

2.2.4. Solar System (Photovoltaic Cell, PV) Material Test Standards and Approval.

2.2.4.1. Acceptable Test Standards and criteria

- 2.2.4.1.1. All the Materials, Systems, Assemblies, Pipes and fittings, equipment, Products and Accessories, referred to in this chapter shall be Listed, Approved and Registered by the Civil Defence Material Approval Department.
- 2.2.4.1.2. There is no year of edition mentioned against any test standards. It is the intent of Civil Defence to convey to the customers seeking laboratory tests and the test laboratories to follow the "LATEST EDITION OF THE TEST STANDARD, AS AND WHEN THEY ARE UPGRADED/REVISED/ AMENDED, TO THE DATE."

2.2.4.2. PV cells (BAPV) to be installed on roof of Lowrise buildings

- i. Class B, with ANSI/UL 1703, Standard for Safety for Flat-Plate Photovoltaic Modules and Panels. **OR**
- ii. CLASS B, with IEC 61730-2, Requirements for PV modules tested under Fire conditions.

2.2.4.3. PV cells (BAPV) to be installed on roof of Midrise and Highrise buildings

- i. Class A, with ANSI/UL 1703, Standard for Safety for Flat-Plate Photovoltaic Modules and Panels. **OR**
- ii. CLASS A, with IEC 61730-2, Requirements for PV modules tested under Fire conditions.

2.2.4.4. PV cells Integrated into building (BIPV) material to be installed on roof of Midrise and Highrise buildings shall comply with any of the following

- i. Class A, with ANSI/UL 790, Standard for Standard Test Method for Roof Coverings
- ii. Class A, with ASTM E 108, Standard Test Method of Roof Coverings
- iii. Class A, with NFPA 256, Standard Methods of fire tests of roof coverings
- iv. Class A, with EN 13501-5, Classification using data from external fire exposure to roofs.
- v. Class A, with ISO 13501-5, Classification using data from external fire exposure to roofs.

2.2.4.5. PV cells (BAPV) to be installed on façade of any buildings

- i. Class B, d0, S1, with EN 13501-1, Classification using data from reaction to fire tests

2.2.4.6. PV Systems (BAPV) OR (BIPV), as facade system to be installed on façade of any buildings

- i. Shall be tested as per **Chapter 1. Table 1.14.a.**