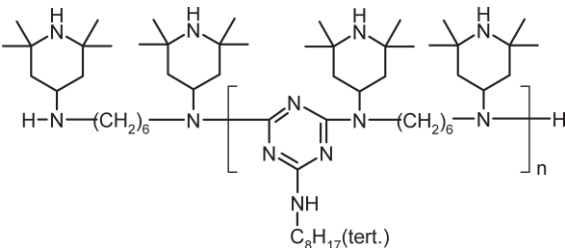


Rhinossorb® 944

Oligomeric hindered amine light stabilizer (HALS)

Characterization	Rhinossorb 944 is a high molecular weight hindered amine light stabilizer (HALS). It shows excellent compatibility, good resistance to extraction and low volatility.
Chemical name	Poly[[6-[(1,1,3,3-tetramethylbutyl)amino]-1,3,5-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidinyl)imino]-1,6-hexanediy][(2,2,6,6-tetramethyl-4-piperidinyl)imino]]
CAS number	71878-19-8 70624-18-9 (US)
Structure	<p>Rhinossorb 944</p> 
Molecular weight	Mn = 2000–3100 g/mol
Applications	<p>Rhinossorb 944 areas of application include polyolefins (PP, PE), olefin copolymers such as EVA as well as blends of polypropylene with elastomers.</p> <p>In addition in certain instances Rhinossorb 944 is highly effective in polyacetals, polyamides, polyurethanes, flexible and rigid PVC, as well as PVC blends, and in certain styrenic elastomer and adhesive specialty applications.</p>
Features/benefits	<p>Rhinossorb 944 imparts excellent light stability to thin articles, particularly fibers and films. In thick cross sections it is specifically suitable for polyethylene articles.</p> <p>Rhinossorb 944 is highly effective as a long-term thermal stabilizer in thin and thick articles and shows good extraction resistance.</p>

Product forms	Code:	Rhinossorb 944 FDL white	Rhinossorb 944 LD white
	Appearance:	to slightly yellowish granules	to slightly yellowish low dust powder
Guidelines for use	Thick sections*:	UV Stabilization of HDPE, LLDPE, LDPE and PP	0.05–1.0 %
	Films*:	UV Stabilization of LLDPE and LDPE	0.10–1.0 %
	Tapes:	UV Stabilization of PP and HDPE	0.10–0.8 %
	Fibers:	UV Stabilization of PP	0.10–1.4 %

* The presence of a UV absorber (e.g. Rhinuva® 326/328 or Rhinossorb 622) is recommended for unpigmented or slightly pigmented articles or to improve the light fastness of certain organic pigments.

Physical properties	Melting range	100–135 °C
	Flashpoint (ASTM D-93)	>150 °C
	Specific gravity (20 °C)	1.01 g/cm ³
	Vapor pressure (20 °C)	~ 1.0 E-6 Pa
	Bulk density	
	Rhinossorb 944 FDL	560–610 g/l
Rhinossorb 944 LD	450–550 g/l	

Solubility (20 °C)	% w/w
Acetone	>50
Chloroform	>30
Ethanol	<0.1
Ethyl acetate	>50
n-Hexane	41
Methanol	3
Dichloromethane	>50
Toluene	>50
Water	<0.01

Volatility	Pure substance; TGA-data, heating rate 20 °C/min in air
Weight loss %	Temperature °C
0	250
0.2	275
1.0	300
3.7	325
9.4	350

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 the material safety data sheet.

Note

The descriptions, designs, data and information contained herein are presented in good faith, and are based on RHINO CHEM's current knowledge and experience.

They are provided for guidance only, and do not constitute the agreed contractual quality of the product or a part of RHINO CHEM's terms and conditions of sale.

Because many factors may affect processing or application/use of the product, RHINO CHEM recommends that the reader carry out its own investigations and tests to determine the suitability of a product for its particular purpose prior to use. It is the responsibility of the recipient of product to ensure that any proprietary rights and existing laws and legislation are observed. No warranties of any kind, either expressed or implied, including, but not limited to, warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth herein, or that the products, descriptions, designs, data or information may be used without infringing the intellectual property rights of others. Any descriptions, designs, data and information given in this publication may change without prior information. The descriptions, designs, data and information furnished by RHINO CHEM hereunder are given gratis and RHINO CHEM assumes no obligation or liability for the descriptions, designs, data or information given or results obtained, all such being given and accepted at the reader's risk.