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Light Stabilizers

Tinogard® Q

Excited State Quencher
For protection of clear packaged products

Uses

Tinogard Q is a light stabilizer based on excited state quenching technology (ESQ). This technology is based on a stabilizing interaction of the active with molecules in high energy states, as caused by exposure to (UV-) light. Through this mechanism Tinogard Q reduces the probability of degradation reactions caused by light exposure. The mechanism is complementary to UV absorption and thus combinations of UV absorbers with Tinogard Q result in highly effective stabilizer systems for protection of transparent packaged products from light induced degradation.

Chemical Name

Active Tris(Tetramethylhydroxypiperidinol) Citrate
Solvents Water
Ethanol

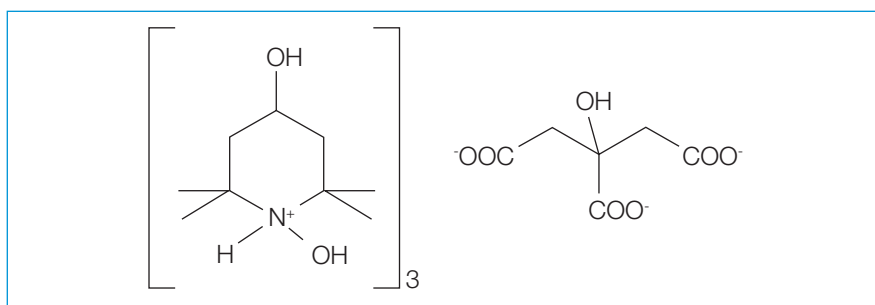
INCI Name

Tris(Tetramethylhydroxypiperidinol) Citrate and Water and Ethanol

PRD-No.*

30482052

* BASF's commercial product numbers.

Structure (active)**Chemical Character**

Organic salt

Molecular weight

711 g/mol

Product form

Yellowish-orange liquid

Shelf Life

18 months

Spectrum

– Not applicable –

Tinogard Q does not absorb UV light. It protects formulations through an excited state quenching mechanism that is complementary to the mode of action of UV absorbers.

Physical Properties

Flashpoint (°C, DIN51584)

35

Solubility (20 °C)	g/100 g solution
Propylene Glycol	> 20
Sodium Laureth Sulfate	> 20
Cocamido Propylbetaine	> 20
C-90-C11 alcohol ethoxylates	> 20
Ethanol	> 20
2-Propanol	> 20
Water	completely miscable

Guidelines for use

Tinogard Q is an aqueous, liquid formulation containing 10% active excited state quencher. It is water and alcohol soluble. It is suitable for alcoholic, hydro-alcoholic and aqueous formulations. Concentrations of 0.01 to 0.10% are usually sufficient to stabilize formulations against photolytic degradation. Optimal incorporation levels depend on the individual formulation, the packaging and long-term stability requirements. It is recommended to combine Tinogard Q with one of the broadband UV absorbers Tinogard HS, Cibafast H Liquid or Tinogard TL. Typically a UV-absorber/Tinogard Q ratio of 2:1 to 4:1 results in highly cost effective systems.

Health & Safety

In accordance with good industrial practice, handle with care and prevent contamination of the environment. Avoid dust formation and ignition sources. For more detailed information please refer to the material safety data sheet.

Note

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January 2012

