We create chemistry

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Tinuvin® NOR™ 371

High molecular weight hindered amine NOR stabilizer

Characterization

Tinuvin NOR 371 is a high molecular weight hindered amine NOR stabilizer. Tinuvin NOR 371 is an excellent light and thermal stabilizer and is particularly well suited for applications in contact with chemicals, like agricultural products, such as greenhouse and mulch films or nonwovens.

Chemical name

Triazine derivative

Molecular weight

2800 – 4000 g/mol

Applications

Tinuvin NOR 371 areas of application include polyolefins (PP, PE) as well as olefin copolymers, such as EVA and EBA.

Features/benefits

Tinuvin NOR 371 is designed to provide outstanding stabilization to agricultural films even in presence of chemicals such as pesticides, insecticides or soil disinfection agents. It shows outstanding performance also as long-term thermal stabilizer; this behavior is especially useful where films are in contact with frames (wood, iron, aluminum).

Product forms

Code:	Tinuvin NOR 371 FF
Apperance:	slightly pinkish granules

Guidelines for use

Films	UV stabilization of greenhouse film	0.2 – 1.6 %
Films	UV stabilization of mulch films	0.2 – 1.0 %

Combined with UV absorbers (e. g. Tinuvin 326, Tinuvin 328, Chimassorb® 81 or Tinuvin 1577) it may give rise to synergistic effects.

Physical properties

Melting range	91 – 104 °C
Specific gravity (24 °C)	1.03 g/cm^3
Vapor pressure (20 °C)	< 0.6 Pa
Bulk density	380 – 450 g/l

Solubility (20 °C)	**% w/w**
Water	3.3×10^{-5}
Tetrahydrofurane	> 100
Dichloromethane	10 – 100
n-Octanol	0.1 – 0.2
Isopropanol	< 0.1

Volatility	**Pure substance; TGA; heating rate 10 °C/min in air**
Weight loss (%)	Temperature °C
0.27	200
0.46	225
0.95	250
2.36	275

Handling & Safety

Tinuvin NOR 371 requires no special safety measures, provided the usual precautions for handling chemicals are observed.

Avoid dust formation and ignition sources. For more detailed information please refer to the material safety data sheet.

Registration

Australia:	pending
Canada:	notified
Europe:	polymer, monomers listed on EINECS
Japan:	MITI
Korea:	pending
USA:	TSCA

Important Notes

1.) Use of Tinuvin NOR 371 light stabilizer in combination with flame retardants may constitute infringement of Australian Patent No. 735643 or/and US Patent No. 5,393,812 and of any existing equivalent patents or any patents granted on equivalent patent applications in other countries.

2.) Please be aware that the presence of BHT antioxidant in plastic articles containing Tinuvin NOR 371 can give rise to discoloration, if the article is stored in absence of light. This effect normally disappears upon UV exposure without significantly affecting the light stabilization properties of Tinuvin NOR 371. Antioxidants like Irganox® 1010 and Irganox 1076 do not give rise to such an effect under normal conditions.

Note

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