

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



PARSOL® 1789

0446181

Version 4.0

Revision Date 17.06.2014

Print Date 30.06.2014

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : PARSOL® 1789
REACH Registration Number : 01-2119967408-25-0000
Substance name : 1-(4-tert-butylphenyl)-3-(4-methoxyphenyl)propane-1,3-dione
CAS-No. : 70356-09-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : UV filter, Ingredient for personal care products

1.3 Details of the supplier of the safety data sheet

Company : DSM Nutritional Products (UK) Ltd.
Heanor Gate
αGB061EI0017
Delves Road
GB-DE75 7SG Heanor
Telephone : +441773536500
Telefax : +441773536600
E-mail address : sds.nutritionalproducts@dsm.com
Responsible/issuing person

1.4 Emergency telephone number

+441773536623 / +41628662314

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Chronic aquatic toxicity, Category 4 H413: May cause long lasting harmful effects to aquatic life.

Classification (67/548/EEC, 1999/45/EC)

R53: May cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

70356-09-1 1-[4-(1,1-dimethylethyl)phenyl]-3-(4-methoxyphenyl)propane-1,3-dione

2.3 Other hazards

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Risk of dust explosion.

3. Composition/information on ingredients

Synonyms : butyl methoxydibenzoylmethane (INCI)

Brief description of the product : Substance

Molecular formula : C20-H22-O3

3.1 Substances

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
1-[4-(1,1-dimethylethyl)phenyl]-3-(4-methoxyphenyl)propane-1,3-dione	70356-09-1 274-581-6 01-2119967408-25	R53	Aquatic Chronic 4; H413	>= 95

4. First aid measures

4.1 Description of first aid measures

General advice : No hazards which require special first aid measures.

If inhaled : Move to fresh air.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No specific symptoms known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam

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Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : None known.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Consider dust explosion hazard.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.
Avoid dust formation.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.
Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Protect against light.
: Keep container tightly closed and dry.

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Storage temperature : < 25 °C

7.3 Specific end use(s)

Specific use(s) : not applicable

8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

DNEL

1-[4-(1,1-dimethylethyl)phenyl]-3-(4-methoxyphenyl)propane-1,3-dione : Inhalation, Workers: 2 520 mg/m³
Potential health effects: Acute systemic effects

Inhalation, Workers: 39,4 mg/m³
Potential health effects: Long-term systemic effects

Skin contact, Workers: 6,49 mg/kg bw/d
Potential health effects: Long-term systemic effects

Skin contact, Consumers: 2,25 mg/kg bw/d
Potential health effects: Long-term systemic effects

Ingestion, Consumers: 2,25 mg/kg bw/d
Potential health effects: Long-term systemic effects

PNEC

1-[4-(1,1-dimethylethyl)phenyl]-3-(4-methoxyphenyl)propane-1,3-dione : Fresh water: 0,027 mg/l

Marine water: 0,027 mg/l

Water: 0,027 mg/l
Intermittent use/release

Fresh water sediment: 11,96 mg/kg dry weight

Marine sediment: 11,96 mg/kg dry weight

Soil: 2,38 mg/kg dry weight

Sewage treatment plant: 100 mg/l

8.2 Exposure controls

Personal protective equipment

Respiratory protection : In case of high dust concentration use a dust mask applicable to local conditions.

Hand protection : Glove material: for example nitrile rubber

Eye protection : Safety glasses with side-shields

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : powder
Colour : white - pale yellow
Odour : slight, aromatic
Odour Threshold : No information available.
pH : No data available
Melting point/range : 81 - 86 °C
Boiling point/boiling range : > 400 °C
Flash point : 264 °C (closed cup)
Flammability (solid, gas) : not highly flammable (Method: Flammability (solids))
Vapour pressure : < 0,00001 hPa (at 25 °C; calculated value)
Relative vapour density : not applicable
Density : 1,221 g/cm³ (at 20 °C; OECD Test Guideline 109)
Water solubility : 0,027 mg/l (20 °C)
practically insoluble
Solubility in other solvents : Ethanol: slightly soluble
Oils and fats: soluble
Partition coefficient: n-octanol/water : log Pow 6,1 (20 °C; OECD Test Guideline 117)
Auto-ignition temperature : No self ignition observed in the Grewer oven at temperatures below melting point.
not pyrophoric
Thermal decomposition : Not relevant
Explosive properties : Not explosive
Oxidizing properties : Not oxidizing

9.2 Other information

Combustibility index for deposited dust : 2 (ca. 21 °C)
Dust explosion class : St(H)2 (Product sample; The value was determined in the modified Hartmann tube.)
Minimum ignition energy : 1 - 3 mJ (Product sample, Median value of the tested sample 0,128 mm)
The Minimum ignition energy (MIE) of a dust/air mix depends on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE.
: General remark: The indicated dust explosion characteristics are only valid for this product and are sensitive to the sample's

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parameters.

Powder volume resistivity	: ca. 6E+12 Ohmm (Product sample) The material can accumulate static charge and can therefore cause electrical ignition.
Minimum ignition temperature of a dust/air mix	: ca. 430 °C (Median value of the tested sample 0,128 mm) determined in the BAM oven
Molecular weight	: 310,39 g/mol

10. Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Dust may form explosive mixture in air.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Metals
Iron salts

Strong acids and strong bases
Strong oxidizing agents

10.6 Hazardous decomposition products

No decomposition if used as directed.

11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity	: LD50 (rat): > 16 000 mg/kg
	: LD50 (mouse): > 8 000 mg/kg
Acute dermal toxicity	: LD0 (rat, male and female): >= 1 000 mg/kg
Skin corrosion/irritation	: No skin irritation (human, Patch Test 24 Hrs.)
	: slight irritation (several species)
	: no phototoxic skin reaction (guinea pig, CTFA Test Guideline)
Serious eye damage/eye irritation	: No eye irritation (rabbit)

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- Respiratory or skin sensitisation : Dust contact with the eyes can lead to mechanical irritation.
: Did not cause sensitization. (Various test systems)
: no photoallergenic skin reaction (Various test systems)
- Genotoxicity in vitro : not mutagenic, not genotoxic, not photomutagenic (Various test systems)
- Genotoxicity in vivo : not genotoxic (In vivo micronucleus test, mouse, Oral, OECD Test Guideline 474)
- Carcinogenicity : No indication for carcinogenicity known.
- Teratogenicity : not teratogenic
not embryotoxic
(several species)
- STOT - single exposure : The substance or mixture is not classified as specific target organ toxicant, single exposure.
- STOT - repeated exposure : NOAEL (Oral, rat) : 450 mg/kg bw/d
Sub-chronic toxicity study (90-day)
: NOAEL (Dermal, rabbit, 6 h) : 360 mg/kg bw/d
Subacute toxicity
- Aspiration toxicity : No aspiration toxicity classification
- Further information : The absorption through human skin is very low.
: The product passes into and partly through the skin of rats and pigs.
The skin absorption rate is very low.

12. Ecological information

12.1 Toxicity

- Toxicity to fish : Cyprinus carpio (Carp)
LC50 (96 h) > 100 mg/l
(nominal concentration)
(OECD Test Guideline 203)
- Toxicity to daphnia and other aquatic invertebrates : Daphnia magna (Water flea)
EC50 (48 h) > 100 mg/l
(nominal concentration)
(OECD Test Guideline 202)
- Toxicity to algae : Scenedesmus capricornutum (fresh water algae)
EC50 (72 h) > 100 mg/l

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(nominal concentration)
(OECD Test Guideline 201)

Toxicity to bacteria : activated sludge
NOEC (3 h) \geq 1 000 mg/l
(nominal concentration)
No inhibition was observed on microbial respiration.
(OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability : Not inherently biodegradable.
4 % (28 d)
(OECD Test Guideline 302C)

: Not anaerobically biodegradable.
ca. 0 % (79 d)

12.3 Bioaccumulative potential

||| Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Elimination: yes
Method: OECD Test Guideline 305
Biomagnification factor $<$ 1

||| Partition coefficient: n-octanol/water : log Pow 6,1 (20 °C ; OECD Test Guideline 117)

12.4 Mobility in soil

||| Distribution among environmental compartments : Adsorption/Soil
ca.log Koc 4,65 (calculated value)
immobile

||| Additional advice : No data available
Environmental fate and pathways

12.5 Results of PBT and vPvB assessment

Assessment : The substance does not fulfill the PBT criteria.
: The substance does not fulfill the vPvB criteria.

12.6 Other adverse effects

Additional ecological information : May cause long-term adverse effects in the aquatic environment.

13. Disposal considerations

13.1 Waste treatment methods

Product : Discharge into the environment must be avoided.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Dispose of as unused product.
Do not re-use empty containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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14. Transport information

14.1 UN number

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.2 Proper shipping name

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.3 Transport hazard class

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.4 Packing group

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.5 Environmental hazards

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

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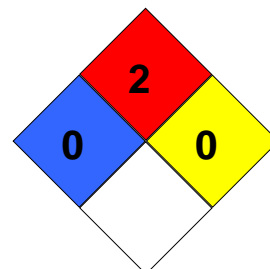
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15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

NFPA Classification : Health hazard: 0
Fire Hazard: 2
Reactivity Hazard: 0



15.2 Chemical Safety Assessment

|| A Chemical Safety Assessment has been carried out for this substance.

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R53 May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under sections 2 and 3.

H413 May cause long lasting harmful effects to aquatic life.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Abbreviations: 67/548/EEC= Dangerous Substances Directive. 1999/45/EC= Dangerous Preparations Directive. Regulation (EC) No. 1272/2008= Regulation on classification, labelling and packaging of substances and mixtures. DNEL= Derived No-Effect Level. PNEC= Predicted No-Effect Concentration. NFPA= National Fire Protection Association (USA). IATA= International Air Transport Association. IMDG= International Maritime Dangerous Goods. RID= International Rule for Transport of Dangerous Substances by Railway; ADR= European Agreement concerning the International Carriage of Dangerous Goods by Road. TWA= Time Weighted Average. STEL= Short term exposure limit. WEL = Workplace Exposure Limit.

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Annex

	Title of Exposure Scenario
ES 1:	Used for formulation of personal care products / Pure substance
ES 2:	Used for formulation of personal care products / Covers the percentage of the substance in the product up to 5%.
ES 3:	Private use of cosmetics and personal care products

Abbreviations

ART = Advanced REACH Tool

ES = Exposure scenario

PEC = Predicted exposure concentration

RCR = Risk characterisation ratio: "Level of Exposure/DNEL" or "PEC/PNEC"

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ES 1: Used for formulation of personal care products / Pure substance

1. Scenario description

Main User Groups : **SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites

Sectors of end-use : **SU 10:** Formulation

Process categories : **PROC1:** Use in closed process, no likelihood of exposure
PROC2: Use in closed, continuous process with occasional controlled exposure
PROC3: Use in closed batch process (synthesis or formulation)
PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)
PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation
PROC15: Use as laboratory reagent
COLIPA: M1, M2, M3, M4, M5, M5b, M6, M7, M8

Environmental Release Categories : **ERC2:** Formulation of preparations

Further information : COLIPA = The European Cosmetics Association

2.1 Contributing scenario controlling environmental exposure for: ERC2

Amount used

Annual amount per site : 250 000 kg
Remarks : amount used for the exposure estimation

Frequency and duration of use

Continuous exposure : <= 250 days/year

Environment factors not influenced by risk management

Flow rate of receiving surface : 18,000 m³/d
water
Dilution Factor (River) : 10
Dilution Factor (Coastal Areas) : 100

Other given operational conditions affecting environmental exposure

Continuous use/release
Emission or Release Factor: Air : 0 %
Emission or Release Factor: Water : 1 %
Emission or Release Factor: Soil : 0 %

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Onsite sewage treatment plant
Flow rate of sewage treatment : 2 000 m³/d
plant effluent

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Percentage removed from waste water : 99,9 %
Sludge Treatment : Disposal

Conditions and measures related to external treatment of waste for disposal

Waste treatment : All contaminated waste water must be processed in an industrial or municipal wastewater treatment plant that incorporates both primary and secondary treatments.
Disposal methods : Can be landfilled or incinerated, when in compliance with local regulations.

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC15

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Solid, high dustiness
Vapour pressure : < 0,00001 Pa

Frequency and duration of use

Frequency of use : <= 220 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor use

Conditions and measures related to personal protection, hygiene and health evaluation

For personal protection see section 8.

2.3 Contributing scenario controlling worker exposure for: PROC5

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Solid, high dustiness
Vapour pressure : < 0,00001 Pa

Frequency and duration of use

Frequency of use : <= 220 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor use

Conditions and measures related to personal protection, hygiene and health evaluation

Effective dust mask. (Effectiveness (of a measure): 50 %)

Wear protective gloves. (Effectiveness (of a measure): 80 %)

2.4 Contributing scenario controlling worker exposure for: PROC8a

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Solid, high dustiness
Vapour pressure : < 0,00001 Pa

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Frequency and duration of use

Frequency of use : <= 220 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor use

Conditions and measures related to personal protection, hygiene and health evaluation

Effective dust mask. (Effectiveness (of a measure): 75 %)

Wear protective gloves. (Effectiveness (of a measure): 80 %)

2.5 Contributing scenario controlling worker exposure for: PROC8b, PROC9**Product characteristics**

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).

Physical Form (at time of use) : Solid, high dustiness

Vapour pressure : < 0,00001 Pa

Frequency and duration of use

Frequency of use : <= 220 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor use

Conditions and measures related to personal protection, hygiene and health evaluation

For personal protection see section 8.

Wear protective gloves. (Effectiveness (of a measure): 80 %)

3. Exposure estimation and reference to its source**Environment**

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value	Level of Exposure (PEC)	RCR
ERC2	EUSES		Sewage treatment plant			< 0,001
			Fresh water			0,004
			Fresh water sediment			0,042
			Soil			0,012
			Marine water			0,004
			Marine sediment			0,038

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC1, PROC2, PROC3, PROC15	ECETOC TRA	Worker (Industrial)	Inhalation: long-term, systemic	<= 1 mg/m ³	<= 0,127
PROC1, PROC2, PROC3, PROC15	ECETOC TRA	Worker (Industrial)	Dermal: long-term, systemic	<= 1,371 mg/kg bw/day	<= 0,211
PROC5	ECETOC TRA	Worker (Industrial)	Inhalation: long-term, systemic	12,5 mg/m ³	0,32

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PROC5	ECETOC TRA	Worker (Industrial)	Inhalation: short-term, systemic	25 mg/m ³	0,01
PROC5	ECETOC TRA	Worker (Industrial)	Dermal: long-term, systemic	2,74 mg/kg bw/day	0,42
PROC8a	ECETOC TRA	Worker (Industrial)	Inhalation: long-term, systemic	12,5 mg/m ³	0,32
PROC8a	ECETOC TRA	Worker (Industrial)	Inhalation: short-term, systemic	25 mg/m ³	0,01
PROC8a	ECETOC TRA	Worker (Industrial)	Dermal: long-term, systemic	2,74 mg/kg bw/day	0,42
PROC8b, PROC9	ECETOC TRA	Worker (Industrial)	Inhalation: long-term, systemic	<= 25 mg/m ³	<= 0,64
PROC8b, PROC9	ECETOC TRA	Worker (Industrial)	Inhalation: short-term, systemic	<= 50 mg/m ³	<= 0,02
PROC8b, PROC9	ECETOC TRA	Worker (Industrial)	Dermal: long-term, systemic	1,37 mg/kg bw/day	0,21

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

EUSES = EUSES version 2.1.1

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ES 2: Used for formulation of personal care products / Covers the percentage of the substance in the product up to 5%.

1. Scenario description

Main User Groups : **SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites

Sectors of end-use : **SU 10:** Formulation

Process categories : **PROC1:** Use in closed process, no likelihood of exposure
PROC2: Use in closed, continuous process with occasional controlled exposure
PROC3: Use in closed batch process (synthesis or formulation)
PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)
PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation
PROC15: Use as laboratory reagent
COLIPA: M1, M2, M3, M4, M5, M5b, M6, M7, M8

Environmental Release Categories : **ERC2:** Formulation of preparations

Further information : COLIPA = The European Cosmetics Association

2.1 Contributing scenario controlling environmental exposure for: ERC2

Product characteristics

Amount used

Annual amount per site : 250 000 kg
Remarks : amount used for the exposure estimation

Frequency and duration of use

Continuous exposure : <= 250 days/year

Environment factors not influenced by risk management

Flow rate of receiving surface : 18,000 m³/d
water
Dilution Factor (River) : 10
Dilution Factor (Coastal Areas) : 100

Other given operational conditions affecting environmental exposure

Continuous use/release
Emission or Release Factor: Air : 0 %
Emission or Release Factor: Water : 1 %
Emission or Release Factor: Soil : 0 %

Conditions and measures related to municipal sewage treatment plant

Flow rate of sewage treatment : 2 000 m³/d

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plant effluent
 Percentage removed from waste : 99,9 %
 water
 Sludge Treatment : Disposal

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15**Product characteristics**

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 5%.
 Physical Form (at time of use) : Liquid mixture
 Vapour pressure : < 0,00001 Pa
 Physical Form (at time of use) : Solid mixture, Dustiness: Medium

Frequency and duration of use

Frequency of use : <= 220 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor use

Conditions and measures related to personal protection, hygiene and health evaluation

For personal protection see section 8.

3. Exposure estimation and reference to its source**Environment**

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value	Level of Exposure (PEC)	RCR
ERC2	EUSES		Sewage treatment plant			< 0,001
			Fresh water			0,004
			Fresh water sediment			0,042
			Soil			0,012
			Marine water			0,004
			Marine sediment			0,038

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15	ECETOC TRA	Worker (Industrial)	Inhalation: long-term, systemic	<= 1	<= 0,03
PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15	ECETOC TRA	Worker (Industrial)	Dermal: long-term, systemic	<= 0,686 mg/kg bw/day	<= 0,11
PROC5, PROC8a, PROC8b, PROC9, PROC14	ECETOC TRA	Worker (Industrial)	Inhalation: short-term, systemic	<= 2 mg/m ³	<= 0,001

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



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4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

EUSES = EUSES version 2.1.1

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ES 3: Private use of cosmetics and personal care products**1. Scenario description**

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)
 Chemical product category : **PC39:** Cosmetics, personal care products
 Environmental Release Categories : **ERC8a:** Wide dispersive indoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure for: ERC8a**Product characteristics****Amount used**

Annual amount : 1 000 t
 Remarks : amount used for the exposure estimation

Frequency and duration of use

Continuous exposure : 365 days/year

Environment factors not influenced by risk management

Flow rate : 18,000 m³/d
 Dilution Factor (River) : 10
 Dilution Factor (Coastal Areas) : 100

Other given operational conditions affecting environmental exposure

Continuous use/release
 Emission or Release Factor: Air : 0 %
 Emission or Release Factor: Water : 100 %
 Emission or Release Factor: Soil : 0 %

Conditions and measures related to municipal sewage treatment plant

Flow rate of sewage treatment : 2 000 m³/d
 plant effluent
 Percentage removed from waste : 99,9 %
 water
 Sludge Treatment : Disposal

2.2 Contributing scenario controlling consumer exposure for: PC39**Product characteristics**

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 5%.

3. Exposure estimation and reference to its source**Environment**

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value	Level of Exposure (PEC)	RCR
ERC8a	EUSES		Sewage treatment plant			< 0,001

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			Fresh water			< 0,001
			Fresh water sediment			0,004
			Soil			0,007
			Marine water			0,001
			Marine sediment			0,009

Risk to consumers' health does not need to be assessed as this is already covered by the Cosmetic Directive 76/768/EEC.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

EUSES = EUSES version 2.1.1