

SILCOLAPSE 411

Description	SILCOLAPSE 411 is a compound containing polydimethylsiloxane oil and a mineral filler in colloidal dispersion. It is intended mainly for treating anhydrous media, but also aqueous media, in numerous industries (oil, chemicals, metallurgy, etc.). Its low viscosity and its efficiency in alkaline media are of particular interest. SILCOLAPSE 411 is intended for industrial use only, and should not be used in the manufacture of foodstuffs, cosmetics or pharmaceutical products.
--------------------	---

Examples of applications	SILCOLAPSE 411 is intended for general use in such fields as: <u>Oil</u>: Alkanolamine washing of natural or refinery gases. <u>Chemicals and chemical engineering</u>: Distillation, extraction, evaporation and filtration operations. Manufacture of glues and adhesives. <u>Metallurgy</u>: Additive for soluble oils. <u>Domestic cleansers</u>: Manufacture of wax and polish. <u>Public works</u>: Asphalt packaging and transport.
---------------------------------	---

Key benefits	SILCOLAPSE 411 offers the following advantages. - Ease of use: SILCOLAPSE 411 can be used as supplied or, prediluted in a solvent or in some of the medium to be defoamed (see paragraph on Processing). It disperses readily in most media. The low viscosity of the product enables it to be used with automatic injection systems. - Efficiency: SILCOLAPSE 411 is efficacious at low doses, from about 1 to 100 mg per kg of medium to be defoamed. - Inertness: SILCOLAPSE 411 is chemically inert towards media to be defoamed, and therefore does not affect their properties.
---------------------	--

Typical properties

Chemical nature	Polymethylsiloxane oil compound
Appearance	Opalescent liquid
Colour	Greyish white
Odour	None
Active ingredients, %, approx	100
Thinner (1):	Aromatic, aliphatic and chlorinated hydrocarbons, water-soluble solvents, water-dispersible solvents
Specific gravity at 25 °C, approx	1.0
Emulsifiers	None
Effective concentration, mg/kg (2)	10 to 100

(1) For further details, see paragraph on "instruction of use"

(2) Milligrams of product as supplied per kilogram of medium to be defoamed. This concentration can also be expressed, with no significant error, as milligrams of product as supplied per litre of medium to be defoamed (mg/l).

Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

Instruction of use	SILCOLAPSE 411 is equally efficacious in aqueous and anhydrous media. It is easily dispersed provided a suitable thinner is used (see below). Recommended concentrations and directions for use: SILCOLAPSE 411 is normally used in concentrations of 1 to 100 mg per of medium to be defoamed. It can be used as supplied, but it is often preferable to predilute it to a concentration of between 1 and 10%. To do this, slowly add either 99 or 90 parts of the thinner used to 1 or 10 parts respectively of SILCOLAPSE 411. Prediluting SILCOLAPSE 411: The product can be diluted either in some of the medium to be
---------------------------	---

SILCOLAPSE 411

defoamed (1), or in one of the following thinners, which are all solvents of the silicone oil in the compound, and are soluble, or simply dispersible, in the medium to be defoamed.

a/ use in anhydrous media

The following thinners are recommended:

- aliphatic hydrocarbons (hexane, heptane, white spirit, etc.)
- aromatic hydrocarbons (benzene, toluene, xylene, naphtha solvent, etc.).
- chlorinated hydrocarbons (tri-chlorethylene, perchlorethylene, carbon tetrachloride, etc.)

b/ use in aqueous media

In this case, water-soluble or water-dispersible thinners should be used, such as:

- certain ketones, e.g. methylethylketone or methylisobutylketone
- certain alcohols, e.g. tertibutanol, dodecanol-1 or ethyl-2 hexanol
- certain ethers, e.g. ethyl ether or isopropyl ether.

Methanol, isopropanol, ethylene glycol, propylene glycol, glycerine, etc. are NOT RECOMMENDED for diluting **SILCOLAPSE 411** as they are not solvents of the silicone oil in the compound.

(1) In the case of an aqueous medium, a master dispersion of **SILCOLAPSE 411** can be prepared. The homogeneity and length of stability of such a dispersion will depend on the degree of agitation, and also on the surfactant and rheological characteristics of the medium concerned.

Remarks:

Prior dilution tests are recommended in all cases before any operations on an industrial scale. The colloidal filler in the compound may result in cloudy or clear dilutions, depending on the refractive of the thinner.

Use of pre-dilutions:

Examples of final concentrations of antifoam in the medium:

- 1 mg/kg dilute either 1 part of 1% predilution in 10 000 parts of the medium to be defoamed, or 1 part of 10 % predilution in 100 000 parts.
- 100 mg/kg - dilute either 1 part of 1 % predilution in 100 parts of the medium to be defoamed, or 1 part of 10% predilution in 1 000 parts.

Users should make systematic tests to determine the optimum concentration of **SILCOLAPSE 411**, which generally depends on a number of factors - composition of the medium, temperature, pH and intensity of agitation. We recommend starting a dose of 10 mg of antifoam per kg of medium to be defoamed, and then increasing or decreasing this amount according to results.

Regulation	Please consult your local ELKEM SILICONES sales office.
Limitations	Please consult your local ELKEM SILICONES sales office.
Packaging	• SILCOLAPSE 411 is available in ○ Drum of 200 KG (441 LB) ○ Pallet of 1000 KG (2205 LB)
Storage and shelf life	When stored in its original packaging: SILCOLAPSE 411 may be stored at temperatures between -5°C / 23°F and 40°C / 104°F for up to 18 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.
Safety	Please consult the Safety Data Sheet of: SILCOLAPSE 411

Visit our website www.elkem.com/silicones/

Warning to the users

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and is in no way binding, particularly as regards infringement of or prejudice to third party rights through the use of our products. ELKEM SILICONES guarantees that its products comply with its sales specifications.

SILCOLAPSE 411

This information must on no account be used as a substitute for necessary prior tests which alone can ensure that a product is suitable for given use. Determination of the suitability of product for the uses and applications contemplated by users and others shall be the sole responsibility of users. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorisations. Users are requested to check that they are in possession of the latest version of this document and ELKEM SILICONES is at their disposal to supply any additional information.