Technical Data Sheet

Product name: UV-1130
Product Form: Light yellow amber viscous liquid
Chemical name: b-[3-{2-[H-Benzotriazole-2-yl]-4-hydroxy-5-tert.butylphenyl]-propionic acid}poly(ethylene glycol) 300-ester and Bis{b-[3-{2-[H-Benzotriazole-2-yl]-4-hydroxy-5-tert.butylphenyl]-propionic acid}}-poly(ethylene glycol) 300-ester
Synonym: Tinuvin 1130
CAS No: 104810-47-1 and 104810-48-2 and 25322-68-3
EINECS No: 400-830-7
Formula weight: Monomer: 637, dimmer: 975

Chemical Structure:

![Chemical Structure of UV-1130]

General:
UV-1130 is a liquid UV absorber of the hydroxyphenylbenzotriazole class specifically developed for coatings. The product is miscible with all common solvents but also easily incorporated into water borne systems. In view of the high durability demands, its high temperature and extraction resistance makes it especially suitable for industrial and automotive coatings. Because of its broad UV absorption, UV-1130 also provides efficient protection to light sensitive substrates such as wood and plastics.

Physical Properties:

Appearance: yellow to light amber viscous liquid
Dynamic Viscosity at 20°C: 7400 mPa.s
Density at 20°C: 1.17 g/cm³

Miscibility (g/100 g solution) at 20°C:
- butylcarbitol > 50
- butanol > 50
- butylacetate > 50
- Depanol J¹ > 50
- ethylglycol > 50
- 1-methoxypropylacetate-2 > 50
- methyl ethyl ketone > 50
- Solvesso 100² > 50
- Solvesso 150² > 50 ¹) Trade Mark of Hoechst
- xylene > 50 ²) Trade Mark of Esso
- water n.m.
- hexanedioldiacrylate > 50
- trimethylolpropanetriacrylate > 50

**Application:**
The dispersion of UV-1130 in water borne systems may be eased by dilution with a water miscible solvent such as butylcarbitol.

UV-1130 is recommended for both solvent and water based coatings such as:
- automotive coatings
- industrial coatings
- trade sales coatings

UV-1130 may be used in combination with a light stabilizer of the sterically hindered amine class (HALS) such as UV-144, UV-292 or UV-123. These synergistic combinations impart superior coating protection against gloss reduction, cracking, blistering, delamination and color change.

The light stabilizers may be added in two coat automotive finishes to the clear coat and to the base coat. However, according to our experience, the optimum protection is achieved by adding the light stabilizer to the topcoat.

The amount of UV-1130 required for optimum performance should be determined in trials covering a concentration range.

**Uses:**
Recommended concentrations:
1.0-3.0% UV-1130, 0.5-2.0% UV-292 or 123 or 144

**Chemical Specification**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Light yellow amber viscous liquid</td>
</tr>
<tr>
<td><strong>Assay</strong></td>
<td></td>
</tr>
<tr>
<td>CAS No: 104810-48-2</td>
<td>50-52%</td>
</tr>
<tr>
<td>CAS No: 104810-47-1</td>
<td>36-38%</td>
</tr>
<tr>
<td>CAS No: 25322-68-3</td>
<td>12%</td>
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<tr>
<td><strong>Transmittance</strong></td>
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<tr>
<td>460 nm:</td>
<td>95% min.</td>
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<tr>
<td>500 nm:</td>
<td>97% min.</td>
</tr>
<tr>
<td><strong>Viscosity (20°C):</strong></td>
<td>7400 mPa.S</td>
</tr>
<tr>
<td><strong>Active component (HPLC):</strong></td>
<td>99.0% min.</td>
</tr>
<tr>
<td><strong>Density (20°C):</strong></td>
<td>1.17 g/cm³</td>
</tr>
</tbody>
</table>
Ash: 0.1% max.

Packing:
in plastic drum of 20/25kg net or 200kg net.

Safety and Handling:
UV-1130 should be handled in accordance with good industrial practice. Detailed information is provided in the MSDS.

Storage:
Stored in a closed system and be kept in a dry and dark place without light exposure.