

TEGOPREN® 5831

Product description

TEGOPREN® 5831 is based on organo-modified siloxanes. The multifunctional additive is used as defoamer and wetting agent.

Physical properties

| | |
|-----------------------|-------------------------------|
| Appearance | colourless to pale straw |
| Colour to Gardner | <= 2 |
| Active matter content | 100 % |
| Density (25 °C) | approx. 1.0 g/cm ³ |
| Viscosity (25 °C) | approx. 50 - 300 mPas |

Application

TEGOPREN® 5831 is particularly suitable as a defoamer for lubricating oils and neat metalworking fluids that are based on ester oils and polyalkylene glycols.

Furthermore, TEGOPREN® 5831 is especially used as a wetting agent for neat oils as well as for emulsifiable metalworking fluids.

In addition TEGOPREN® 5831 can be applied to improve water separation characteristics of non-aqueous media based on mineral or ester oils.

Properties / Benefits

TEGOPREN® 5831 combines the high compatibility of organic antifoams with the high defoaming efficiency of pure silicone oil antifoams.

TEGOPREN® 5831 provides the same defoaming efficiency at a much higher deaeration rate of the base fluid compared to pure silicone oils (i. e. no negative impact on air release properties). Due to its unique chemistry TEGOPREN® 5831 outperforms organic defoamers such as polyacrylates

- significantly lower dosage
- longer lasting defoaming efficiency

As a multifunctional additive TEGOPREN® 5831 is able to enhance wetting properties of both non-water miscible and water miscible (emulsifiable) metalworking fluids that are based on mineral oil.

Moreover, TEGOPREN® 5831 can improve water separation capacity of neat metalworking fluids and lubricating oils to avoid corrosion, cavitation, premature lubricant degradation etc.

Furthermore, in contrast to pure silicone oils, TEGOPREN® 5831 has no adverse effect on finishing processes (painting, electroplating etc.) of treated metal parts when used in metalworking fluids.

Compared to conventional siloxane-based additives TEGOPREN® 5831 allows for a strongly reduced treat rate due to its exceptional efficiency.

Dosage/Handling

Depending on the composition of the media and its condition for use, the dosage of TEGOPREN® 5831 can vary over a wide range. Consequently, the necessary dosage has to be evaluated with appropriate tests.

If TEGOPREN® 5831 is applied as defoamer or to improve water separation capacity of non-aqueous media we recommend for initial screening a dosage of 20 ppm active matter.

To increase defoaming efficiency it is highly recommended to prepare a dilution of 10 % of TEGOPREN® 5831 in an adequate solvent (e.g. TEGOLUBE® DC 16 that represents a diethylhexyl carbonate), which is also compatible with the neat metalworking fluid or the lubricating oil.

Clear pre-dilutions are not strictly necessary, i. e. slight opacity is acceptable but strong turbidity should be avoided.

TEGOPREN® 5831 will become most effective, if it precipitates in form of finely dispersed droplets when incorporated in the non-water miscible media as solvent based pre-dilution.

To improve wetting properties of non-aqueous media as well as of water miscible (emulsifiable) metalworking fluids, TEGOPREN® 5831 should be incorporated in its undiluted form.

If TEGOPREN® 5831 is applied as wetting agent in non-aqueous media, for first tests we recommend a dosage of 0.1 % TEGOPREN® 5831.

In water miscible (emulsifiable) metalworking fluid concentrates TEGOPREN® 5831 should be incorporated at a dosage of 0.1 % related to the water-mixed fluid (i. e. this corresponds to a dosage of 2 % of TEGOPREN® 5831 incorporated in the metalworking fluid concentrate, if the water-mixed fluid's concentration is 5.0 %).

Registration status

The ingredients of TEGOPREN® 5831 are listed in the following chemical inventories:

EINECS, TSCA, DSL, ENCS, AICS, ECL, PICCS and CHINA

Storage stability

TEGOPREN® 5831 has a shelf-life of 12 months when being stored in original sealed containers.

Packaging

25 kg plastic cans

Pallet size: 8 x 25 kg = 200 kg

Hazardous goods classification

Information concerning

- classification and labelling according to regulations for transport and for dangerous substances
- protective measures for storage and handling
- measures in case of accidents and fire
- toxicity and ecological effects

is given in our material safety data sheets.

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Trademark notice and legal notice

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