

Technical Information

Uvinul® MS 40

PRD 30035116

Valid since 23.06.2017
Revision 1.0

Page 1 of 6

® = registered trademark of BASF in many countries ™ = Trademark of BASF

Care Chemicals**UV Filter****INCI name(s)**

Benzophenone-4

Chemical description

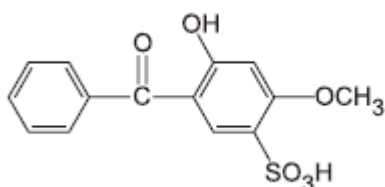
2-Hydroxy-4-Methoxybenzophenone-5-Sulfonic Acid

Physical form:

Off white fine to coarse powder

Molecular weight

308 g/mol

Molecular FormulaC₁₄H₁₂O₆S**Structural Formula****CASR-No.**
4065-45-6**Ingredient**
2-Hydroxy-4-Methoxybenzophenone-5-Sulfonic
Acid

Technical Information

Uvinul® MS 40

PRD 30035116

Valid since 23.06.2017
Revision 1.0

Page 2 of 6

® = registered trademark of BASF in many countries ™ = Trademark of BASF

Care Chemicals**Application**

The sulfonic acid group makes Uvinul® MS 40 soluble in water. The acid group must be neutralized with one of the usual neutralizing agents, e.g. triethanolamine, NaOH etc. The neutralizing agent has no effect on the absorption characteristics. However, if the product is over neutralized (pH 9), the absorption curve shifts towards shorter wavelengths.

The quantities of neutralizing agent required to completely neutralize 1 g of Uvinul® MS 40 are as follows:

Sodium Hydroxide

approx. 0.13 g

Triethanolamine

approx. 0.53 g

Tromethamine

approx. 0.41 g

Tetrahydroxypropyl Ethylenediamine

approx. 1.00 g

The pH value of the resultant solutions lies between 7.00 and 7.50.

A combination of an oil-soluble UV filter e.g. Uvinul® MC 80 and a water soluble UV filter e.g. Uvinul® MS 40 is recommended for achieving higher sun protection factors.

Technical Information

Uvinul® MS 40

PRD 30035116

Valid since 23.06.2017
Revision 1.0

Page 3 of 6

® = registered trademark of BASF in many countries ™ = Trademark of BASF

Care Chemicals**Characteristic values**

The specifications stated in the paragraphs 'Quality control data' and 'Additional product descriptive data' finally and conclusively describe the properties of the product.

Quality control data

(Data which is used for quality release and is certified for each batch.)

Test property	Specification	Test method
Appearance at room temperature	Off-white to light yellow powder	
Identification	must comply	PM0207
Color (Gardner, 100 g/l in water)	max. 4.0	ASTM 1544
Specific absorbance (A1 %/1 cm, 286 nm in water)	460 - 490	PM0207
k-value	46 - 49	E1%/1cm/10
Water (Karl-Fischer)	max. 2.0 %	PM 0079
Sulfuric acid	max. 0.5 %	PM 0041
Content	97.0 - 103.0 %	Calculated on the anhydrous substance

Storage information**Shelf life**

24 months

Storage temperature

Room temperature

Storage conditions

In original sealed containers and protected from moisture

Additional information

Protect from light

Protect against heat

Technical Information

Uvinul® MS 40

PRD 30035116

Valid since 23.06.2017
Revision 1.0

Page 4 of 6

® = registered trademark of BASF in many countries ™ = Trademark of BASF

Care Chemicals**Stabilising additives / Auxiliaries****Preservatives**

not present

Antioxidants

not present

Solvents

not present

Others

not present

General information**Raw material basis**

Synthetic: (mineral oil / natural gas)

Composition hints for finished product label**INCI Components****INCI Name (US/EU/CN)**

Benzophenone-4

Content

Complete *

* Complete means conclusively describes the substance

Technical Information

Uvinul® MS 40

PRD 30035116

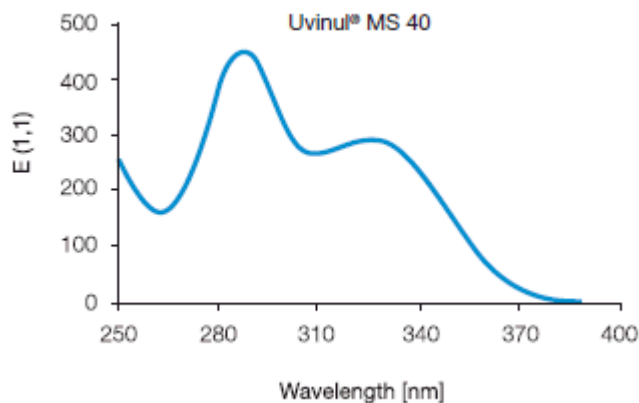
Valid since 23.06.2017
Revision 1.0

Page 5 of 6

® = registered trademark of BASF in many countries ™ = Trademark of BASF

Care Chemicals**Specific technical data**

UV spectrum

**Approval status**

Region	Amount in %
EU	5
Switzerland	5
India	5
Taiwan	5
Korea	5
Japan	10
China	5
Australia	10
ASEAN	5
USA	10
Canada	6
S. America	10
Mexico	5



We create chemistry

Technical Information

Uvinul® MS 40

PRD 30035116

Valid since 23.06.2017
Revision 1.0

Page 6 of 6

® = registered trademark of BASF in many countries ™ = Trademark of BASF

Care Chemicals

Disclaimer

This document, or any answers or information provided herein by BASF, does not constitute a legally binding obligation of BASF. While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. It does not relieve our customers from the obligation to perform a full inspection of the products upon delivery or any other obligation. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE.