SPECIFICATION FOR MASTIC MATERIALS & INSTALLATION

**Revised on 22-02-2022**

SPECIFICATIONS FOR MASTIC MATERIAL & INSTALLATION

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1.0 General Requirement

“Mastic” is a cold applied, self-adhesive, moldable and self-supporting for sealing, filling and caulking application where a protective, waterproof and non-setting material is required. Profiling primer/mastic and petrolatum tapes shall contain a petrolatum compound containing inert siliceous fillers and shall not contain volatile organic compounds. Mastic shall be “self supporting”, and “non cracking” and “non hardening” and shall remain impervious to moisture at the wide temperature range (tropical grade application).

This shall be highly resistant to mineral acid, alkalis, salts and mechanical stress over a wide temperature range. It is specially recommended around pipes to prevent the water seeping through the joint. This is used for moulding around irregular profiles such as flanges, mechanical joints, and valves to provide a contour suitable for wrapping with anti-corrosion tapes.

The cell cellular polymer, flow control additives or reinforce fiber contain mastic not accepted due to hard at the tropical applications.

**2.0 Technical Properties:**

Properties of Primer, Mastic Paste, Mastic Tape and Outer Wrapping Tape shall be as given below.

**Mastic Primer**

|  |  |
| --- | --- |
| **TYPICAL PROPERTIES** | **DATA** |
| Specific Gravity at 250C |  0.85 – 1.25 |
| Flash Point minimum 0C |  65 |
| Drop melting point, minimum 0C |  56 |
| Cone penetration at 25 0C, 100g wt,5sec;mm |  7.4 – 25.0 |
| Petrolatum or petroleum wax content, minimum, percent by weight |   70% |

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**Mastic Paste**

|  |  |
| --- | --- |
| **TYPICAL PROPERTIES** | **DATA** |
| Specific Gravity, minimum 25 0C |  1.1 |
| Flash Point ,minimum 0C |  180 |
| Maximum Service Temperature 0C | 90 |
| Maximum application temperature 0C | 70 |

 Note : The maximum Specific Gravity of Mastic Paste shall be as per the Manufacturers

 specification catalogue and it shall not exceed at the maximum service temperature

 of 900C.

**Mastic Tape**

|  |  |
| --- | --- |
| **TYPICAL PROPERTIES** | **DATA** |
| Flash Point minimum 0C |  150 |
| Drop melting point of saturant , minimum 0C |  60 |
| Thickness, minimum , mm |  1.016 |
| Breaking Strength, width ,minimum, (N/m) |  3152 |
| Elongation at break, minimum, percent (%) | 6 |
| Petrolatum or petroleum wax components applied to fabric carrier, percent by weight |  50% - 70% |
| Maximum Service Temperature 0C |  70 |

 Outer Wrapping Tape

|  |  |
| --- | --- |
|  TYPICAL PROPERTIES |  DATA |
| Thickness, minimum , (µm) |  120 |
| Tensile Strength ,minimum (Mpa) |  18 |
| Elongation at break (%) |  ≥150% |
| Service temperature (0C) |  60 |
| Specific material property required | Shall be a UV protective material |

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* 1. Application

The following procedure shall be applied for the protection of flanged joints.

1. Pipe joints and adjacent area of pipe shall be cleaned and all loose scale rust and dirt, etc removed before protection materials are applied.

2. The application of continuous coating of petroleum paste over the whole area to be protected as a primer, including bolt heads, nuts, flanges etc.

3. Where bolt heads, nuts, flanges and other projections arises, profiling mastic shall used to give a smooth external profile, extending upto the end of the special wrapping to form a tapered profile.

4. Flange joint including Bolt heads, nuts, flanges and other projections and hollows shall be filled with a profiling mastic to give a smooth external profile to suit the smooth wrapping.

5. The joint shall be spirally wrapped with a self adhesive protective tape. Minimum application shall be a spiral wrap with 55% overlap. Care should be taken to ensure that tape is in contract with the under laying surface to prevent wrinklers or air pockets. The tape shall extent minimum of 150mm along the barrel of the pipe on each side of the joint and finished smooth so that no water shall seep through the wrapping.

6. For further protection, a separate overwrap of PVC self adhesive tape or clear outerwrap may be applied spirally over the petrolatum tape.

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