CLH report

Proposal for Harmonised Classification and Labelling

**Based on Regulation (EC) No 1272/2008 (CLP Regulation),
Annex VI, Part 2**

International Chemical Identification:
hexyl 2-(1-(diethylaminohydroxyphenyl)methanoyl)benzoate; hexyl 2-[4-(diethylamino)-2-hydroxybenzoyl]benzoate

EC Number: **443-860-6**

CAS Number: **302776-68-7**

Index Number: **607-693-00-4**

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Version number: 1.0 **Date: October 2017**

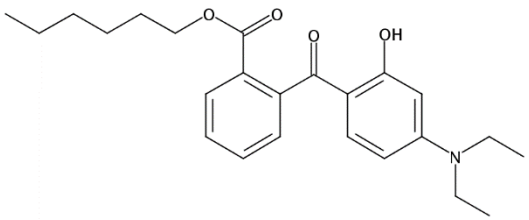
CONTENTS

1 IDENTITY OF THE SUBSTANCE 1
1.1 NAME AND OTHER IDENTIFIERS OF THE SUBSTANCE 1
1.2 COMPOSITION OF THE SUBSTANCE 1
2 PROPOSED HARMONISED CLASSIFICATION AND LABELLING 2
2.1 PROPOSED HARMONISED CLASSIFICATION AND LABELLING ACCORDING TO THE CLP CRITERIA 2
3 HISTORY OF THE PREVIOUS CLASSIFICATION AND LABELLING 3
4 JUSTIFICATION THAT ACTION IS NEEDED AT COMMUNITY LEVEL 4
5 IDENTIFIED USES 4
6 DATA SOURCES 4
7 PHYSICOCHEMICAL PROPERTIES 4
11 EVALUATION OF ENVIRONMENTAL HAZARDS 6
11.1 RAPID DEGRADABILITY OF ORGANIC SUBSTANCES 6
11.1.1 Ready biodegradability 6
11.1.2 Hydrolysis 6
11.1.3 Other convincing scientific evidence 6
11.1.3.1 Photochemical degradation 6
11.2 ENVIRONMENTAL FATE AND OTHER RELEVANT INFORMATION 6
11.3 BIOACCUMULATION 6
11.3.1 Estimated bioaccumulation 7
11.3.2 Measured partition coefficient and bioaccumulation test data 7
11.4 ACUTE AQUATIC HAZARD 8
11.4.1 Acute (short-term) toxicity to fish 8
11.4.2 Acute (short-term) toxicity to aquatic invertebrates 8
11.4.3 Acute (short-term) toxicity to algae or other aquatic plants 8
11.5 LONG-TERM AQUATIC HAZARD 9
11.5.1 Chronic toxicity to fish 9
11.5.2 Chronic toxicity to aquatic invertebrates 9
11.5.3 Chronic toxicity to algae or other aquatic plants 10
11.6 COMPARISON WITH THE CLP CRITERIA 10
11.6.1 Acute aquatic hazard 10
11.6.2 Long-term aquatic hazard (including bioaccumulation potential and degradation) 11
11.7 CONCLUSION ON CLASSIFICATION AND LABELLING FOR ENVIRONMENTAL HAZARDS 11
12 REFERENCES 12

1 IDENTITY OF THE SUBSTANCE

1.1 Name and other identifiers of the substance

Table 1: Substance identity and information related to molecular and structural formula of the substance

Name(s) in the IUPAC nomenclature or other international chemical name(s)	Hexyl 2-[4-(diethylamino)-2-hydroxybenzoyl]benzoate
Other names (usual name, trade name, abbreviation)	Uvinul A Plus; Diethylamino hydroxybenzoyl hexyl benzoate; Benzoic acid, 2-[4-(diethylamino)-2-hydroxybenzoyl]-, hexyl ester
ISO common name (if available and appropriate)	-
EC number (if available and appropriate)	443-860-6
EC name (if available and appropriate)	hexyl 2-(1-(diethylaminohydroxyphenyl)methanoyl)benzoate
CAS number (if available)	302776-68-7
Other identity code (if available)	INCI: Diethylamino hydroxybenzoyl hexyl benzoate
Molecular formula	$C_{24}H_{31}NO_4$
Structural formula	
SMILES notation (if available)	CCCCCCOC(=O)c1ccccc1C(=O)c2ccc(N(CC)CC)cc2O
Molecular weight or molecular weight range	397.51 g/mol

1.2 Composition of the substance

Table 2: Constituents (non-confidential information)

Constituent (Name and numerical identifier)	Concentration range (% w/w minimum and maximum in multi-constituent substances)	Current CLH in Annex VI Table 3.1 (CLP)	Current self-classification and labelling (CLP)
hexyl 2-(1-(diethylamino hydroxyphenyl)methanoyl) benzoate (CAS: 302776-68-7; EC: 443-860-6)	80-100	Aquatic Chronic 4; H413	Aquatic Chronic 4; H413 Not Classified

2 PROPOSED HARMONISED CLASSIFICATION AND LABELLING

2.1 Proposed harmonised classification and labelling according to the CLP criteria

Table 3:

	Index No	International Chemical Identification	EC No	CAS No	Classification		Labelling			Specific Conc. Limits, M-factors	Notes
					Hazard Class and Category Code(s)	Hazard statement Code(s)	Pictogram, Signal Word Code(s)	Hazard statement Code(s)	Suppl. Hazard statement Code(s)		
Current Annex VI entry	607-693-00-4	hexyl 2-(1-(diethylaminohydroxyphenyl)methanoyl)benzoate	443-860-6	302776-68-7	Aquatic Chronic 4	H413	-	H413			
Dossier submitters proposal		hexyl 2-(1-(diethylaminohydroxyphenyl)methanoyl)benzoate; hexyl 2-[4-(diethylamino)-2-hydroxybenzoyl]benzoate			**Modify:** Aquatic Chronic 4 to Aquatic Chronic 1	**Modify:** H413 to H410	**Add:** GHS09 Wng	**Modify:** H413 to H410		**Add:** M = 1000	
Resulting Annex VI entry if agreed by RAC and COM					Aquatic Chronic 1	H410	GHS09 Wng	H410		M = 1000	

Table 4: Reason for not proposing harmonised classification and status under public consultation

Hazard class	Reason for no classification	Within the scope of public consultation
Explosives		No
Flammable gases (including chemically unstable gases)		No
Oxidising gases		No
Gases under pressure		No
Flammable liquids		No
Flammable solids		No
Self-reactive substances		No
Pyrophoric liquids		No
Pyrophoric solids		No
Self-heating substances		No
Substances which in contact with water emit flammable gases		No
Oxidising liquids		No
Oxidising solids		No
Organic peroxides		No
Corrosive to metals		No
Acute toxicity via oral route		No
Acute toxicity via dermal route		No
Acute toxicity via inhalation route		No
Skin corrosion/irritation		No
Serious eye damage/eye irritation		No
Respiratory sensitisation		No
Skin sensitisation		No
Germ cell mutagenicity		No
Carcinogenicity		No
Reproductive toxicity		No
Specific target organ toxicity-single exposure		No
Specific target organ toxicity-repeated exposure		No
Aspiration hazard		No
Hazardous to the aquatic environment		**Yes**
Hazardous to the ozone layer		No

3 HISTORY OF THE PREVIOUS CLASSIFICATION AND LABELLING

The harmonised classification and labelling of Uvinul A Plus (Aquatic Chronic 4) was included in Annex VI of the CLP-Regulation with the 1st ATP (Commission Regulation (EC) No 790/2009).

4 JUSTIFICATION THAT ACTION IS NEEDED AT COMMUNITY LEVEL

Reason for a need for action at Community level:

Change in existing entry due to changes in the criteria (2.ATP)
Disagreement by DS with current self-classification

5 IDENTIFIED USES

This substance is used in the following products: cosmetics and personal care products.

6 DATA SOURCES

REACH registration dossier (04/2017)

7 PHYSICOCHEMICAL PROPERTIES

Table 5: Summary of physicochemical properties

Property	Value	Reference	Comment (e.g. measured or estimated)
Physical state at 20°C and 101,3 kPa	solid	REACH registration dossier	-
Melting/freezing point	54 °C at 1013.0 hPa	REACH registration dossier	experimental result [OECD Guideline 102 (Melting point/Melting Range): thermal analysis]
Boiling point	substance decomposes at 314 °C before boiling	REACH registration dossier	experimental result [EU Method A.2 (Boiling Temperature): dynamic method]
Relative density	1.16 at 20 °C	REACH registration dossier	experimental result [OECD Guideline 109 (Density of Liquids and Solids): pycnometer method]
Vapour pressure	2.9 10^{-8} hPa at 20 °C	REACH registration dossier	experimental result [EU Method A.4 (Vapour Pressure): effusion method]
Surface tension	-	REACH registration dossier	n.a. (The water solubility is below 1 mg/L at 20°C.)
Water solubility	16 µg/l at 20 °C (pH = 6.9)	REACH registration dossier	experimental result [OECD Guideline 105 (Water Solubility): column elution method]
Partition coefficient n-octanol/water	log Pow = 6.2 at 24 ° C	REACH registration dossier	experimental result [EU Method A.8 (Partition Coefficient): HPLC method]
Flash point			
Flammability			
Explosive properties			
Self-ignition temperature			
Oxidising properties			

Property	Value	Reference	Comment (e.g. measured or estimated)
Granulometry	D10= 230.6 µm; D50= 1247.8 µm; D90= 1646.0 µm	REACH registration dossier	experimental result [Laser diffraction method according to ISO 13320-1: volumetric distribution]
Stability in organic solvents and identity of relevant degradation products	-		n.a. (The stability of the substance is not considered as critical.)
Dissociation constant	-		n.a. (The substance is not soluble in water.)
Viscosity	-		n.a. (Substance is a solid.)

11 EVALUATION OF ENVIRONMENTAL HAZARDS

11.1 Rapid degradability of organic substances

Table 6: Summary of relevant information on rapid degradability

Method	Results	Remarks	Reference
OECD Guideline 301 F (Manometric Respirometry Test)	2-5 % (O_2 consumption) after 28 days reference substance: 80-90 % after 14 days	Rel. 2 GLP study	(BASF, 2001b)

11.1.1 Ready biodegradability

Ready biodegradation of Uvinul A Plus was investigated in a study according to OECD Guideline 301 F using 30 mg/L inoculum (domestic activated sludge, non-adapted) and 100 mg/L test substance (BASF, 2001b). After 28 days 2-5 % degradation was observed. The percentage degradation of the reference substance (aniline) has reached the pass level after 14 days (80-90%). The test was performed at a pH-value of 7.3-7.4. No further details on this study are available in the REACH registration dossier.

Uvinul A Plus is not readily biodegradable.

11.1.2 Hydrolysis

No experimental data available.

Half-lives of 250 days at pH 8 and 6.9 years at pH 7 were estimated by EPI Suite HYDROWIN (v2.00).

11.1.3 Other convincing scientific evidence

No data available.

11.1.3.1 Photochemical degradation

A rate constant of 0.0000000002252403 cm³/molecule*sec and a half-life in the atmosphere of 1.7 hours for Uvinul A Plus was predicted by a calculation assuming a 24 hour day and an OH-radical concentration of 5.0E+05 molecules/cm³ (SRC AOP v1.92, 2007) (ECHA, 2017). Hence, if the substance will be exposed to air, it will be rapidly degraded by photochemical degradation. Nevertheless, based on Henry´s law constant (see chapter 11.2) the substance will not evaporate from water surface to air.

11.2 Environmental fate and other relevant information

The adsorption of the substance was tested by OECD Guideline 121. Based on a log Koc of 5.1 (23°C) adsorption to sediment and soil is expected (BASF, 2010).

Henry´s law constant of 0.000019 Pa·m³/mol was calculated by SRC HENRYWIN (v3.10). The substance has a very low potential to evaporate from water surface to air (ECHA, 2017).

11.3 Bioaccumulation

Table 7: Summary of relevant information on bioaccumulation

Method	Results	Remarks	Reference
OECD Guideline 305 *Danio rerio* Uptake period = 28 days Depuration period = 16-21 days	1.0 µg/L exposure concentration: BCF_{ss} = 215.4 BCF_k = 204.6 0.1 µg/L exposure concentration:	Rel. 2 GLP-study	(BASF, 2006)

Method	Results	Remarks	Reference
	BCF_{ss} = 126.8 BCF_k = 120.3 Lipid and growth corrected: BCF = 360 (1.0 µg/L exposure concentration) BCF = 230 (0.1 µg/L exposure concentration)		
OECD Guideline 305 *Danio rerio* Uptake period = 21 days Depuration period = 7 days	BCF_k = 225.6 BCF_{ss} = 193.4	Rel. 2	(BASF, 2005)

BCF_{ss} = bioconcentration factor based on steady state concentrations;
BCF_k = bioconcentration factor based on kinetic modelling

11.3.1 Estimated bioaccumulation

11.3.2 Measured partition coefficient and bioaccumulation test data

A log Kow value of 6.2 (24 °C) was determined by EU Method A.8 (HPLC method) (BASF, 2000c). The study was performed without adjustment of pH value. No further information on study design is available.

The bioconcentration factor of Uvinul A Plus was measured for *Danio rerio* using OECD Guideline 305. The study was carried out in a flow-through system and two exposure concentrations (0.1 and 1 µg/L, nominal) were assessed over an uptake phase of 28 days and a depuration phase of 16 days (1 µg/L) and 21 days (0.1 µg/L). ^{14}C-radiolabelled test substance was used. An aqueous stock solution of 100 µg/L was used. It was prepared by dissolving 9.30 mg test substance in 120 mL acetone. The concentration in fish reached steady state within 7 days in both concentration groups. Based on the steady state concentrations the bioconcentration factor BCF_{ss} in whole fish was 126.8 in the lower concentration and 215.4 in the higher concentration. Based on kinetic modelling the bioconcentration factor BCF_k in whole fish was 120.3 in the lower and 204.6 in the higher concentration. In conclusion the bioconcentration factor for Uvinul A Plus was 166.8 based on the mean of BCF_{ss} and BCF_k in both test concentrations. During the depuration phase the half-life time for the test substance in fish was 0.9 days in the low and 1.4 days in the high concentration. Approximately 90 % of the steady state-concentration of the test substance was excreted after 3.1 days in the low concentration and after 4.8 days in the high concentration. The lipid content was in the range between 3.01 and 4.62 % over the whole uptake and elimination period but no lipid corrected BCFs were provided. A growth corrected BCF was not calculated. However, statistical estimation by applying the R-package of the revised OECD 305 Guidance Doc (2016) yields a lipid and growth corrected BCF of 360 (mean lipid content of 3.84 %; 4 % growth rate per day) for the higher exposure concentration and 230 for the lower exposure concentration.

The result of the first study is supported by a screening study according to OECD Guideline 305. The study was carried out in a flow-through system and an exposure concentration of 1 µg/L (nominal) over an uptake period of 21 days followed by a depuration period of 7 days. ^{14}C-radiolabelled test substance was used. An aqueous stock solution of 100 µg/L was used. It was prepared by dissolving 8.75 mg test substance in 100 mL acetone. The BFC-values in whole fish are considered to be 225.6 based on kinetic data and 193.4 based on steady state concentration. The time to steady state was approximately 1 day. During the depuration phase the half-life of the test substance in fish was 1.17 days (DT90 = 3.9 days).

11.4 Acute aquatic hazard

Table 8: Summary of relevant information on acute aquatic toxicity

Method	Species	Test material	Results[1]	Remarks	Reference
OECD 203	*Danio rerio*	CAS 302776-68-7	96h-LC_{50} > 100 mg/L (nominal)	Rel. 2 (registrant rel. 1) GLP-study	(BASF, 2000b)
OECD 202	*Daphnia magna*	CAS 302776-68-7	48h-EC_{50} > 100 mg/L (nominal)	Rel. 2 (registrant rel. 1) GLP-study	(BASF, 2000a)
OECD 201	*Desmodesmus subspicatus*	CAS 302776-68-7	72h-E_rC_{50} > 100 mg/L (nominal)	Rel. 2 (registrant rel. 1) GLP-study	(BASF, 2001a)

[1] Indicate if the results are based on the measured or on the nominal concentration

11.4.1 Acute (short-term) toxicity to fish

An acute toxicity study with *Danio rerio* was conducted by (BASF, 2000b) according to OECD 203 under static conditions. It was a limit test with nominal 100 mg/L. No vehicle was used. This concentration was analytically confirmed with a capillary gas chromatography (limit of quantification was 2 mg/L). As the maximal water solubility of the test item is far below the analytical limit of quantification, no test substance was detected. Although the analytically confirmation was not possible because the solubility of the substance was below the limit of detection, the test was evaluated in 2001 as valid. The test temperature was 23 °C, the pH value between 8.3 and 8.4 and the dissolved oxygen was 8.2 to 8.6 mg/L. The test was valid and plausible. There were no hints for toxicity of the test substance to fish after 96 hours of testing up to its maximal water solubility concentration.

11.4.2 Acute (short-term) toxicity to aquatic invertebrates

(BASF, 2000a) conducted also an acute toxicity test to the aquatic invertebrate *Daphnia magna* according to OECD 202. They used no vehicle and a static test design. The test substance concentration was not analytically confirmed because the detection limit of the analytical method was beyond the water solubility of the test substance. Although the analytically confirmation was not possible because the solubility of the substance was below the limit of detection, the test was evaluated in 2001 as valid. The nominal test concentrations were 0, 12.5, 25, 50, and 100 mg/L. The test temperature averaged from 20.1 to 20.4 °C, the pH values were 8.0 to 8.1 and the dissolved oxygen 8.2 to 8.7 mg/L. Five organisms per vessel and 4 vessels per concentration were used with a biomass loading rate of 0.5 animals per mL. The photoperiod was 16 hours light per day with diffuse light (2-7 µE/m²s at a wave length of 400 to 700 nm). The test was valid and plausible. No acute toxicity to *Daphnia magna* occurred within 48 hours up to the limit of water solubility of the test substance.

11.4.3 Acute (short-term) toxicity to algae or other aquatic plants

(BASF, 2001a) conducted an algae test with the species *Desmodesmus subspicatus* according to OECD 201 under static conditions. No vehicle was used. The test concentrations were not analytically confirmed. Although the analytically confirmation was not possible because the solubility of the substance was below the limit of detection (see fish and daphnia acute toxicity test), the test was evaluated in 2001 as valid. The test temperature varied between 21 and 25 °C and the pH value between 7.7 and 8.4. The nominal test concentrations were 3.13, 6.25, 12.5, 25, 50, and 100 mg/L. The effects were measured via chlorophyll-a-fluorescence measurement (pulsed excitation with light flashes having a wavelength of 435 nm). The test was valid and plausible. The test substance showed no toxicity to algae within 72 hours up to the limit of water solubility. The basis of the effect was growth rate.

11.5 Long-term aquatic hazard

Table 9: Summary of relevant information on chronic aquatic toxicity

Method	Species	Test material	Results[1]	Remarks	Reference
OECD 210	*Pimephales promelas*	CAS 302776-68-7	34d-NOEC ≥ 8.8 µg/L (mean measured)	Rel. 1 GLP-study	(BASF, 2013)
OECD 211	*Daphnia magna*	CAS 302776-68-7	21d-NOEC ≥ 14.2 µg/L (mean measured)	Rel. 1 GLP-study	(BASF, 2009)
OECD 211	*Daphnia magna*	CAS 302776-68-7	21d-$NOEC_{Reproduction}$ = 0.1 µg/L (mean measured)	Rel. 1 (registrant rel. 3) GLP-study	(BASF, 2007)
OECD 201	*Desmodesmus subspicatus*	CAS 302776-68-7	72h-NOE_rC ≥ 100 mg/L (nominal)	Rel. 2 (registrant rel. 1) GLP-study	(BASF, 2001a)

[1] Indicate if the results are based on the measured or on the nominal concentration

11.5.1 Chronic toxicity to fish

(BASF, 2013) conducted an early life stage test according to OECD 210 with the test species *Pimephales promelas* under flow-through conditions (9 L/h). The embryos were less than 3 hours old. The limit test concentration was analytically confirmed (LOQ = 2 µg/L). The measured concentrations over the first 21 d of exposure, ranged from 10.0 to 18.0 µg/L. From day 28 to day 34 of exposure, concentrations ranged from 5 to 3 µg/L. A vehicle was used. The test temperature was 23.4 to 24.9 °C, the pH value 7.8 to 8.1 and the dissolved oxygen corresponded to 67 to 97 % saturation at 25 °C (5.6 to 8.1 mg/L). A photoperiod of 16 hours light at a light intensity of 116 to 196 lux existed during the 34 days of the test. 25 fertilized eggs/embryos were exposed per vessel with 4 vessels (replicates) per concentration. The test fulfils the validity criteria of OECD 210. No signs of toxicity or abnormalities were observed during the test.

11.5.2 Chronic toxicity to aquatic invertebrates

Two long-term toxicity tests to the aquatic invertebrate *Daphnia magna* are available. Both of them were conducted according to OECD 211.

(BASF, 2007) used semi-static test conditions (renewal of the test medium every 2 to 3 days) with a temperature of 19 to 20 °C, a pH value of 7.2 to 8.3 and a content of dissolved oxygen above 7.7 mg/L. The photoperiod was 16 hours light per day (60 – 120 lux). A vehicle was used (acetone). The test concentrations were analytically confirmed (LC-MS/MS-method with a limit of quantification of 2 µg/L). At the lower concentrations, the test substance was not analysed and the recovery rates for the upper two concentrations were used to extrapolate the lower ones. This results in the concentration range: 1, 3.2, 10, 32, and 100 µg/L nominal or 0.1, 0.3, 0.9, 2.2, and 12.2 µg/L mean measured. The recovery rates of the two highest test concentrations declined despite the renewal of the test medium every 2 to 3 days. The registrant commented that there is the possibility that also not dissolved testing material was analysed using acetonitrile in sample preparation before analysing it. In this respect there are no hints in the test report. One organism per vessel and ten vessels per concentration were used in the test. The registrant assessed the test with reliability 3 amongst others (see below) because they question "to what extend dissolved and/or undissolved test substance was present in the test and if any potential outcome of the study might be related to substance intrinsic properties or rather is due to physical interactions with the material". It is possible, that the effects occurred due to physical interactions but as there were no remarkable observations on the behaviour of the test item in the test water concerning e.g. turbidity or inhomogeneous dispersion, it cannot be excluded that the test material caused the effects and so we do not share this appraisal. In the study report, the effects of the test substance on reproduction were compared to historical control of *Daphnia magna* as the reproduction rates appeared "unusual high" to the authors. Therefore, the report concludes that there are no effects from the test substance on the test organisms. According to OECD 211, the results from the exposed *Daphnia magna* are compared to the control in the test in order to determine the LOEC and NOEC. Additionally there is only a validity criterion for a minimal reproduction rate (mean number of live offspring produced per parent animal surviving at the end of the test is ≥ 60) and not for a maximum. Taking the control from the

test into account, the 21 day LOEC for reproduction is 0.3 µg/L and therefore the NOEC is 0.1 µg/L (ToxRat version 2.09; Williams t-test procedure). The test fulfils the validity criteria of OECD 211. As required by the OECD Guidance 211 only the live brood of the surviving adults was taken into account. The registrant notes that in up to five replicates per concentration the upcoming hatch was not taken into account (especially at the highest test concentration), which may have required an extension of the study period. The test was not extended. Analysing all offspring from the third hatch, irrespective on which exact day this occurred, results in the same NOEC of 0.1 µg/L based on mean measured concentrations or 1 µg/L based on nominal concentrations as using the data for day 21.

(BASF, 2009) used an analytical confirmation (extraction with n-hexane, GC-MS on nonpolar stationary phase, quantification with internal standard). For the preparation of the medium, a saturated solution of the test substance in the dilution water was prepared using a saturation column. This means that the test substance was dissolved in acetone and poured over glass wool in a stainless steel pan and acetone was evaporated. The glass wool with the attached test substance was packed into a glass column. Below the glass wool a cellulose plug was situated to keep particulate material in the column. The packed column was rinsed with demineralized water and afterwards with M4 medium. To generate the saturated test solution, after 4 days M4 medium was pumped circularly through the saturation column for one day. The mean measured concentration in the stock solution was 14.3 µg/L (8 – 30 µg/L) and in the test solution 14.2 µg/L (5 – 31 µg/L). The test was a limit test with flow-through conditions and a test temperature of 19 to 21 °C, a pH value of 8.0 to 8.2, and a content of dissolved oxygen of 8.4 to 8.9 mg/L. The photoperiod consisted of 16 hours light per day (680 – 741 lux at a wave length of 400 – 750 nm). Five organisms per vessel and four vessels per concentration were used. The test fulfils the validity criteria of OECD 211. No effects occurred up to 14.2 µg/L (mean measured).

As the most protective valid result is a NOEC for reproduction of 0.1 µg/L (mean measured) or 1 µg/L (nominal) from (BASF, 2007). This result will be used for classification.

11.5.3 Chronic toxicity to algae or other aquatic plants

(BASF, 2001a) conducted an algae test with the species *Desmodesmus subspicatus* according to OECD 201 under static conditions. No vehicle was used. The test concentrations were not analytically confirmed. Although the analytically confirmation was not possible because the solubility of the substance was below the limit of detection (see acute fish and daphnia toxicity test), the test was evaluated in 2001 as valid. The test temperature varied between 21 and 25 °C and the pH value between 7.7 and 8.4. The nominal test concentrations were 3.13, 6.25, 12.5, 25, 50, and 100 mg/L. The effects were measured via chlorophyll-a-fluorescence measurement (pulsed excitation with light flashes having a wavelength of 435 nm). The test was valid and plausible. The test substance showed no toxicity to algae within 72 hours up to the limit of water solubility.

11.6 Comparison with the CLP criteria

11.6.1 Acute aquatic hazard

Table 10: Comparison with criteria for acute aquatic hazards

	Criteria for environmental hazards	**Uvinul A Plus**	**Conclusion**
Acute Aquatic Toxicity	Cat. 1: $LC_{50}/EC_{50}/ErC_{50} \leq 1$ mg/L	Fish: 96h-LC_{50} > 100 mg/L (nominal) Invertebrates: 48h-EC_{50} > 100 mg/L (nominal) Algae: 72h-E_rC_{50} > 100 mg/L (nominal)	No acute aquatic toxicity up to the limit of water solubility

11.6.2 Long-term aquatic hazard (including bioaccumulation potential and degradation)

Table 11: Comparison with criteria for long-term aquatic hazards

	Criteria for environmental hazards	Uvinul A Plus	Conclusion
Rapid Degradation	Half-life hydrolysis < 16 days Readily biodegradable in a 28-day test for ready biodegradability (> 70 % DOC removal or > 60 % ThCO2, ThOD)	Half-life hydrolysis > 16 days (estimated) 0-10 % after 28 days (O_2 consumption) => not readily biodegradable	**Not rapidly degradable**
Bioaccumulation	BCF > 500 or log Kow ≥ 4	BCF < 360 (lipid and growth corrected)	**Not bioaccumulative**
Aquatic Toxicity	Non-rapidly degradable substances: Based on long-term toxicity data: Cat. 1: NOEC ≤ 0.1 mg/L Cat. 2: NOEC ≤ 1 mg/L	Fish: 34d-NOEC ≥ 8.8 µg/L (mean measured) Invertebrates: 21d-$NOEC_{Reproduction}$ = 0.1 µg/L (mean measured) Algae: 72 h-NOE_rC ≥ 100 mg/L (nominal)	**Aquatic chronic 1, H410, M= 1000** (based on *Daphnia magna* $NOEC_{reproduction}$ = 0.0001 mg/L)

11.7 CONCLUSION ON CLASSIFICATION AND LABELLING FOR ENVIRONMENTAL HAZARDS

Uvinul A Plus is not rapidly degradable and the most protective valid long-term toxicity no effect concentration is 0.0001 mg/L. This results in a classification of Uvinul A Plus as Aquatic Chronic 1 (M-factor of 1000) and a labelling with H410.

12 REFERENCES

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