BLS® 531
UV Absorber / Light Stabilizer for Plastics

Overview
BLS 531 is a benzophenone UV absorber, which is highly effective for the light stabilization of plastics, and is especially suited for use in polyolefins and flexible PVC. It protects the polymers from UV radiation helping to preserve the original appearance and physical integrity.

Chemistry
Chemical Name: Methanone, [2-hydroxy-4-(octyloxy)phenyl]phenyl-
CAS Number: 1843-05-6
Chemical Structure:

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\begin{align*}
\text{O} & \\
\text{OH} & \\
\text{OC}_8\text{H}_17 &
\end{align*}
\]

Typical Properties
Product Form: Solid
Melting Range: 46.5 – 49°C
Molecular Weight: 326.4 g/mol

Solubility (percent by weight, 20°C)
- Acetone: 43
- Chloroform: 61
- Ethanol: 3.5
- Ethyl acetate: 44
- n-Hexane: 12
- Methanol: 1.7
- Methyl ethyl ketone (MEK): 65
- Methylene Chloride: 67
- Toluene: >50
- Water: <0.01

Applications
BLS 531 is useful for the light stabilization of plastics, including polyolefins (polypropylene, polyethylene, EVA), flexible PVC, acrylics, linear and unsaturated polyesters, polycarbonates, and others. Specialty applications include adhesives, sealants, and in coatings with moderate weatherability requirements. Combinations of BLS 531 with HALS show synergistic performance and are recommended in polyethylene and EVA agricultural films as well as in polypropylene and HDPE thick section applications.

Advantages
- Highly compatible with a wide range of organic substrates
- Low color contribution
- Particularly suitable for thick films, typically > 100 um and thick sections
• Low migration rates reduce danger of blooming
• Low volatility
• Compatibility with other stabilizers
• FDA cleared for use in polyolefins and petroleum wax

UV Absorbance Spectrum (20 mg/L in ethyl acetate)

Guidelines for Use
Typical recommended use levels in plastic applications range between 0.1% and 0.7%. Combinations with other light stabilizers such as HALS and benzoates often show enhanced performance. The exact formulation to be used is dependent on the substrate, performance requirements, and other factors, and should be determined by the user based on testing to simulate actual conditions of use. Please contact Mayzo for specific recommendations.

Storage
This product may be stored up to two years in a sealed container. Containers should be kept tightly closed when not in use and stored in a cool, dry place.

Safety
Please consult the Safety Data Sheet (SDS) prior to handling or using this product.

FDA Regulations
BLS 531 has been cleared for use in olefin polymers under 21 CFR §178.2010 and in petroleum wax under 21 CFR §178.3710. Please contact your Mayzo representative for complete details, including restrictions of use.