

Silcolapse® 454

Antifoams

November/2017

Description **Silcolapse® 454** is a 100% active silicone antifoam designed for use in aqueous and anhydrous media. **Silcolapse® 454** can be used in crop protection products, detergents, oil processing and chemical distillation processes. It is intended for industrial use only, and should not be used in the manufacture of foodstuffs, cosmetics or pharmaceutical products.

Features

- Effective performance in alkaline conditions
- Easy to use, either as is or pre-diluted
- Cost efficient, effective at low doses, from about 1 to 100 mg/ kg of medium to be de-foamed
- Chemically inert in foaming systems, will not alter the properties of the foaming medium
- Readily dispersible in most media
- Can be used in automated injection systems

Applications

- **Crop Protection** – product formulations; emulsifiable concentrates and aqueous dispersions
- **Detergents** – manufacture of detergent powders, liquids and soaps
- **Oil** – alkanolamine washing of natural or refinery gases
- **Chemicals** – distillation, extraction, evaporation, dissolution, filtration

Typical Properties	<ul style="list-style-type: none"> • Appearance Gray-white, opalescent, homogeneous liquid • Actives, % 100 • Specific Gravity 1.00 • Diluents Hydrocarbon solvents, water-soluble/ dispersible solvents • Effective Concentrations, ppm 1 to 100
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Please note: The typical properties listed in this bulletin are not intended for use in preparing specifications for any particular application of Silcolapse® silicone materials. Please contact our Technical Service Department for assistance in writing specifications.

Regulatory Information **EPA Pesticide Chemical Regulations**
The Ingredients in **Silcolapse® 454** are exempt from the requirement of a tolerance under EPA regulations:

- 40 CFR 180.910 for use on raw agricultural commodities after harvest and growing crops
- 40 CFR 180.930 for use on animals

Instructions for use **Silcolapse® 454 is effective in aqueous and anhydrous media. It disperse readily, provided a suitable diluent is used. Silcolapse® 454 is normally used in a concentration of between 1 and 100 mg/kg of medium to be defoamed. It can be used as supplied, but it is often preferable to predilute to a concentration of between 1 to 10%. To do this, slowly add either 99 or 90 parts of the diluent used to 1 or 10 parts respectively of Silcolapse® 454.**

For use in anhydrous media, the following diluents are recommended:

- Aliphatic hydrocarbons (hexane, heptane, white spirits)
- Aromatic hydrocarbons (benzene, toluene, xylene, naphtha)
- Chlorinated hydrocarbons (trichloroethylene, perchloroethylene, carbon tetrachloride)

For use in aqueous media, the following water soluble/ dispersible diluents are recommended:

- Ketones (methylethyl ketone, methylisobutyl ketone)
- Alcohols (tertiary butanol, dodecanol-1, **2-ethylhexanol**)
- Ethers (ethyl ether, isopropyl ether)

Methanol, isopropanol, ethylene glycol, propylene glycol, glycerine, etc. are not recommended for diluting Silcolapse® 454.

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With an aqueous medium, a master dispersion of **Silcolapse® 454** can be prepared. The homogeneity and stability of this dispersion will depend on the degree of agitation, and also on the surfactant and rheological characteristics of the medium.

Prior dilution tests are recommended in all cases before any operation on an industrial or commercial scale. Examples of final concentrations of antifoam in the medium are:

- **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 of the medium to be defoamed
- **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 of the medium to be defoamed

Users should make systematic tests to determine the optimum concentration of **Silcolapse® 454**, which generally depends on composition of the medium, temperature, pH and intensity of agitation. It is recommended to start with a dose of 10 mg of antifoaming agent per kg of medium to be defoamed, and then increasing or decreasing this amount based on the results obtained.

Storage and shelf life	When stored in the original, unopened container at or below 30°C, Silcolapse® 454 can be stored for 18 months from the date of manufacture. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.
Safety	Product safety information required for safe use is not included. Before handling, please read the Material Safety Data Sheet (MSDS) and container labels for safe use, physical and health hazard information. To obtain a material safety data sheet for this product contact Elkem Silicones at 866-474-6342.
Packaging	Silcolapse® 454 is available in 200 kg drums.

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