THUECON®

MSS GmbH
Mineral Supply Service

Mineral corrosion protection for hot water pipelines / district heating pipes

Product description

2-component solvent-free mineral based coating which hardens hydraulically.

The combination of selected natural minerals plus a high-grade reactive fluid component produces the ready-to-use mixture THUECON S.

The outstanding product properties include:

- very good application on stable, rusty steel surfaces
- no rust infiltration of the coating
- high-alkaline medium ensures active long-term corrosion protection
- temperature stability of -40°C to +180°C in the humid environment
- high resistance to acids and bases from pH 3,5 to pH 14
- high adhesion force to steel that does not diminish even with multiple load changes
- the expansion coefficient of the material is the same as that of steel
- hole filling and sealing capacities ≤ 3 mm
- extremely low shrinkage of the material
- vapour permeability
- resistant against demineralised water
- neutral regarding drinking water
- long-distance corrosion protection up to 300 m
- environmentally-friendly, solvent-free, low-pollution – not a hazardous material!

Ground preparation

When viewing the steel surface without magnification, it must be free of oil, grease, paint, coatings and any loose separating substances. Rolling skin and mill scale on new steel surfaces and pipelines must be removed by sandblasting. Stable rust can remain on the steel. Degree of purity according to ISO 8501-1 Sa1. A small amount of residual humidity (no free water) can be tolerated.

Cleaning

Ultrahigh water pressure

Mixing process

Shake the fluid component included in the delivered package (in plastic container) well and add it to the powder component. Mix both components for 1 to 2 minutes, using a hand mixer. Let the mixture rest for 30 minutes. Then mix well again for 2–5 minutes, apply only after this step. When using continuously running pug mixers, the uninterrupted mixing time is > 30 minutes. The mixing location should be protected against direct solar radiation.

Finished mixture

Viscous consistency. Application related or in case of deep pitting corrosion in the pipe the processor can add to the mixture up to 50% fire-dried quartz sand (grain size 0.1-0.6 mm). Attention! The required amount of quartz sand must be determined by individual tests.

Processing period

The processing period of the ready-to-use mixture is around 2 hours at an ambient temperature of 20°C. Lower temperatures will prolong the processing period, higher temperatures will reduce it.

Processing

Centrifuging by means of a pneumatic or elektric motor with a lamellar head. Caution: When coating is complete, the pipe ends must be plugged to prevent a draught.

MSS GmbH
Mineral Supply Service

Consumption figures

To ensure long-time corrosion protection the material layer thickness has to be > 5 mm. Practical experience consumption internal pipe coating: At 5 mm layer thickness material consumption is about 10 kg/m². Consumption figures may deviate from the average value above due to particularities connected with the object and the application.

Putting into operation

Putting into operation no sooner than after 24 hours at an ambient temperature of +20°C. At lower temperatures, the putting into operation is extending. By treatment with superheated steam of > 100 ° C on containers, chambers and pipelines immediate use is allowed.

Layer thickness:

Only on steel: The layer thicknesses must be checked using suitable measuring equipment and respected.

Delivery component

Powder component: Component A, high-quality mineral component

Fluid component: Component B, aqueous reactive polymer dispersion with additives

Processing temperature	Color
not below + 5°C	grey
Surface quality	**Equipment cleaning**
Smooth to orange skin-like appearance	with water
Material density	**Storage**
wet 1.8 kg = 1 litre of finished mixture	12 months, dry, not below 0 °C and not above +30 °C
Material safety measures	**Environment**
As with cement products. Store under lock and key and inaccessible for children. Flush thoroughly with water in case of eye contact. Irritates the eyes and the skin. Remove any soiled or soaked clothing from the body. Wear suitable protective gloves/face protection during work. Non-hazardous materials for transport.	The material can be disposed of on a household waste dump after hardening.

Note: The information in the list above is provided on the basis of our experience and according to the best of our knowledge, but without obligation. The information must be adapted to the building objects in question and the particular requirements. On condition of the above, we are liable for the correctness of our Terms of sale and delivery. Recommendations made by our employees and deviating from our codes of practice shall be binding for us only if confirmed in writing.