

Fully water blown foam system for discontinuous filling of pipes providing improved processing properties: Daltofoam TE 44204/Suprasec 5005

Pipe insulation

fact sheet



PRODUCT INTRODUCTION

Daltofoam TE 44204 is a fully formulated polyol system containing water, catalyst and silicone surfactant, developed for the discontinuous filling of pipes. It is a fully water blown system that provides a reduced reactivity. The long cream time allows the use of low foam output machines and facilitates the filling of big diameter pipes.

PRODUCT CHARACTERISTICS

Property	Unit	Value
Appearance	–	pale yellow liquid
Hydroxyl value	mg KOH/g	370
Viscosity at 25°C	mPa.s	550
Density at 25°C	kg/l	1.05
Flash point	°C	>100
Reactivity in foam test*		
– Cream time	s	41
– String time	s	163
Free rise density* (bagfoam)	kg/m ³	33

Typical Properties:

The typical physical properties are published as a guide to potential users of the product. A sales specification is published separately.

* measured at a temperature of 20°C on a laboratory bagfoam
mixing ratio: 100 pbw Daltofoam TE 44204 and 168 pbw Suprasec 5005

KEY FEATURES

Daltofoam TE 44204 provides a broad processing window through reduced system reactivity. Despite the lower reactivity, a good adhesion between foam and pipe components, i.e. steel and HDPE casing pipe, is maintained. Furthermore, Daltofoam TE 44204 provides good flow properties. Excellent thermal and mechanical foam properties can be obtained.

- fully water blown system
- low viscosity
- no surface friability
- long cream time allows long foam injection time
- large pipe diameters easy to fill
- excellent long-term thermal resistance
- complies with EN253 norm

The recommended mixing ratio of Daltofoam TE 44204 and Suprasec 5005 that will give the best properties is:

100 pbw Daltofoam TE 44204 and 168 pbw Suprasec 5005

FOAM PROPERTIES

Foam property	Unit	Average value	EN253 requirement
Core density	kg/m ³	86.5	60
Overall density	kg/m ³	91.5	80
Compressive strength	MPa	0.55	0.30
Water absorption	%	6.1	10
Axial shear strength at 23°C at 140°C	MPa	0.46 0.18	0.12 0.08
Tangential shear strength at 23°C	MPa	0.73	0.20
Thermal conductivity (50°C)	W/m.K	0.030	0.033
CCOT*	°C/30y	142	120

The following properties were determined on pre-insulated DN50 pipes.

All material properties are fulfilling the requirements of the EN253 norm for buried pre-insulated pipes.

* calculated continuous operating temperature

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