
Technical Information

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Uvinul[®] 3050

® = Registered trademark of
BASF Aktiengesellschaft

UV absorber for plastics and paints

Supplement for technical information texts

In Germany a new section (§ 15a) has been included in the second amendment to the German Chemical Law:

Sale of dangerous substances

"It is unlawful to sell or offer for sale a dangerous substance without indicating in accordance with § 3a Section 1 the dangers relating to the substance."

Substances given in this brochure that come under § 15a are marked with the numbers [1] – [15]. These numbers relate to the indications of danger given in § 3a of the German Chemical Law (see key below):

- [1] Explosive
- [2] Oxidizing
- [3] Extremely flammable
- [4] Highly flammable
- [5] Flammable
- [6] Very toxic
- [7] Toxic
- [8] Harmful
- [9] Corrosive
- [10] Irritant
- [11] Sensitizing
- [12] Carcinogenic
- [13] Toxic for reproduction
- [14] Mutagenic
- [15] Dangerous for the environment

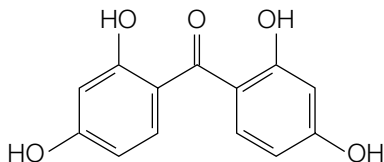
The following products given in this technical information are currently affected:

Uvinul 3050 [8, 11, 15]

Uvinul 3050

Nature

UV absorber
2,2',4,4'-Tetrahydroxybenzophenone



$C_{13}H_{10}O_5$

Molecular mass

246

CAS no.

131-55-5

Physical form

Yellowish powder

Storage

Keep product dry and protect containers from damage. Reseal containers tightly after use.

Properties

Melting point 195–197 °C

Density at 25 °C 1.21 g/cm³

Solubility (wt.% at 30 °C)

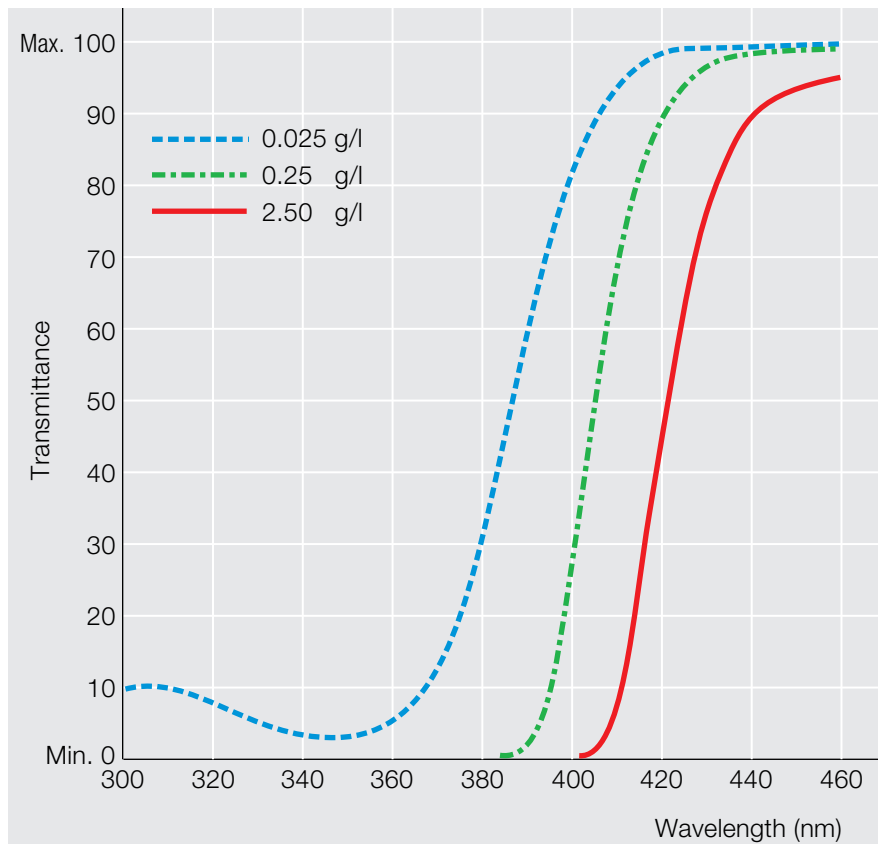
Water <1

Methanol 50

Ethyl acetate 10

Methyl ethyl ketone 22

Toluene <1



Transmittance spectra (methanol, 1 cm cuvette)

Application

Thanks to its wide absorption band, which extends far into the UV-A range, Uvinul 3050 is very suitable for applications in which an optimum filter effect up to the boundary with visible light is desired. Uvinul 3050 is used in linear polyesters or optical articles made from poly[diethylene glycol bis(allyl carbonate)].

Uvinul 3050, for instance, drastically reduces the UV transmittance of lenses produced from this material (see table below).

Transmittance of allyl carbonate lenses:

Wavelength	Without 3050	With 3050
260	1.0	0
280	9.0	0
300	32.0	0
320	64.0	0
340	81.0	0
360	87.0	0
380	90.0	0
400	89.5	2.0
420	89.5	63.0
440	91.0	88.0

The UV absorber is applied by dipping the lenses in a 1% aqueous solution of Uvinul 3050 heated to about 100 °C.

Others applications are:

- Alkyd resins
- Phenolic resins
- Fluorescent pigments
- PUR systems
- Oil paints
- Polymer dispersions

Safety

BASF knows of no ill effects that could have resulted from using Uvinul 3050 for its intended purpose in accordance with sound manufacturing practice.

According to the experience we have gained over many years and other information at our disposal, Uvinul 3050 is not harmful to health, provided that it is used properly, due attention is given to the precautions necessary for handling chemicals, and the information and advice given in our Safety Data Sheets are observed.

Note

The information submitted in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

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