

Description **SILCOLAPSE 454** 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, crop protection products, detergents, chemicals, etc.). Its excellent behaviour in alkaline media and its efficiency in a wide range applications are of interest.

SILCOLAPSE 454 is intended for industrial use only, and it should not be used in the manufacture of foodstuffs, cosmetics or pharmaceutical products.

Examples of applications **SILCOLAPSE 454** has numerous applications in such fields as:

- Oil: Alkanolamine washing of natural or refinery gases.
- Crop protection products: Product formulations (emulsifiable concentrates and aqueous dispersions)
- Detergents: Manufacture of detergents powders and liquids and of soap.
- Chemicals: Distillation, extraction, evaporation, dissolution, filtration, etc.

Key benefits **SILCOLAPSE 454** offers the following advantages :

Ease of use:
SILCOLAPSE 454 can be used 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 product can be used with automatic injection systems.

Efficiency:
SILCOLAPSE 454 is efficacious at low doses, from about 1 to 100 mg per kg of medium to be defoamed.

Inertness:
SILCOLAPSE 454 is chemically inert towards media to be defoamed and therefore does not affect their properties.

Typical properties

	SILCOLAPSE 454
Dry content	100 %
Color	White grey

Appearance..... Opalescent homogeneous liquid
 Colour..... Greyish white
 Odour None
 Active ingredients, %, approx..... 100
 Specific gravity at 25 °C, approx..... 1.0
 Emulsifiers..... None
 Effective concentration, mg/kg (or ppm) (1)..... 1 to 100
 Thinner (2): Aromatic, aliphatic and chlorinated hydrocarbons.
 Water-soluble solvents and Water-dispersible solvents.

(1) Milligram 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).

(2) For further details, see paragraph on Processing, page 3.

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 454 is equally efficacious in aqueous and anhydrous media. It disperses readily provided a suitable thinner is used (see below).

Recommended concentrations and directions for use:

SILCOLAPSE 454 is normally used in a concentration of between 1 and 100 mg per kg of medium to be defoamed.

It can be used as supplied, but it is often preferable to prediluted to a concentration of between 1 to 10%. To do this, slowly add either 99 or 90 parts of the thinner used to 1 or 10 parts respectively of **SILCOLAPSE 454**.

Prediluting **SILCOLAPSE 454**:

The product can be diluted either in some of the medium to be 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, naphta solvent, etc.).
- chlorinated hydrocarbons (trichlorethylene, perchlorethylene, carbon tetrachloride, etc.).

b/ use in aqueous media

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

- Certain ketones, e.g. methylethylketone or methylisobutyl-ketone.
- Certain alcohols, e.g. tertiobutanol, 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 454**, 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 454** 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 operation on an industrial scale.
- The colloidal filler in the compound may result in cloudy or clear dilutions, depending on the refractive index of the thinner.

Use of predilutions:

Examples of final concentrations of antifoam in the medium :

- 1 mg/kg - dilute either 1 part of 1 % predilution in 10000 parts of the medium to be defoamed, or 1 part of 10 % predilution in 100000 parts.
- 100 mg/kg - dilute either on part in 1 % predilution in 100 parts of the medium to be defoamed, or 1 part of 10 % predilution in 1000 parts.

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Users should make systematic tests to determine the optimum concentration of **SILCOLAPSE 454**, which generally depends on a number of factors - composition of the medium, temperature, pH and intensity of agitation. We recommend starting with a dose of 10 mg of antifoaming agent per kg of medium to be defoamed, and then increasing or decreasing this amount according to results.

Packaging	<ul style="list-style-type: none">• SILCOLAPSE 454 is available in<ul style="list-style-type: none">○ Pallet of 1000 KG (2205 LB)○ Pail of 25 KG (55.13 LB)○ Drum of 200 KG (441 LB)
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Storage and shelf life	When stored in its original packaging: SILCOLAPSE 454 may be stored at a temperature 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.
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Regulation	Please consult your local ELKEM SILICONES sales office.
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Limitations	Please consult your local ELKEM SILICONES sales office.
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Safety	Please consult the Safety Data Sheet of: SILCOLAPSE 454
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Visit our website www.silicones.elkem.com

Warning to the users

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