

**Table 9.12: Water Mist System Requirements**

ITEMS	REQUIREMENTS
<b>6. BREECHING INLET</b>	<ul style="list-style-type: none"> <li>i. A breeching inlet for Civil Defence shall be provided for all water mist systems except where <ul style="list-style-type: none"> <li>a. The water mist is protecting an area less than 200 m<sup>2</sup>.</li> <li>b. The water mist system pressure exceeds 12 bar and is supplied by storage cylinders.</li> <li>c. Water mist systems where the atomizing medium is essential for fire suppression.</li> </ul> </li> <li>ii. For water mist systems with system design pressures less than or equal to 12 bar (175 psi), the connection of the fire department connection to the system shall be made on the upstream (supply) side of the system strainer or filter.</li> <li>iii. For water mist systems with system design pressures in excess of 12 bar (175 psi), the connection of the fire department connection to the system shall be made on the suction side of the pressure source components.</li> </ul>
<b>7. ADDITIVES</b>	<ul style="list-style-type: none"> <li>i. All the components in the water mist systems and the additive injection system shall be of corrosion resistant material.</li> </ul>
<b>8. GAS AND WATER CONTAINERS</b>	<ul style="list-style-type: none"> <li>i. Gas and water containers subject to pressurization shall be made, tested, approved, equipped and marked in accordance with the current specifications of the ASME Boiler and Pressure Vessel Code, Section VIII, or other approved international standards.</li> <li>ii. Each pressurized container shall be provided with a safety device to release excess pressure.</li> <li>iii. Each water and gas container shall have a permanent nameplate or other permanent marking specifying the liquid/gas held in the container (including additives) and the nominal water volume and pressurization level (where applicable) of the container.</li> <li>iv. All containers supplying the same manifold outlet shall be interchangeable and of the same size and charge.</li> </ul>
<b>9. FIRE DETECTION AND ALARM SYSTEM</b>	<ul style="list-style-type: none"> <li>i. Fire Detection, control system, design and installation shall be as per <b>Chapter 8. Fire Detection and Alarm Systems</b>.</li> </ul>
<b>10. NOZZLES</b>	<ul style="list-style-type: none"> <li>i. Nozzles shall be installed in accordance with the manufacturer's listing.</li> <li>ii. The minimum and maximum height and nozzle pressure limitations shall be in accordance with the manufacturer's listing.</li> <li>iii. The minimum and maximum distances between nozzles, distance from walls, obstructions to nozzles, distance below ceilings etc. shall be in accordance with the manufacturer's listing.</li> <li>iv. Temperature rating, Classifications and color coding of thermally activated nozzles shall be as per <b>Table 9.12.A</b>.</li> </ul>

**Table 9.12.A: Nozzle Operating Temperature and Colour Classification**

MAXIMUM CEILING TEMPERATURE	TEMPERATURE RATING OF SPRINKLER HEAD	TEMPERATURE CLASSIFICATION	COLOUR CODE	GLASS BULB COLOURS
<b>1. 38°C</b>	<b>57°C—77°C</b>	Ordinary	Uncoloured or Black	Orange or Red
<b>2. 66°C</b>	<b>79°C—107°C</b>	Intermediate	White	Yellow or Green
<b>3. 107°C</b>	<b>121°C—149°C</b>	High	Blue	Blue
<b>4. 149°C</b>	<b>163°C—191°C</b>	Extra High	Red	Purple
<b>5. 191°C</b>	<b>204°C—246°C</b>	Very Extra High	Green	Black
<b>6. 246°C</b>	<b>260°C—302°C</b>	Ultra High	Orange	Black
<b>7. 329°C</b>	<b>343°C</b>	Ultra High	Orange	Black