

PSM™ 190

Potassium Silicate Anti-Acid Mortar



Building
&
Transportation



Oil, Gas
&
Industrial



Offshore
&
Onshore



Water
&
Wastewater



PRODUCT DESCRIPTION

The CTech-LLC® Potassium Silicate Anti-Acid Mortar (PSM™ 190) is a two-component mortar consists of a potassium silicate binder and a finely divided, silica filler.

The CTech-LLC® potassium silicate anti-acid mortar used in the laying of acid proof brick and tile linings in chemical environments.

TECHNICAL DATA

	Unit	PSM™ 190
Appearance / Colors	-	Mixed: Light Gray
Chemical Base	-	Potassium Silicate
Density	kg/cm ³	Mixed ~ 1.9
Compressive Strength	Kg/cm ²	120-150
Flexural Strength	Kg/cm ²	25-35
Bond Strength to Substrate	Kg/cm ²	>1
Water Absorption	%	Max. 5-6
Mixing Ratio by Weight	-	Solution: 1 Powder: 3
Substrate Temperature	°C	Minimum: +10 Maximum: +30
Maximum Service Temperature	°C	900
Initial Setting	hour	~ 3-4 @ +25°C
Final Setting	hour	~ 15 @ +25°C
Pot Life	min	~ 10-15 @ +25°C
Curing	days	Approx. 4 @ +25°C

ADVANTAGES

- Resistant to all acids in all concentrations, except hydrofluoric acid and fluoride salts. Especially recommended for all concentrations of sulphuric, nitric, hydrochloric and phosphoric acids. Unaffected by 98% Sulphuric Acid.
- High-temperature tolerance (max 900°C)
- High bond strength
- Low shrinkage
- Easy to Prepare and Apply (Two part mix)
- Chemically cures for easy application and reliable performance.

TYPICAL USES

PSM™ 190 potassium silicate anti-acid mortar is widely used for Acid

resistant bricks & tiles lining works as bedding & jointing mortar for:

- Acid tanks
- Pickling lines
- Power station chimneys
- Floors and drains in acid storage areas
- Sewage treatment
- Absorption and drying towers in sulphuric acid and nitric acid plants
- Industrial chimneys
- Fertilizer industry
- Waste acid collection sumps

INSTALLATION PROCEDURE

PREPARATION OF SUBSTRATE

All surfaces in contact with PSM™ 190 potassium silicate anti-acid mortar should be clean, dry, and free of dust, dirt, grease, oil, and other contaminants.

MIXING

In order to obtain good working consistency, the average mixing ratio is 1 PBW of solution & 3 PBW of powder. Stir the Solution thoroughly before use. Place the Solution in a suitable mixing pan and add powder in it. Mix thoroughly with a spatula or Trowel. The mixing operation shall be continued until a uniform mixture is obtained.

Mix small batches to maintain workability. Use all mortar from the pan before preparing a new batch.

APPLICATION

Mortar is buttered on acid resistance brick/tile as usual bricklayers Method.

Apply the mortar using a finishing trowel or putty knife in layers not exceeding 5 mm thickness per coat. For applications requiring greater thickness, the mortar must be applied in multiple successive layers, allowing each layer to set properly before applying the next, until the desired total thickness is achieved.

CONSUMPTION

The estimated consumption of potassium silicate antacid mortar (PSM™ 190) is approximately 4 kg per square meter at standard application thickness. Actual usage may vary based on project scope, substrate conditions, application technique, and workmanship. It is recommended to include a suitable waste factor when calculating material requirements.

STORAGE & SHELF LIFE

- Solution: 24 Months
- Powder: 24 Months
- All two components are stored in cool and dry place under the roof until ready to use it original unopened (Sealed) containers.

PACKAGING

- Hobbock: 20kg
- Bag: 3*20kg

CAUTION

All components of anti-acid mortar systems may cause skin irritation and sensitization. Use of chemical resistant gloves is recommended. Avoid breathing vapors and dust. Get medical attention if you are breathing with difficulty. Resins products can cause strong eye irritation. Avoiding eye contact and Using safety goggles is necessary.