

## SMET NHL 5 – Eminently Hydraulic Lime Binder

SMET NHL 5 is a high-quality, pure Natural Hydraulic Lime binder, produced under an ISO 9001 and ISO 14001 system to EN 459-1. The eminent hydraulic strength development of SMET NHL 5 makes it suitable for producing lime mortars for masonry work, rendering, plastering base coats and limecrete in extreme weather environments and exposed areas.

- Historical, gypsum and cement free NHL
- Produces highly breathable mortars
- Highly sulphate resistant
- Low-stress hardening process
- Excellent subsequent hardening
- High water retention and elasticity in produced mortars
- Excellent bond properties to masonry
- EN 459-1

### Field Of Application

An eminently hydraulic lime binder for the production of mortars particularly suited for ecological new builds, restoration and preservation works in extreme weather environments and exposed areas. The product's special composition allows the mortar product to breathe and also permits constant hygrometric exchange between the substrate and the environment.

### Production Of Mortars For Masonry

Binder : sand ratio: from 1 : 1.5 to 1 : 3 depending on site and material conditions, joint size and sand grading. Always use well graded clean sands (3 - 4mm down to 75 microns).

### Production Of Mortars For Rendering

1. Scud Coat (3 - 5 mm) Binder : Sand ratio: 1 : 1.5
2. Base Coats (10 mm) Binder : Sand ratio: 1 : 2
3. Finish Coat (5 - 10 mm) Binder : Sand ratio: 1 : 2.5

### Attention

SMET NHL 5 must be mixed with clean, well graded sands and clean water without additives. Do not mix or apply if the temperature is below +5°C or over 30°C. This product must not be mixed with gypsum or be applied onto gypsum based substrates. Avoid over-mixing, as this can adversely affect performance and strength. Material that has set must not be re-mixed. For interior applications, care must be taken when using heating systems. High or rapidly changing temperatures may affect the hydraulic setting reaction of the mortar/ render and cause cracking and/or adhesion problems. Delay the implementation of heating systems for as long as possible and heat up interiors gradually. Other unfavourable conditions, such as overly wet backgrounds, low background temperatures and low air temperatures can delay setting. During and after application, protect the mortar/render from adverse weather conditions, such as direct sunlight, strong winds, rain and frost.

### Storage

12 months under dry, protected conditions in original unopened packaging.

### Disposal Considerations

Waste treatment methods. Recommendation. Must not be disposed together with household garbage. Do not allow product to reach sewage system. Uncleaned packaging: Recommendation: Disposal must be made according to official regulations..

### Safety

Classification according to Regulation (EC) No 1272/2008. **GHS05 GHS07**. Labelling according to Regulation (EC) No 1272/2008. **Hazard pictograms: GHS05 GHS07**. **Signal word:** Danger. **Hazard-determining components of labelling:** calcium oxide. See CASEA Health and Safety Data Sheet for further information. All standard precautions for the handling of construction materials/chemicals must be taken.

### Hazard Statements

- H315** Causes skin irritation.
- H318** Causes serious eye damage.
- H335** May cause respiratory irritation.

### Precautionary Statements

- P261** Avoid breathing dust/fume/gas/mist/vapours/spray.
- P280** Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352** IF ON SKIN: Wash with plenty of water.
- P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310** Immediately call a POISON CENTER/doctor.
- P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

### Technical Information

	Unit	Average values*	Conformity to Standard	
			Mini	Maxi
<b>Physical Properties</b>				
Whiteness	Y	5.3	-	15
Fineness at 90 µ	%	4	-	2
Fineness at 200 µ	%	1.3	-	2
Expansion	mm	0.772	-	-
Bulk density	g/cm <sup>3</sup>	2.75	-	-
Real density	g/cm <sup>3</sup>	8856	-	-
Blaine value	cm <sup>2</sup> /g	0.91	-	2
Water content	%			
<b>Mechanical Properties</b>				
		142	60	-
Beginning of set	min	191	-	900
End of set	min	2.65	2	-
Mechanical strength at 28 days	MPa	5.34	5	15
<b>Chemical Properties</b>				
SO <sub>3</sub>	%	1.23	-	2
Free lime content	%	18.5	15	-

\*statistical data - non contractual

	<p><b>CASEA GmbH</b>                  Pontelstr.3                  99755 Ellrich                  Germany                  13                  116 442</p>
<p><b>EN 459 :2010</b>  <b>EN 459-1 NHL 5</b>  <b>Natural Hydraulic Lime</b>  <b>NHL 5</b></p> <p><b>Applications for materials for construction, building and civil engineering</b>                  The declared performance, by level and classes, is defined by the natural hydraulic lime designation</p>	

