



Standard Practice for Use of Chemical-Resistant Sulfur Mortar¹

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1. Scope

1.1 This practice provides detailed information on the handling, installation, and proper use of chemical-resistant sulfur mortar such as those covered in Specification C 287.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are provided for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* For specific safety precautions, see Section 5.

2. Referenced Documents

2.1 ASTM Standards:²

C 267 Test Methods for Chemical Resistance of Mortars, Grouts, and Monolithic Surfacing and Polymer Concretes
C 287 Specification for Chemical-Resistant Sulfur Mortar
C 395 Specification for Chemical-Resistant Resin Mortars
C 399 Practice for Use of Chemical Resistant Resin Mortars
C 904 Terminology Relating to Chemical Resistant Non-metallic Materials

3. Terminology

3.1 *Definitions*—For definitions of terms used in this practice, see Terminology C 904.

4. Storage

4.1 The sulfur mortar shall be stored in unopened containers and in a clean, dry place to prevent contamination of the product. The mortar is not known to deteriorate in storage.

5. Safety Precautions

5.1 Sulfur mortar must be heated and molten in order to be used.

5.2 Molten sulfur mortar fumes and vapors are irritating to the eyes and mucous membranes. Adequate ventilation should be provided wherever sulfur mortars are used.

5.3 If overheated, sulfur mortar ignites and burns with a low, blue flame that generates sulfur dioxide. If this should happen, heating must be stopped and the vessel covered with a tight-fitting lid to smother the flames.

5.3.1 When using sulfur mortar in a confined area, each pail of molten material must be checked before entering the area to ensure that the mortar is not burning.

5.3.2 The areas where the melting and pouring are carried out must be checked for flammable or explosive gases, and a flame permit issued, if required, before melting vessel fires are lit, or the molten sulfur mortar is carried into the area.

5.3.3 Fire extinguishing equipment must be available in order to prevent flame spread.

5.3.4 Water should not be used to extinguish ignited sulfur.

5.4 All workmen must be equipped with suitable eye protection and gloves to protect them from spills and splashes of the molten mortar.

5.4.1 It is recommended that workmen wear flame-retardant clothing. If combustible clothing is worn, care should be taken to ensure that it does not contact the flame used for melting the sulfur mortar.

5.4.2 All surfaces which molten sulfur mortar will contact must be dry to prevent splattering.

6. Equipment

6.1 *Vessel*, made of cast iron, steel, or aluminum, for melting the sulfur mortar. Suitable melting pots may be available from the sulfur mortar manufacturer.

6.2 *Long-Handled Steel Ladle*, for dipping and stirring.

6.3 *Metal Pails*, for transporting and pouring mortar.

NOTE 1—All equipment must be clean and dry.

7. Melting

7.1 Sulfur mortar must be dry at the time of use in order to prevent foaming.

¹ This practice is under the jurisdiction of ASTM Committee C03 on Chemical-Resistant Nonmetallic Materials and is the direct responsibility of Subcommittee C03.02 on Mortar and Monolithics.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.