

PRODUCT INFORMATION

Asplit® HB

PRODUCT DESCRIPTION

Asplit HB is a two-component, halogen-free, bedding and jointing mortar based on Potassium Silicate

FIELDS OF APPLICATION

Asplit HB is suitable for bedding and jointing of acid resistant ceramic tiles, bricks, brick lining of vessels, apparatus and chimneys. **Asplit HB** exhibits excellent resistance to water and rinsing actions, which allows rinsing even at neutral range for several weeks, yet permanent rinsing, is not possible. For consistent rinsing or abrasion resistance, use an **Asplit** synthetic resin based mortar for jointing.

Except for Hydrofluoric Acid, **Asplit HB** is resistant to all acids, solvents, oxidising agents, oils and fats; but it is not resistant to alkalis.

FEATURES

- Halogen-Free, containing no Fluoride
- Extremely high resistance against acids
- Temperature Resistance up to +900 °C

CHEMICAL RESISTANCE

Information on the chemical resistance properties are available on request or can be taken from the resistance chart.

SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before **Asplit HB** is applied, the suitability of the object is checked and recorded that it conforms to the requirements for surface preparation in accordance with DIN EN 14879-1.

Concrete substrates should be primed with a scratched barrier layer of a Potassium Silicate-type thin consistency mortar mix, to ensure that the surface porosity is sealed; so as to prevent the intrusion of liquid acid.

SURFACE PRE-TREATMENT

C-Steel

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferretic steel surfaces shall be abrasive blasted to "Near White Metal". A standard preparation degree of SA 2½ according EN ISO 12944-4 must be achieved. To prevent flash rust, the primer must be applied immediately after blasting and cleaning of the substrate.

Concrete

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum peel strength of 1.5 MPa. The residual moisture content must not exceed 4%.

A mechanical treatment by blasting with solid abrasives, high pressure water blasting or shot blasting is recommended. Blasting is also required after milling, flame blasting or prying.

PROCESSING

Environmental Conditions

Environmental Conditions	Value
Relative Humidity	Max. 80%
Surface Temperature	Min. +10 °C, max. +30 °C
Application Temperature	+20 ± 5 °C is recommended
Dew Point Distance	≥ 3K

Equipment

The following equipment is essential for the application of **Asplit HB**:

- Stirrer (max. 300 r/min.)
- Measuring Jugs and Mixing vessels
- Wide brushes & Lambs wool rollers
- Mortar Trowel
- Jointing Trowel, Joint Extruder
- PSA (safety glasses, rubber gloves etc.)

Mixing

Pour the **Asplit HB Solution** into a mixing tub. Add the **Asplit HB Powder** mixing constantly and thoroughly (3 min) until a homogenous and lump-free mass is produced.

Mixing Ratio

Scratch Coat for 1m ²	Kg	Parts per weight	Parts per volume
Asplit HB Solution	0.50 kg	100	2.00 L
Asplit HB Powder	0.50 kg	100	2.47 L
Asplit HB	Kg	Parts per weight	Parts per volume
Asplit HB Solution	0.50 kg	100	1.00 L
Asplit HB Powder	1.50 kg	300	3.71 L
	2.00 kg = 1 Liter		

Application

The Scratch Coat is applied on the substrate by using a wide Brush or a Lambs wool roller.

Asplit HB is applied with a Mortar Trowel on to the substrate base and to the material to be applied. The bricks or shapes are to be fully bedded and jointed, avoiding any voids, lumps or cavities.

Consumption

Fully Bedded Laying (Bed Joint 5 mm / Cross Joint 7 mm):

Material	Measurements	Usage
Tiles	240 x 115 x 20 mm	approx. 15 kg/m ²
Tiles	240 x 115 x 40 mm	approx. 18 kg/m ²
Bricks	240 x 115 x 65 mm	approx. 23 kg/m ²
Bricks	240 x 115 x 80 mm	approx. 26 kg/m ²

Pot Life

Temperature	Asplit HB
20 °C	approx. 60 min.

Curing

Load Capacity	Time
Accessible	1 – 2 days (at 20 °C)
Chemical Load	8 - 10 days (at 20 °C)

Post Treatment

The Brickwork and Flooring, with **Asplit HB** will be waterproof after 2 – 3 weeks, even if it is not acidified. If an earlier waterproofing is sought, then it should be acidified.

Acidifying is also necessary when **Asplit HB** is applied without jointing; where it is to be post jointed with a Furanic or Phenolic resin-based mortar. In this case, after the Potassium Silicate mortar is set, it is necessary to acidify the voids / joints 2 or 3 times, with a few hours interval between. Acidifying can be done with a mixture (by weight) of: 20% Alcoholic Sulphuric Acid (mixture of 20 Parts Water + 20 Parts 96% Sulphuric Acid + 60 Parts Isopropyl Alcohol).

20% Watery Sulphuric Acid can also be used, but it has a slower drying time. When mixing, the water has to be added first.

Operation / Start-Up

Brick and Tile Linings with **Asplit HB** can be exposed to chemical stresses of fluids, at the earliest after 5 days; except when the liquid temperature is +150 °C, then there should be a time lapse of 8 -10 days after completion. In the case of chimneys, the actual Norms and Guidelines should be followed.

Technical Data	Standard	Unit	Value
Flexural Strength	DIN EN ISO 178	N/mm ²	10
Density (Completed mixture Asplit HB)	DIN EN ISO 2811-1	g/cm ³	2.0
Compressive Strength (Cylinder)	DIN EN ISO 604	N/mm ²	30
Modulus of Elasticity	-	N/mm ²	1.1 x 10 ⁴
Hardness Shore D	-	-	> 20
Lineal Co-efficient of Expansion	-	K ⁻¹	12 x 10 ⁻⁶
Max. Operating Temperature	-	°C	+900
Thermal Conductivity	-	W/(m · K)	1.2

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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Brick Lined Vessels or Apparatus, should be put into operation initially with diluted Mineral Acids. If there is a long period of time between the completion of the linings and normal operation; or after the Apparatus has been out of service for a longer time, it is mandatory to fill the Vessel or Apparatus with a weak concentration of acid and water. Open Vessels should be covered.

Cleaning

Clean all equipment immediately after use with **Asplit Universal Cleaner**. The cleaning is to be carried out as long as the material is not cured.

SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Product-No.
Asplit HB Solution	20 kg	592 0230
Asplit HB Solution	290 kg	592 0220
Asplit HB Powder	25 kg	592 0090
Asplit Universal Cleaner	8.4 kg	592 0900

STORAGE

The materials must be stored at a cool and dry place, protected from direct sunlight. At the specified storage temperatures, the minimum shelf life of the products is given for the following periods:

Product	Temperature	Shelf Life
Asplit HB Powder	-	24 month
Asplit HB Solution	≤ +30 °C	24 month

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof.