



Schill + Seilacher

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Technical Data Sheet

STRUKSILON 8118

Silicone Stabiliser for Liquid-CO₂ and Conventional Flexible PU–Slabstock Foam

Application Fields

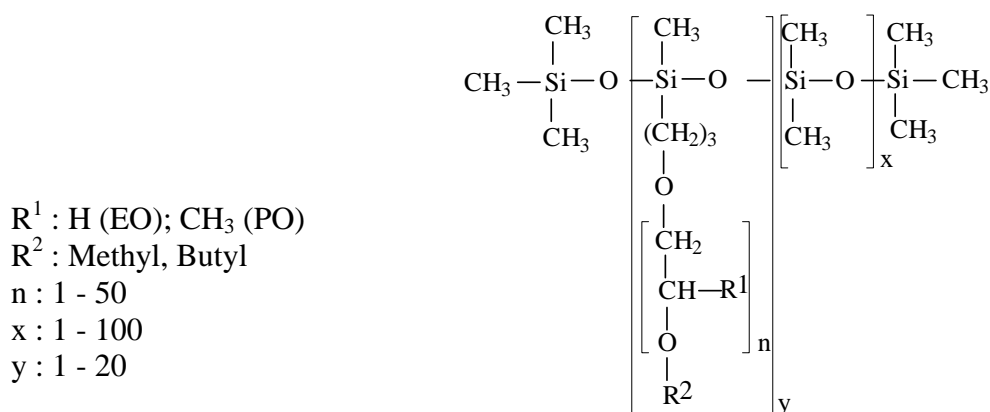
STRUKSILON 8118 is a silicone stabiliser for liquid-CO₂ of medium potency for the production of flexible polyurethane slabstock foam based on polyether polyols.

STRUKSILON 8118 was especially developed for the production of liquid-CO₂ blown PU slabstock foam. Additionally, STRUKSION 8118 can be used in conventional PU slabstock foam blown with water or physical blowing agents and works in nearly all known flexible PU slabstock foam applications.

Chemical and Physical Properties

STRUKSILON 8118 is a hydrolytically stable polyether-modified polydimethyl siloxane. STRUKSION 8118 is chemically inert due to the exclusive usage of encapped polyethers and possesses a high stability.

General Chemical Structure:



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 8118 is a clear, colourless to slightly yellow liquid of middle viscosity and is miscible with water at room temperature.

Viscosity at 25°C	[mPas]	950
Turbidity Point	[°C]	34
Density at 25°C	[kg/m ³]	1016
Flash Point	[°C]	> 100
Physiological Behaviour		refer to material safety data sheet
Storage Stability		12 months in closed original containers if transported and stored at temperatures between 1 and 30°C.
Packaging		200 kg drums 1000 kg containers (IBC)

Technical Properties

STRUKSILON 8118 is very well suited for the continuous production of liquid-CO₂ blown flexible slabstock foam. STRUKSILON 8118's very good nucleation properties enhance the formation of an uniform and stable froth. An uniform flexible foam with fine cells, good physical and mechanical properties and a high degree of open cells is obtained. STRUKSILON 8118 enables the production of high quality flexible foam over a wide mix head pressure range.

STRUKSILON 8118 is a silicone stabiliser of medium potency. It induces a balanced relation between good stabilisation properties and high quantities of open cells resulting in good air flow as well as a uniform cell and density distribution combined with good physical and mechanical properties in flexible block foams.

STRUKSILON 8118 shows excellent emulsifying efficiency and polyetherpolyol compatibility.

STRUKSILON 8118 can be used in combination with all usual co-blowing agents like methylenechloride or acetone. Application in new low pressure technologies can be recommended. Furthermore, STRUKSILON 8118 possesses a wide processing latitude and is recommended for the production of conventional flexible PU slabstock foam with a density range of approximately 16 – 35 kg/m³.

Recommended Dosage

In liquid-CO₂ blown foam STRUKSILON 8118 is normally used in amounts of 0.8 to 1.8 php. We recommend to adjust the optimum dosage according to the corresponding formula, type and amount of activators, catalysts, activity of raw materials and desired process and product parameters. The application of STRUKSILON 8118 in liquid-CO₂ blown flexible foam is further illustrated by the following example:

Component	Product	Unit	Formulation 1	Formulation 2
Polyol	Arcol 1108	parts	100	100
Colour Batch	Yellow RU 01	parts	0	0.5
Water		parts	4.8	4.7
Amine	Struksilon BD 70	parts	0.05	0.05
Stabiliser	Struksilon 8118	parts	1.5	1.5
Carbon Dioxide (CO₂)		parts	4	3
Catalyst	Tin octoate	parts	0.21	0.24
TDI 80	Desmodur T80	parts	58.2	60.8
Index			108	115
Temperature	Polyol / TDI	°C	22 / 21	22 / 22
Mix Head Pressure		bar	10.8	6.65

With formulation 1 and 2 fine celled flexible foams were obtained that showed densities of 15.5 and 16.5 kg/m³, respectively.

By variation of stabiliser, amine and tin octoate amounts blow off time and intensity, foam height and the air flow of the foam can be adjusted according to needs.

Usually, in conventional flexible slabstock STRUKSILON 8118 is applied in quantities of 0.6 to 1.5 php (parts on 100 parts polyol). We recommend to adjust the optimum dosage according to the corresponding formula, type and amount of activators, catalysts, blowing agents and the activity of raw materials.

However, a concentration of 2.5 php should not be exceeded.

STRUKSILON 8118 is not a hazardous material for the purposes of hazardous materials regulations.

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

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. 11/2005

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