

Silcolapse® 5020

Silicone Emulsion

November 2017

Description **Silcolapse® 5020** is a non-ionic aqueous 20% active defoamer. It offers excellent antifoam and defoaming properties in a wide variety of industrial applications.

Applications **Silcolapse® 5020** is a broad spectrum antifoaming and defoaming agent which can be used to control or destroy foam in many applications. Typical industries in which it can be used include

- **Chemical:** Detergents and cleaners; rubber latex; cutting oil formulations; water based printing inks; adhesive formulations
- **Water/ Effluent Treatment:** Aerobic and anaerobic water treatment; activated sludge processes and cooling towers
- **Textile Processing:** Defoaming and sinking of textiles; textile printing; continuous dyeing
- **Agrochemicals:** used during the manufacture and in the end-use application of many agrochemical formulations

Silcolapse® 5020 can also be used in many types of agro-chemical formulations:

- Emulsifiable concentrates
- Suspension concentrates
- Water-dispersible granules

Typical Properties	
• Appearance	milky white, pourable emulsion with a creamy consistency
• Actives, %	20
• Specific Gravity	1.0
• Emulsifier System	nonionic
• pH	3.5
• Diluents	water

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® 5020** are exempt from the requirement of a tolerance under EPA regulations:

- 40 CFR 180.920 for use on growing crops only
- 40 CFR 180.930 for use on animal

Storage and shelf life When stored in the original, unopened container between (5-40°C), **Silcolapse® 5020** has a shelf life of 15 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.

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Instruction for use

• Dilution:

Silcolapse® 5020 can be used either as supplied or diluted in clean, cold water and used within 24 hours. All equipment used for dilution should be of stainless steel or a suitable plastic material and should be thoroughly cleaned between dilutions.

• Sterilization:

Silcolapse® 5020 may be sterilized by autoclaving at 121°C for 30 to 60 minutes, providing the emulsion is stirred during cooling from 90°C to below 30°C. Under these conditions, slight oiling may occur, but this usually has the effect of enhancing the defoaming and antifoaming properties of the emulsion.

• Methods of Addition :

• **Continuous addition:** is made using a metering pump or header-tank device.

• **Intermittent dosage:** is made either by a manual “one-shot” addition as required or by means of a timer device and metering pumps

• Point of Addition:

Silcolapse® 5020 is best added to the medium before foam begins to form, but it can also be added later to bring troublesome foam under control. The ease with which an antifoam can be added depends on the design and operational procedures in place. The antifoam will act most efficiently if it is uniformly dispersed as quickly as possible in the liquor that is foaming. If the temperature of the liquor that is producing the foam is above 40°C, pre-dilute the antifoam.

Silcolapse® 5020 should be added either:

• In formulations and products, it should be added to the water or other liquid phase and mixed before the addition of foaming components, such as surfactants or wetting agents.

• In processes, it should be added at some point of maximum turbulence upstream of the place where the foam is being formed. For example, in food washing, the antifoam is best added to the water entering the plant. In distillation processes, it should be metered into the cold feed before the preheater or boiler.

• Effect of pH:

• **Silcolapse® 5020** is effective between a pH of 1 to 11. There is a decrease in effectiveness at pH levels below 1 and above 11.

• Amount to Use:

The amount of **Silcolapse® 5020** needed for a particular foam problem depends on:

- Foaming media and concentration
- pH
- Temperature
- Degree of agitation/ aeration

Each foam problem tends to be unique, sometimes to a particular process or product and even to a specific plant.

The following is offered as a guide to starting concentrations of **Silcolapse® 5020** for lab evaluations:

- Conventional surfactants: 50 ppm, and increase or decrease the amount to obtain the optimum concentration
- Protein, starch or latex foams: 100 to 300 ppm
- Fermentation processes: 50 to 100 ppm added during sterilization and during the

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subsequent fermentation

Aerobic effluent treatment: The optimum amount of antifoam for daily consumption can only be found by long term plant trials because of the variability of the effluent, the different methods of addition used and the variation of plant throughput.

Packaging

Silcolapse® 5020 is available in 200 kg drums.

Visit our website www.silicones.elkem.com

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