

Polyurethane foam systems for spray onto a rotating pipe:
Daltofoam TE 24207/Suprasec 5005 and Daltofoam TE 44208/Suprasec 5005

Pipe insulation

fact sheet



PRODUCT INTRODUCTION

Daltofoam TE 24207 and Daltofoam TE 44208 are fully formulated polyol systems containing water, catalyst, silicone surfactant and in case of Daltofoam TE 24207, HCFC-141b. Both systems were developed to spray onto a continuously rotating pipe. Daltofoam TE 24207 is a HCFC-141b/water dual blown system. The use of HCFC-141b, having ozone depletion potential and global warming potential, is restricted in a number of countries and will be phased out in the future. It is advised to check the local legislation before implementing this system in the production. Daltofoam TE 44208 is a fully water blown system.

PRODUCT CHARACTERISTICS

Property	Unit	Daltofoam TE 24207	Daltofoam TE 44208
Appearance	–	pale yellow liquid	pale yellow liquid
Hydroxyl value	mg KOH/g	425	420
Viscosity at 25°C	mPa.s	1250	2000
Density at 25°C	kg/l	1.09	1.07
Flash point	°C	>100	>100
Reactivity in foam test*			
– Cream time	s	8	7
– String time	s	33	32
Free rise density* (bagfoam)	kg/m ³	64	64

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 24207 and 142 pbw Suprasec 5005
mixing ratio: 100 pbw Daltofoam TE 44208 and 172 pbw Suprasec 5005

KEY FEATURES

Daltofoam TE 24207 and Daltofoam TE 44208, in combination with Suprasec 5005, allow the production of foams that exhibit excellent thermal and mechanical foam properties. A fast build up of mechanical foam strength is obtained. Depending on the foam output rate, a layer thickness up to 5 cm can be obtained per foam application. Two foam layers, consecutively applied, show a very good interlayer adhesion.

- Daltofoam TE 24207: HCFC-141b/water dual blown
- volume ratio Daltofoam TE 24207 to Suprasec 5005: 1 to 1.25
- Daltofoam TE 44208: fully water blown
- volume ratio Daltofoam TE 44208 to Suprasec 5005: 1 to 1.5
- very good adhesion to steel
- very good interlayer adhesion
- foam layer thickness up to 50 mm possible in one spray application
- excellent mechanical foam properties
- good long-term thermal resistance
- comply with EN253 norm

The recommended mixing that will give the best properties is:

100 pbw Daltofoam TE 24207 and 142 pbw Suprasec 5005

100 pbw Daltofoam TE 44208 and 172 pbw Suprasec 5005

FOAM PROPERTIES

Foam property	Unit	Daltofoam TE 24207	Daltofoam TE 44208	EN253 requirement
Core density	kg/m ³	64	61	60
Compressive strength	MPa	0.61	0.51	0.30
Closed cell content	%	94	94	>88
Water absorption	%	3.3	3.1	10
Softening temperatures	°C			
initial		140	140	–
post-cure 24hrs/150°C		148	160	–
Axial shear strength	MPa			
at 23°C		0.43	0.24	0.12
at 140°C		0.20	0.21	0.08
Tangential shear strength	MPa			
at 23°C		0.80	0.36	0.20
CCOT*	°C/30y	>120 estimated	129	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 time

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