



The Chemical Company

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Tinuvin[®] XT 833

High performance light stabilizer system

Characterization

Tinuvin XT 833 is a novel high performance light stabilizer system that imparts outstanding weatherability to PVC and to PVC alloys. The primary advantage of Tinuvin XT 833 over the more traditional ultraviolet absorbers typically added to exterior PVC is the superior color and physical property retention that it provides.

Chemical name

System based on hindered amine derivates

CAS number

Preparation

Applications

The use of Tinuvin XT 833 is especially recommended for applications like PVC roofing membranes, PVC pond, pool, and irrigation liners, PVC coated fabrics such as those used in tents, tarps, and awnings, flexible PVC outdoor furniture, PVC flooring, PVC automotive trim, and in other flexible PVC outdoor applications. It can also be used in rigid PVC formulations, especially those that do not contain tin mercaptide thermal stabilizers. Some of the applications include dark colored PVC siding and pigmented window and door profiles. Additionally, it can be used in PVC alloys like PVC/ABS and PVC/PUR for parts exposed to sunlight.

Features/benefits

Tinuvin XT 833 is a powerful ultraviolet light stabilizer that maintains its activity in highly acidic environments. It protects PVC from the harmful effects of light exposure and helps it to maintain its initial appearance, its initial tensile, elongation, and impact properties, and its physical integrity during long-term weathering. In PVC roofing membranes, for example, it minimizes discoloration and embrittlement and enables the membranes to retain their moisture barrier properties and their reflectivity for many years. A similar appearance and physical property protection is provided by Tinuvin XT 833 in other outdoor PVC applications.

Product forms

Code: Tinuvin XT 833 FF
Appearance: white to off-white granules

Guidelines for use

Tinuvin XT 833 is intended for use in PVC applications demanding the highest performance and the longest durability. For harsh conditions such as in roofing, siding, and decking, the recommended concentration is 1 % or higher. For less severe end uses, 0.2 to 1.0 % may be used. Please note that the use levels depend on the performance requirements of the final application. The level selected should be based on the desired stability and the economics of the given circumstances. Because of their negative influence on UV stability, we do not recommend that Tinuvin XT 833 be used together with tin mercaptide thermal stabilizers. The preferred thermal stabilizers are barium/zinc, calcium/zinc and tin carboxylates. Tinuvin XT 833 can be used alone or in a variety of blends and combinations with Irgafos[®], Irganox[®], Irgastab[®], Tinuvin, Chimassorb[®], Uvinul[®], and other functional stabilizers and additives where often a synergistic performance is observed.

Physical properties

Melting range	63–75 °C
Bulk density	488 g/l

Solubility (20 °C)	% w/w
Chloroform	39
Ethanol	2
n-Hexane	20
Methyl ethyl ketone	30
Dichloromethane	52
Toluene	43
Bis (2-ethylhexyl) adipate	<5
Tritolyl phosphate	<2
DOP (dioctyl phthalate)	<1
ESBO (epoxidized soybean oil)	<1

Handling & Safety

In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid continuous or repetitive breathing of dust. Use only with adequate ventilation. Avoid dust formation and ignition sources.

For more detailed information please refer to material safety data sheet.

Note

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