

# Technical Information

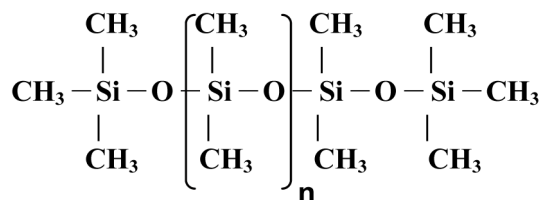
## Foamsol (FDC511) Silicone Antifoaming Agent

### Description

Foamsol is a water based emulsion of dimethylpolysiloxane designed to control foams produced in kettle and fermenter.

### Principle

Dimethylpolysiloxane is an inert polymer which is highly effective in foam suppression



Bubble collapse occurs as a result of reduction of surface tension in the liquid film.

### Benefits

- Increased kettle utilisation
- Increased fermenter utilisation
- Preservation of foam-positive proteins
- Increased alpha-acid utilisation
- Elimination of over-foaming problems
- Optimised CO<sub>2</sub> recovery
- Enhanced vessel cleaning

### Treatment Rates

The optimum treatment rate for Foamsol depends on beer type, vessel dimension, and point of application but is typically in the range 2–10 ml per hectolitre.

The starting point for plant trials should be 4 ml per hectolitre.

### Application

Efficient dispersal of the insoluble silicone compound is essential to achieve optimum effect. This is best facilitated by adding Foamsol to the wort in-line as the fermenter is filled.

Alternatively Foamsol can be added to the kettle, where a higher addition rate may be required, or to the surface of the fermenting beer via the CIP system.

### Removal from Beer

It is important that none of the active component of Foamsol, dimethylpolysiloxane, remains in the finished beer. Yeast removes the major part by absorption onto the cell wall. The remainder is removed on the filter. The removal of Foamsol from beer in this way can be easily demonstrated by a simple experiment (methodology available on request).

Foamsol Addition (ml/hl)	Beer Foam after Processing (Rudin ½ life, seconds)
0	97.5
1	98.4
2	98.1
4	98.1
8	97.6

### Brewing Practice

Dimethylpolysiloxane has been successfully used as a processing aid in beer production, throughout the world, for more than 30 years. Over this period it has been shown to deliver consistent benefits to the brewer, with no adverse effect on beer foam or flavour stability.

### Regulatory

Whilst Foamsol is used as a processing aid and not a food additive in the brewing process, dimethylpolysiloxane also meets the requirements of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) INS 900a

#### USA

Dimethylpolysiloxane is authorised by Food and Drug Administration under 27CFR173 subpart L section 173.340

#### UK and EEC

E900 is an authorised food additive under Regulation 1333/2008 (as amended). It can also be used as a processing aid as it meets the requirements of EU General Food Law (Regulation (EC) No 178/2002 (as amended))

#### Australia and New Zealand

Food standards code Standard No 1.3.3 lists dimethylpolysiloxane as a permitted food processing aid.

No FOAMSOL                      FOAMSOL 4 ml/hl

