

# **Product Data Sheet**

# **Tempo True Inhibitors**

# **General Description**

During the last 30 years the Tempo inhibitors have become the market leading products for many different monomers. They are extremely effective due to their reaction speed – radical to radical reactions are a thousand times faster than hydroxylamine inhibitors and when used in the correct dose they can effectively stop polymerisation.

The inhibitors have become firmly established in styrene manufacturing plants where they can be used on their own, in low temperature units, or in combination with a retarder.

Nufarm produces the market leading 4-Oxo Tempo and 4-Hydroxy Tempo in addition to other more speciality Tempos.

#### **Product Features**

The Tempos are efficacious and easy to use:

- The stable free radical has a very fast reaction speed with unstable monomer radicals that is close to the speed of diffusion (108 M L<sup>-1</sup> sec<sup>-1</sup>).
- Radical capture is so efficient that very low polymer levels can be obtained.
  - Available as a solution in various solvents.

#### **Products Available**

4-Hydroxy Tempo – Available as a solid flake and also in polar solvents.

4-Oxo Tempo – This is only available as solutions in ethylbenzene or styrene monomer.

Inhibitor AHM P500 – A specialist high temperature stable product it has found use in styrene units within heat exchangers and high temperature re-boilers. In addition, it has found applications in a number of other monomers including divinylbenzene and butadiene. It is a liquid product and can therefore be pumped without the need for a solvent.

# **Product Application**

Dosing locations and rates are determined according to individual plant design and fouling history. Detailed advice is available from Nufarm's Technical Services Team.

#### **Material Compatibility**

Tempos can be supplied as solid flake or solutions. The products are not known to be harmful to petrochemical processes or equipment for which this product is designed.

# Storage/Handling/Health

Please refer to the Material Safety Data Sheet for handling and health advice.

#### **Availability**

All Nufarm Tempos are manufactured and supplied from our ISO 9001 production facility in the UK. All materials are quality controlled before leaving the site. The products are available in a variety of packaging from 20 kg up to 25,000 kg isotanks..

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