

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Linalyl Acetate Couer - SYMRISE

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Commercial Product Name : Linalyl Acetate Couer - SYMRISE
Material number : 762260
REACH Registration Number : 01-2119454789-19-0003
CAS-No. : 115-95-7
EC-No. : 204-116-4

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

Use of the Substance/Mixture : Aroma chemical
Further information on identified uses can be found in the annex of the safety data sheet.

1.3 Details of the supplier of the safety data sheet

Company : Symrise AG
Muehlenfeldstrasse 1
D-37603 Holzminden
Telephone : +495531900
Telefax : +495531901649
E-mail address : sds@symrise.com

For further information, please contact:
Symrise AG - Tel.: +49 / (0)5531 / 90-0

1.4 Emergency telephone number

Emergency CONTACT (24-Hour-Number)
GBK/Infotrac ID 101844: +49(6132)9829021

SECTION 2: HAZARDS IDENTIFICATION


2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315
Eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms : 

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Signal word : **Warning**

Hazard statements : **H315** Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Contains : **LINALYLACETATE.**

2.3 Other hazards

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical characterization : Linalyl acetate

Molecular weight : 196,29 g/mol

Total formula : C12-H20-O2

CAS-No. : 115-95-7

EINECS-No. / ELINCS No. : 204-116-4

REACH Registration Number : 01-2119454789-19-0003

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Linalyl acetate	115-95-7 204-116-4	Skin Irrit.: 2; H315 Eye Irrit.: 2; H319 Skin Sens.: 1B; H317	>= 50 - <= 100
Plinyl-2-Acetate	94346-09-5 424-070-0	Skin Irrit.: 2; H315 Aquatic Chronic: 2; H411	>= 1 - < 5

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Linalool	78-70-6 201-134-4	Skin Irrit.: 2; H315 Eye Irrit.: 2; H319 Skin Sens.: 1B; H317	>= 0,1 - < 1
----------	----------------------	---	--------------

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Never give anything by mouth to an unconscious person.
- Inhalation : Move to fresh air.
- Skin contact : Take off all contaminated clothing immediately.
If skin irritation persists, call a physician.
Wash off immediately with plenty of water for at least 15 minutes.
- Eye contact : Protect unharmed eye.
Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.
Remove contact lenses.
- Ingestion : Clean mouth with water and drink afterwards plenty of water.
Prevent vomiting if possible.
If a person vomits when lying on his back, place him in the recovery position.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Extinguishing media which shall not be used for safety reasons : High volume water jet

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Further information : In the event of fire and/or explosion do not breathe fumes.
Use water spray to cool unopened containers.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions : Do not contaminate water.
Try to prevent the material from entering drains or water courses.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Dam up.
Wipe up with absorbent material (e.g. cloth, fleece).

Additional advice : Local authorities should be advised if significant spillages cannot be contained.
Suppress (knock down) gases/vapours/mists with a water spray jet.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.

Advice on protection against fire and explosion : When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container.
Keep container tightly closed in a dry and well-ventilated place.
To maintain product quality, do not store in heat or direct sunlight.

Advice on common storage : No special restrictions on storage with other products.

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Aroma chemical

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

none

DNEL:

Linalyl acetate:	End Use	: Workers
	Exposure routes	: Inhalation
	Potential health effects	: Long-term systemic effects
	Value	: 2,75 mg/m ³
	End Use	: Workers
	Exposure routes	: Skin contact
	Potential health effects	: Long-term systemic effects
	Value	: 2,5 mg/kg bw/day
	End Use	: Workers
	Exposure routes	: Skin contact
	Potential health effects	: Acute local effects
	Value	: 8 mg/cm ²
	End Use	: Consumers
	Exposure routes	: Inhalation
	Potential health effects	: Long-term systemic effects
	Value	: 0,68 mg/m ³

8.2 Exposure controls

Engineering measures

none

Personal protective equipment

Respiratory protection	: No personal respiratory protective equipment normally required.
Hand protection	: Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred. Wear chemicals-resistant gloves, e.g. safety gloves of chloroprene Level 2 or of butyl rubber Level 6.
Eye protection	: Safety glasses
Skin and body protection	: Lightweight protective clothing Remove and wash contaminated clothing before re-use.
Hygiene measures	: Wash hands before breaks and immediately after handling the product.
Protective measures	: Avoid contact with skin. When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Form	: clear liquid
Colour	: colorless

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Odour : characteristic
Odour Threshold : No data available

Safety data

Flash point : 90 °C

Water solubility : 0,03 g/l

Relative density : 0,8988 - 0,9088 at
20 °C relation to density of water at 4°C

Bulk density : Not applicable

Relative vapour density : not determined

Vapour pressure : < 1 kPa at 50 °C
calculated

Melting point/freezing point : Melting point/range
< -100 °C

Boiling point : 220 °C at 1.013 hPa

Partition coefficient: n-
octanol/water : log Pow: 3,9

pH : Not applicable

Viscosity, dynamic : 2,5 mPa.s at 20 °C
Method: OECD 114
GLP: yes

1,6 mPa.s at 40 °C
Method: OECD 114
GLP: yes

Viscosity, kinematic : 2,77 mm²/s at 20 °C
1,81 mm²/s at 40 °C

Evaporation rate : Lower than the evaporation rate of butyl acetate = 1

Flammability (solid, gas) : Not applicable

Auto-ignition temperature : 270 °C at 1.011 hPa

Decomposition temperature : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Explosive properties : Due to its structural properties, the product is not classified as explosive

Lower explosion limit : Vapours may form explosive mixtures with air.

Upper explosion limit : Vapours may form explosive mixtures with air.

A final assessment of potential explosion hazards can only be made on a case-by-case basis when precise information is available on product handling, production setup and the circumstances surrounding the use of the product.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

9.2 Other data

None.

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity** : No data available
- 10.2 Chemical stability** : No data available
- 10.3 Possibility of hazardous reactions** : No dangerous reaction known under conditions of normal use.
- 10.4 Conditions to avoid** : No data available
- 10.5 Incompatible materials to avoid** : No data available
- 10.6 Hazardous decomposition products** : No data available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

- Acute oral toxicity : LD50 Rat: > 9.000 mg/kg
- Acute inhalation toxicity : No data available
- Acute dermal toxicity : LD50 Rabbit: > 5.000 mg/kg
- Repeated dose toxicity : No data available
- Acute toxicity (other routes of administration) : No data available
- Skin irritation : Rabbit: Skin irritation @ 100 %
- Eye irritation : Rabbit: Eye irritation @ 100 %
- Sensitisation : Humans: No sensitizing effect. @ 10 %
- Mutagenicity : No experimental indication of genotoxicity in vitro.
- Carcinogenicity : No data available
- Reproductive toxicity : No data available
- Teratogenicity : No data available
- Specific target organ toxicity - single exposure : No data available
- Specific target organ toxicity - repeated exposure : No data available
- Aspiration toxicity : No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Acute Fish toxicity : LC50: 11 mg/l/96 h; Cyprinus carpio (Carp), OECD Test Guideline 203

Toxicity to microorganisms : EC20: > 1.000 mg/l/0,5 h; Activated sludge, ISO 8192

12.2 Persistence and degradability

Readily biodegradable.
76 %/28 d, OECD 301F

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product : Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.
The product should not be allowed to enter drains, water courses or the soil.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

Not classified as dangerous in the meaning of transport regulations.

14.2 Proper shipping name

Not classified as dangerous in the meaning of transport regulations.

14.3 Transport hazard class

Not classified as dangerous in the meaning of transport regulations.

14.4 Packing group

Not classified as dangerous in the meaning of transport regulations.

14.5 Environmental hazards

Not classified as dangerous in the meaning of transport regulations.

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

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

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: REGULATORY INFORMATION

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

National legislation

Risk classification according to BetrSichV (Germany) : Flash Point > 55 °C up to 100 °C, at 15 °C not miscible with water

Water contaminating class (Germany) : WGK 1 (slightly water endangering)
1,381 VwVWS Annex 2

15.2 Chemical safety assessment

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

SECTION 16: OTHER INFORMATION

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

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Further information

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.

Any data changes with reference to previous versions are marked by a vertical line in front of the concerned paragraph.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Formulation of compounds

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

Process categories : **PROC1:** Use in closed process, no likelihood of 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)
PROC15: Use as laboratory reagent

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

2.1 Contributing scenario controlling environmental exposure for: ERC2: Formulation of preparations

Further information : In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.

Conditions and measures related to external treatment of waste for disposal

Disposal methods : Can be landfilled or incinerated, when in compliance with local regulations.

2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

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) : Liquid substance

Frequency and duration of use

Exposure duration : 60 min
Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palm of one hand (240 cm²)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.3 Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

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) : Liquid substance

Frequency and duration of use

Exposure duration : 4 h
Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palm of one hand (240 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

Technical conditions and measures

Provide extraction ventilation at points where emissions occur.

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.4 Contributing scenario controlling worker exposure for: PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)

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) : Liquid substance

Amount used

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

: 10 L/min

Frequency and duration of use

Exposure duration : 4 h
Frequency of use : <= 240 days/year
Frequency of use : 10 minutes/shift

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

Technical conditions and measures

Provide extraction ventilation at points where emissions occur.

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.5 Contributing scenario controlling worker exposure for: PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

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) : Liquid substance

Frequency and duration of use

Exposure duration : 4 h
Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Two hands (960 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 99 %)

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

Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
(Effectiveness (of a measure): 95 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.6 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

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) : Liquid substance

Frequency and duration of use

Exposure duration : 8 h

Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

Technical conditions and measures

Provide extraction ventilation at points where emissions occur.

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.7 Contributing scenario controlling worker exposure for: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

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) : Liquid substance

Frequency and duration of use

Exposure duration : 4 h

Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 99 %)

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

Wear chemically resistant gloves (tested to EN374) in combination with specific activity training. (Effectiveness (of a measure): 95 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166, Lightweight protective clothing

2.8 Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage of the substance in the product up to 20%.

Physical Form (at time of use) : Liquid substance

Frequency and duration of use

Exposure duration : 60 min

Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palm of one hand (240 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166, Lightweight protective clothing

3. Exposure estimation and reference to its source

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR
PROC1	ECETOC TRA		Chronic dermal systemic exposure	0,03430 mg/kg bw/day	0,0137 2
PROC1	ECETOC TRA		Chronic inhalation systemic exposure	0,01636 mg/m ³	0,0059 5
PROC1	ECETOC TRA		Acute dermal local exposure	10 µg/cm ²	0,0012 5
PROC3	ECETOC TRA		Chronic dermal systemic exposure	0,03430 mg/kg bw/day	0,0137 2

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

PROC3	ECETOC TRA	Chronic inhalation systemic exposure	1,47225 mg/m ³	0,53536
PROC3	ECETOC TRA	Acute dermal local exposure	10 µg/cm ²	0,00125
PROC5	ECETOC TRA	Chronic dermal systemic exposure	0,06914 mg/kg bw/day	0,02766
PROC5	ECETOC TRA	Chronic inhalation systemic exposure	2,45375 mg/m ³	0,89227
PROC5	ECETOC TRA	Acute dermal local exposure	10,08 µg/cm ²	0,00126
PROC8a	ECETOC TRA	Chronic dermal systemic exposure	0,685714 mg/kg bw/day	0,274286
PROC8a	ECETOC TRA	Chronic inhalation systemic exposure	0,49075 mg/m ³	0,178455
PROC8a	ECETOC TRA	Acute dermal local exposure	50 µg/cm ²	0,00625
PROC8b	ECETOC TRA	Chronic dermal systemic exposure	0,68571 mg/kg bw/day	0,27429
PROC8b	ECETOC TRA	Chronic inhalation systemic exposure	1,22688 mg/m ³	0,44614
PROC8b	ECETOC TRA	Acute dermal local exposure	100 µg/cm ²	0,0125
PROC9	ECETOC TRA	Chronic dermal systemic exposure	0,342857 mg/kg bw/day	0,137143
PROC9	ECETOC TRA	Chronic inhalation systemic exposure	0,245375 mg/m ³	0,089227
PROC9	ECETOC TRA	Acute dermal local exposure	50 µg/cm ²	0,00625
PROC15	ECETOC TRA	Chronic dermal systemic exposure	0,00686 mg/kg bw/day	0,00274
PROC15	ECETOC TRA	Chronic inhalation systemic exposure	1,63583 mg/m ³	0,59485
PROC15	ECETOC TRA	Acute dermal local exposure	2 µg/cm ²	0,00025

- PROC1 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC3 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC5 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC8a For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC8b For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC9 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC15 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.

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

Potential risks to humans and the environment were evaluated using:
If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.

ECETOC TRA v2.0 Worker; modified version

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Formulation of end-products

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

Process categories : **PROC1:** Use in closed process, no likelihood of 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

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

2.1 Contributing scenario controlling environmental exposure for: ERC2: Formulation of preparations

Further information : In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.

2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage of the substance in the product up to 2%.

Physical Form (at time of use) : Liquid substance

Frequency and duration of use

Exposure duration : 60 min

Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palm of one hand (240 cm²)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.3 Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage of the substance in the product up to 2%.

Physical Form (at time of use) : Liquid substance

Frequency and duration of use

Exposure duration : 60 min

Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palm of one hand (240 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.4 Contributing scenario controlling worker exposure for: PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage of the substance in the product up to 2%.

Physical Form (at time of use) : Liquid substance

Frequency and duration of use

Exposure duration : 4 h

Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm²)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.5 Contributing scenario controlling worker exposure for: PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

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) : Liquid substance

Frequency and duration of use

Exposure duration : 4 h
Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Two hands (960 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 99 %)

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

Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
(Effectiveness (of a measure): 95 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.6 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage of the substance in the product up to 10%

Physical Form (at time of use) : Liquid substance

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Frequency and duration of use

Exposure duration : 60 min
Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.7 Contributing scenario controlling worker exposure for: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage of the substance in the product up to 10%

Physical Form (at time of use) : Liquid substance

Frequency and duration of use

Exposure duration : 60 min
Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
(Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166,
Lightweight protective clothing

2.8 Contributing scenario controlling worker exposure for: PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

2.9 Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage of the substance in the product up to 10%

Physical Form (at time of use) : Liquid substance

Frequency and duration of use

Exposure duration : 60 min

Frequency of use : <= 240 days/year

Human factors not influenced by risk management

Dermal exposure : Palm of one hand (240 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor activities

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 90 %)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice : Safety glasses with side-shields conforming to EN166, Lightweight protective clothing

3. Exposure estimation and reference to its source

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR
PROC1	ECETOC TRA		Chronic dermal systemic exposure	0,00086 mg/kg bw/day	0,00034
PROC1	ECETOC TRA		Chronic inhalation systemic exposure	0,00041 mg/m ³	0,00015
PROC1	ECETOC TRA		Acute dermal local exposure	0,25 µg/cm ²	0,00003
PROC3	ECETOC TRA		Chronic dermal systemic exposure	0,00086 mg/kg bw/day	0,00034
PROC3	ECETOC TRA		Chronic inhalation systemic exposure	0,12269 mg/m ³	0,04461
PROC3	ECETOC TRA		Acute dermal local exposure	0,25 µg/cm ²	0,00003
PROC5	ECETOC TRA		Chronic dermal systemic exposure	0,03429 mg/kg bw/day	0,01371
PROC5	ECETOC TRA		Chronic inhalation systemic exposure	0,61344 mg/m ³	0,22307

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

PROC5	ECETOC TRA		Acute dermal local exposure	5 µg/cm2	0,00063
PROC8a	ECETOC TRA		Chronic dermal systemic exposure	0,685714 mg/kg bw/day	0,274286
PROC8a	ECETOC TRA		Chronic inhalation systemic exposure	0,49075 mg/m³	0,178455
PROC8a	ECETOC TRA		Acute dermal local exposure	50 µg/cm2	0,00625
PROC8b	ECETOC TRA		Chronic dermal systemic exposure	0,06857 mg/kg bw/day	0,02743
PROC8b	ECETOC TRA		Chronic inhalation systemic exposure	0,81792 mg/m³	0,29742
PROC8b	ECETOC TRA		Acute dermal local exposure	10 µg/cm2	0,00125
PROC9	ECETOC TRA		Chronic dermal systemic exposure	0,06857 mg/kg bw/day	0,02743
PROC9	ECETOC TRA		Chronic inhalation systemic exposure	0,81792 mg/m³	0,29742
PROC9	ECETOC TRA		Acute dermal local exposure	10 µg/cm2	0,00125
PROC15	ECETOC TRA		Chronic dermal systemic exposure	0,00343 mg/kg bw/day	0,00137
PROC15	ECETOC TRA		Chronic inhalation systemic exposure	0,81792 mg/m³	0,29742
PROC15	ECETOC TRA		Acute dermal local exposure	1 µg/cm2	0,00013

- PROC1 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC3 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC5 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC8a For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC8b For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC9 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
- PROC15 For complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.

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

Potential risks to humans and the environment were evaluated using:
 If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.

ECETOC TRA v2.0 Worker; modified version

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Industrial end-use of washing and cleaning products

Main User Groups	:	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	:	PROC7: Industrial spraying PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring
Environmental Release Categories	:	ERC8a: Wide dispersive indoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure for: ERC8a: Wide dispersive indoor use of processing aids in open systems

Further information	:	In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.
---------------------	---	---

2.2 Contributing scenario controlling worker exposure for: PROC7: Industrial spraying

Further information	:	In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.
---------------------	---	--

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers percentage substance in the product up to 1 %.
---	---	---

2.3 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Further information	:	In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.
---------------------	---	--

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers percentage substance in the product up to 1 %.
---	---	---

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

2.4 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

2.5 Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

3. Exposure estimation and reference to its source

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

If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Professional end-use of washing and cleaning products

Main User Groups	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	: 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 PROC10: Roller application or brushing PROC11: Non industrial spraying
Environmental Release Categories	: ERC8a: Wide dispersive indoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Further information	: In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.
---------------------	---

2.2 Contributing scenario controlling worker exposure for: PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

Further information	: In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.
Product characteristics	
Concentration of the Substance in Mixture/Article	: Covers percentage substance in the product up to 1 %.

2.3 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Further information	: In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.
Product characteristics	

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

2.4 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

2.5 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

3. Exposure estimation and reference to its source

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

If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Consumer end-use of washing and cleaning products

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)
Chemical product category : **PC35:** Washing and cleaning products (including solvent based products)
Environmental Release Categories : **ERC8a:** Wide dispersive indoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Further information : In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.

2.2 Contributing scenario controlling consumer exposure for: PC35: Washing and cleaning products (including solvent based products)

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

3. Exposure estimation and reference to its source

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Consumer end-use of polishes and wax blends

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)
Chemical product category : **PC31:** Polishes and wax blends
Environmental Release Categories : **ERC8a:** Wide dispersive indoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Further information : In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.

2.2 Contributing scenario controlling consumer exposure for: PC31: Polishes and wax blends

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

3. Exposure estimation and reference to its source

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

If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

WWW.BULKAROMA.COM

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Consumer end-use of air care products

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)
Chemical product category : **PC3:** Air 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: Wide dispersive indoor use of processing aids in open systems

Further information : In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.

2.2 Contributing scenario controlling consumer exposure for: PC3: Air care products

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

3. Exposure estimation and reference to its source

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

If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Consumer end-use of biocides

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)
Chemical product category : **PC8:** Biocidal products (e.g. Disinfectants, pest control)
Environmental Release Categories : **ERC8a:** Wide dispersive indoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Further information : In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.

2.2 Contributing scenario controlling consumer exposure for: PC8: Biocidal products (e.g. Disinfectants, pest control)

Further information : In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the substance in a mixture is less than 1%.

Product characteristics

Concentration of the Substance in Mixture/Article : Covers percentage substance in the product up to 1 %.

3. Exposure estimation and reference to its source

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

1. Short title of Exposure Scenario: Consumer and professional end-use of cosmetics

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)
Chemical product category : **PC28:** Perfumes, fragrances
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, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Further information : In the chemical safety assessment performed according to Article 14(3) in connection with Annex I section 3 (Environmental Hazard Assessment) no hazard was identified. Therefore, according to REACH Annex I (5.0) an exposure estimation is not necessary. Consequently, all identified uses of the substance are assessed as safe for the environment.

2.2 Contributing scenario controlling consumer exposure for: PC28: Perfumes, fragrances

Further information : The consideration of exposures for consumers and professionals from the use of cosmetic products is not required in the chemical safety assessment. Human health aspects of cosmetics are assessed under the Cosmetics Directive and as such do not have to be covered by REACH.

2.3 Contributing scenario controlling consumer exposure for: PC39: Cosmetics, personal care products

Further information : The consideration of exposures for consumers and professionals from the use of cosmetic products is not required in the chemical safety assessment. Human health aspects of cosmetics are assessed under the Cosmetics Directive and as such do not have to be covered by REACH.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9

Revision Date 21.07.2018

Print Date 05.04.2019

3. Exposure estimation and reference to its source

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

If the uses of the downstream user are within the limits of the provided exposure scenario, you may use scaling to adapt the exposure scenario to local conditions.