

Schill + Seilacher

Technical Data Sheet

STRUKSILON 8183

Silicone Surfactant for Flexible PU – Slabstock Foam

Application Fields

STRUKSILON 8183 was developed as surfactant of very high potency for the production of conventional flexible polyurethane slabstock foam. It is especially recommended for foam with low to extremely low densities based on polyether polyols.

STRUKSILON 8183 is applicable in systems for nearly all known flexible PU slabstock foam applications and technologies like production of seats, chairs, mattresses etc. in the furniture and automotive industry or for all kinds of damping devices.

Chemical and Physical Properties

According to its chemical structure STRUKSILON 8183 is a polyether modified polydimethyl siloxane resistant to hydrolysis.

General chemical structure:

R¹: H (EO); CH₃ (PO) R²: Methyl, Butyl

n:1-50 x:1-100 y:1-20

$$\begin{array}{c} CH_{3} \\ CH_{3} - Si - O \\ CH_{3} \\ CH_{3} \\ \end{array} \begin{bmatrix} CH_{3} \\ -Si - O \\ -Si - O \\ -(CH_{2})_{3} \\ O \\ CH_{2} \\ -(CH_{2})_{3} \\ O \\ -(CH_{2})_{3} \\ -(CH_{3}) \\$$

The data given are typical values which are not intended for use in preparing specifications. For test methods refer to the corresponding supplement.

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STRUKSILON 8183 is a clear, colourless to slightly yellow liquid of middle viscosity, has strong surfactant properties and is miscible with water at room temperature.

Viscosity at 25°C	[mPas]	app. 400
Density at 25°C	$[kg/m^3]$	app. 1020
Flash point (DIN/ISO 2562)	[°C]	> 100
Refractive index	-	app. 1.440

Technical Properties

STRUKSILON 8183 is a surfactant of very high potency. Its performance is mainly focussed on high activity but it still induces a well-balanced relation between a high quantity of open cells and resulting good air flow as well as a uniform cell and density distribution combined with good physical and mechanical properties in produced flexible block foams.

Due to its very high potency STRUKSILON 8183 is recommended for the production of flexible PU slabstock foams with a densities as low as 7 kg/m^3 , but can also be used for densities up to 30 kg/m^3 .

Furthermore, STRUKSILON 8183 can be used in the box foaming process, as well as in continuous production of slabstock foams.

STRUKSILON 8183 shows an excellent emulsifying efficiency and compatibility when used with polyetherpolyols and can be also used in combination with Glycerol or other additives for improved stability of very low density foams.

STRUKSILON 8183 can be used in combination with all usual co-blowing agents like methylenechloride or acetone.

Recommended Dosage

Usually, STRUKSILON 8183 is applied in quantities of 1,0 to 3,0 php (parts on 100 parts polyol), but for densities of less than 15 kg/m³ a level of 2,0 to 4,5 php is recommended. We recommend to adjust the optimum dosage to the corresponding formula, type and amount of activators, catalysts, blowing agents and the activity of raw materials.

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Product Safety and Handling

STRUKSILON 8183 is not a hazardous material for the purposes of hazardous materials regulations. STRUKSILON 8183 does not contain aminic components.

Further information regarding safety, toxicology, special properties of the product, transport and storage are given in the material safety data sheet.

Packaging, Storage and Transport

Storage stability 12 months in closed original containers if

transported and stored at a temperature between 1

and 30°C.

Packaging 200 kg drums

1000 kg containers (IBC)

The suggestions for application and usage of our products as well as possible proposed formulations are meant to advise only to the best of our knowledge. This information is without obligation and does not release customers from their own testings to ensure suitability for intended processes and use. Liability is only accepted in case of intention or gross negligence. Liability for any defects caused by minor negligence are not accepted. Each producer is responsible and liable to observe legislation and patent rights of third parties.

This new leaflet replaces all previously printed documentation.

Alterations reserved. 02/2003

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