Label Plus program for applicable definitions and additional testing requirements.

\*\* See Carpet and Rug Institute – Green Label program for applicable definitions.

4. Composite wood and agrifiber products:

No added urea-formaldehyde resins. This requirement applies to laminating resins and binders used in fabrication as well as the base material.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 60 00