



Wetherby Building Systems Ltd
 1 Kidglove Road, Golborne Enterprise Park,
 Golborne WA3 3GS
 Tel: 01942 717100
 Fax: 01942 717101
 Web: www.wbs-ltd.co.uk

HEALTH & SAFETY DATA SHEET

Product Name

WBS Heck K&A Adhesive

Heck K&A is a mineral based bonding and reinforcing filler for HECK insulation systems.

Properties

- Universal to use
- To apply by hand or with plastering machine and conveyor
- Water vapour permeable and water repellent
- Fibre reinforced
- Suitable for sponge finish
- Shades: white, grey

Range of Application

For interior and exterior use, also for socles.

- For bonding and reinforcing of insulation boards in HECK insulation systems.
- For reinforcing and sponge in a second layer.
- For smoothing and levelling of suitable mineral based substrates.

Also suitable for fixing of corner and diagonal protectors.

Application in thermal insulation systems:

- As *thin layered reinforcing filler* (4-6mm) with embedded HECK Armierungsgewebe fein (HECK reinforcing mesh fine).
- As *thick layered reinforcing filler* (6-8mm) with embedded HECK Armierungsgewebe grob (HECK reinforcing mesh thick) or in HECK-Keramiksystemen (HECK ceramic systems) with HECK Armierungsgewebe Keramik (HECK reinforcing mesh ceramic).
- As thin layer for a sponge finish in a second step.

Application in façade renovation:

- As reinforcing filler (3-5mm) directly on to concrete, even masonry and firm mineral based renders P II, III.

Composition

A controlled mixed blend of the following materials

- Sand
- Cement
- Lime

- Admixtures
- Calcium Hydroxide
- Calcium Silicates
- Alkalis

White lime hydrate, cement, washed sands, additives to improve application properties, adhesive strength and water repellent properties as well as fibres.

Technical Data

- Maximum grain size approximately 1.0mm.
- Declared value for thermal conductivity: λ_R : 0.87 W/(mk).
- Water vapour permeation resistance μ : approximately 25.
- Capillary water absorption, $w < 0.5\text{kg}/(\text{m}^2\text{h}_{0.5})$.

Consumption

Bonding:

Point bonded (for guide rail system): approx. 2kg/m².
 Roll point bonding or fully covering: approx. 4kg/m²
 Partial bonding*: approx. 6kg/m²
 Fully covering bonding*: approx. 8kg/m²

Data are valid for even, smooth substrates. If uneven substrates have to be equalised higher consumption may occur.

Reinforcing:

Approximately 1.2kg dry mortar /m² per mm layer thickness. When applied by machine higher consumption may occur.

Sponge Finish:

Approximately 1.2kg dry mortar / m² per mm layer thickness.

Substrate and Substrate Preparation

Bonding and levelling on mineral based substrate:

Substrate must be even, firm, clean, dry and free of fat and dust. Pre-cleaning is recommended. Primarily remove brittle or hollow render, coatings which are no longer firm and algae.

Equalise hollow joints, holes and larger hollows before applying render. Screed to surface, roughen during setting process and let set.

Prime sandy, chalky, strongly absorptive organic based substrates with Colfirmat Isoliergrund (Colfirmat Insulation Primer) once.

Reinforcing on insulation boards:

Insulation boards must be fixed evenly, open joints must be filled with adequate insulation material. Remove grinding dust if present. Profiles, dowels, joint sealing band and render rails, also protectors for edges and diagonal reinforcements have to be fixed before application.

Temperature of Substrate and Applying

+ 5°C, minimum

Application

Stir content of a bag with the required amount of water in a clean mortar drum lump free by handheld stirrer until material is creamy, let stand approximately 10 minutes. Mix again well before used and apply within 2 hours maximum. If a plastering machine is used an after-mixer is recommended.

Bonding:

On covered mineral wool boards bonding mortar first under pressure (pressure application). Then apply bonding mortar to the back of the insulation board with a serrated trowel (10mm), trowel or bonding gun. If the board is to be bonded partial or fully covering apply bonding mortar directly to the wall.

Reinforcing:

Apply bonding mortar with a rust free trowel of steel to the (dry) insulation boards, thickness as required. Embed HECK Armierungsgewebe (Heck reinforcing mesh) within the outer third of the layer. (Let the mesh overlap 10cm minimum.) Apply further material if required. Smooth surface with a trowel of stainless steel evenly if thin final renders are planned. If sponge finish is planned no action is necessary in this state. For thick textured decorative renders roughen the surface but do not uncover the mesh.

Surfaces with sponge finish:

A prepared layer or reinforcing mortar is to be covered with a layer of HECK K & A the next day, approximately 2mm thick. Use a trowel of stainless steel for application and smooth evenly. Sponge during the setting process, preferably with a white sponge trowel.

If on HECK insulation systems large areas are to be completed with a sponge finish and coating apply another reinforcing layer (see "reinforcing"). After hardening of the second layer apply HECK K & A also 2mm thick and sponge during the setting process.

Curing

Protect freshly applied mortar from too fast deprivation of water (sun, wind, high temperatures), from frost and rain.

Coating

With Colfirmat final renders or suitable ceramic elements. If necessary apply a suitable primer before using a final render. Wait one day minimum per mm layer thickness (depending on weather conditions) before application of primer or final render or ceramic elements.

Areas with sponge finish:

If areas with sponge finish are to be coated with a coloured paint a pre-coating with Rajasil Silicongrundierung (Rajasil Silicone Resin Primer) or Rajasil Fassadengrundierung W (Rajasil Façade Primer W) and two coatings (first and final) with Rajasil Siliconharzfarbe (Rajasil Silicon Resin Paint) are required. (Depending on weather conditions wait 3 – 7 days before coating.)

Note

Please note technical data sheet for the Application of HECK insulation systems.

Clean tools immediately after use with water.

Safety Instructions

Heck K & A contains lime and cement. Therefore fresh mortar reacts alkaline. Avoid contact with the skin, wash off splashes immediately. After contact with eyes rinse with water immediately and consult physician. Keep out of reach of children. If swallowed contact physician immediately. Wear protective gloves.

Storage

Dry, storage time approximately 6 months.

Quality Control

External and internal control of production.

Hazardous Materials Classification

- There are no fire or explosion hazards based on information available.
- Alkali is produced when the material is wet and as such may cause burns if contact with skin or eyes are made.
- It is recommended that personnel working with these products should wear the required protective clothing such as masks, goggles, etc. in accordance with Health and Safety regulations.
- Ensure high standards of personal hygiene.
- Do not smoke, drink or consume food in working areas.
- All work clothing should be changed regularly and laundered.

First Aid

- **Skin contamination** - may cause some irritation – Wash with clean water and soap. Launder protective cloth before further use.
- **Eye contamination** - will cause severe irritation – Wash eyes immediately with plenty of clean water for at least 15 minutes and seek medical advice without delay.
- **Ingestion** - will cause irritation to the mouth and risk of choking – Do not induce vomiting. Wash mouth out with water and drink plenty of water. If irritation persists, seek medical advice.
- **Inhalation** - likely to cause a shortness of breath – Move to fresh air. Should breathlessness continue seek medical advice.

Fire Fighting Measures

This product does not present a fire or explosion hazard. Use foam CO² water spray or dry powder fire extinguishers.

Accidental Release Measures**Clean up procedures**

- If material is in powder state, sweep up avoiding the generation of dust.
- If material is a paste, scrape up.
- Avoid contamination of watercourses and drains.
- Dispose of empty sacks or surplus cement at a site authorised to accept builders' waste.

Handling & Storage

- When handling this product due regard should be given to the risks outlined in 'Manual Handling Operations Regulations 1992'.
- Appropriate Personal Protective Equipment (PPE) should be worn whilst handling this product.
- The product should be stored in a dry area, preferably on pallets or similar off the ground.
- When opening and mixing, avoid the formation of dust.

Exposure Controls/Personal Protection**Engineering Control Measures**

- All areas should be well ventilated/extracted to prevent dust build up.

Occupational Exposure Standards (OES)

- OES – 8 hour Time Weighted Average.
- Total dust – 10.00 mg/m³.
- Respirable dust – 5.00 mg/m³.

Respiratory Protection

- Suitable respiratory protection should be worn at all times, particularly if working areas are poorly ventilated.

Hand Protection

- Gloves should be worn when handling bags of Heck K & A Adhesive.

Skin Protection

- Suitable overalls should be worn and all garments are regularly laundered.

Eye Protection

- Use dust proof goggles when handling and using Heck K & A Adhesive.

Physical & Chemical Appearance

- Appearance – Particulate powder.
- Odour – Slight, non offensive.
- PH – 12-14 when wet.
- Viscosity – N/A
- Freezing Point – N/A.
- Boiling Point – N/A.
- Melting Point – N/A.

- Flash Point – N/A (Not flammable).
- Explosives Properties – N/A (Not explosive)
- Density – Approx. 1200 – 1800 kg/m³.
- Solubility – Partially soluble in water.

Stability & Reactivity

- The product is stable under most normal storage conditions. Extremes of temperature should generally however be avoided.
- There are no known conditions likely to contribute to the product's reactivity.

Toxicological Information

From our experience and the information available to us, we are not aware that the product carries any harmful risk to health provided that all safety procedures as outlined in the 'Exposure Controls/Personal Protection' section are followed.

Short-term Effects:

Eye Contact: Cement is a severe eye irritant, and mild exposures can lead to soreness. Untreated exposure and larger exposure can lead to chemical burning and ulceration.

Skin Contact: Cement powder and wet paste can cause irritation, contact dermatitis, allergic dermatitis (Chromium) and/or cause burns.

Ingestion: Small amounts are unlikely to cause any significant reaction. Larger dosages may result in irritation of gastro-intestinal tract.

Inhalation: Cement powder may cause inflammation of the mucous membrane.

Chronic Effects: Repeated high exposures above the OES have been linked to rhinitis and coughing. Skin exposure, particularly to the wet paste, has been linked to allergies (Chromium) dermatitis.

Calcium Hydroxide Toxicity Data:

Eye – rbt 10mg SEV; cyt – rat/ast 1200mg/kg
Orl – rat LD50:7340mg/kg; orl – mus LD50 : 7300mg/kg

Ecological Information

Do not discharge this product into the natural environment. The product may be toxic to aquatic life forms if spilled into ponds, rivers, watercourses, etc. The product is non bio-degradable.

LC50 not determined.

For Calcium Hydroxide: Toxicity Level – 92ppm/7hour/Trout/Fresh Water.

The addition of cement to water will result in a rise of pH and may, therefore, be toxic to aquatic life.

Disposal Considerations

Disposal of the product should be in accordance with any national or regional regulations that may be in effect. Dispose of empty bags at authorised sites only.

Transport Considerations

There is no special classification for conveyance required for this product.

Regulatory Information

Chemicals ('Hazard Information and Packaging for Supply') Regulations 1994.

Classification: Irritant.

Risk Phrases:

Contact with wet cement or wet mortar may cause irritation, dermatitis or burns.

Contact between powder and body fluids (e.g. sweat and eye fluids) may cause irritation, dermatitis or burns.

There is a risk of serious damage to the eyes

Other Information

Other sources of information and current legislation relating to the product can be found in:

- Health & Safety at Work Act 1974.
- Control of Substances Hazardous to Health (COSHH) Regulations (4th Edition) 2002.
- HSE guidance note EH40 (Occupational Exposure Limits). EH40 is published annually and the most recent issue should be used.
- Manual Handling Operations Regulations 1992.
- St. John or Red Cross manuals on first aid measures.

Recipients of WBS products must take responsibility for existing laws and regulations and at all times operate within Health and Safety guidance on the use of these products.

The information provided within this data sheet is deemed to be accurate to the best of our knowledge and given in good faith.