

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

Version 6.15
Revision Date 20.05.2026
Print Date 25.07.2026

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Succinic anhydride for synthesis

Product Number : 8.00683
Catalogue No. : 800683
Brand : Millipore
Index-No. : 607-103-00-5
REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.
CAS-No. : 108-30-5

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

Identified uses : Chemical for synthesis

1.3 Details of the supplier of the safety data sheet

Company : Merck Life Science Pty Ltd
Ground Floor, Building 1, 885 Mountain Highway
BAYSWATER VIC 3153
AUSTRALIA

Telephone : +61 1800 800 097
E-mail address : customersupport.anz@merckgroup.com

1.4 Emergency telephone number

Emergency Phone # : Free call (24/7): 1800 862 115
Int'l (24/7): +61 2 9037 2994
(CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H302: Harmful if swallowed.

Skin corrosion, Sub-category 1B H314: Causes severe skin burns and eye damage.



Serious eye damage, Category 1	H318: Causes serious eye damage.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:			
Signal word	:	Danger		
Hazard statements	:	H302	Harmful if swallowed.	
		H314	Causes severe skin burns and eye damage.	
		H317	May cause an allergic skin reaction.	
		H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Precautionary statements	:	Prevention:		
		P260	Do not breathe dust.	
		P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.	
		Response:		
		P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.		
		P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.		
		P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.		
		P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		

Reduced Labelling (<= 125 ml)

Hazard pictograms	:			
-------------------	---	---	---	--



Signal word	Danger
Hazard Statements	
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
Precautionary Statements	
P260	Do not breathe dust.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

2.3 Other hazards

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Index-No. : 607-103-00-5

EC-No. : 203-570-0

Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
succinic acid anhydride	108-30-5 203-570-0	>= 90 - <= 100	Acute toxicity estimate Acute oral toxicity: 1.794,9 mg/kg



SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	: First aiders need to protect themselves. Show this safety data sheet to the doctor in attendance.
If inhaled	: After inhalation: fresh air. Call in physician.
In case of skin contact	: In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
In case of eye contact	: After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed	: After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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	: Water Foam Carbon dioxide (CO ₂) Dry powder
Unsuitable extinguishing media	: For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting	: Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
---------------------------------------	---



Hazardous combustion products : Carbon oxides

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Advice for non-emergency personnel:
Avoid inhalation of dusts.
Avoid substance contact.
Ensure adequate ventilation.
Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Environmental precautions : Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).
Take up carefully. Dispose of properly. Clean up affected area.
Avoid generation of dusts.

6.4 Reference to other sections

For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Work under hood. Do not inhale substance/mixture.

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Temperature class : T1

For precautions see section 2.2.



7.2 Conditions for safe storage, including any incompatibilities

Further information on storage conditions : Tightly closed. Dry. Keep locked up or in an area accessible only to qualified or authorised persons.

Storage class (TRGS 510) : 8A, Combustible, corrosive hazardous materials

Further information on storage stability : Recommended storage temperature see product label.

Recommended storage temperature : Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
	Worker DNEL, longterm	inhalation	Systemic effects	10 mg/m3
	Worker DNEL, longterm	dermal	Systemic effects	83,3 mg/kg
	Worker DNEL, longterm	inhalation	Local effects	0,41 mg/m3
	Worker DNEL, acute	inhalation	Systemic effects	10 mg/m3
	Worker DNEL, acute	dermal	Systemic effects	167 mg/kg
	Worker DNEL, acute	inhalation	Local effects	0,41 mg/m3
	Worker DNEL, acute	dermal	Local effects	0,04 mg/cm2

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
	Fresh water	0,1 mg/l
	Marine water	0,01 mg/l
	Aquatic intermittent release	1 mg/l
	Sewage treatment plant	3 mg/l

8.2 Exposure controls

Individual protection measures, such as personal protective equipment (PPE)



Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Tightly fitting safety goggles

Hand protection

Material : Nitrile rubber

Break through time : 480 min

Glove thickness : 0,11 mm

Protective index : Full contact

Manufacturer : KCL 741 Dermatril® L

Material : Nitrile rubber

Break through time : 480 min

Glove thickness : 0,11 mm

Protective index : Splash contact

Manufacturer : KCL 741 Dermatril® L

Remarks : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin and body protection : Acid-resistant protective clothing

Respiratory protection : required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Advice : Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : solid (20 °C, 1.013 hPa)

Form : crystals



Color	: colourless
Odor	: pungent
Melting point/ range	: 119 °C Method: OECD Test Guideline 102
Boiling point/boiling range	: 263,5 °C (984,9 hPa) Method: OECD Test Guideline 103
Flammability	: Method: Flammability (solids) GLP: yes Remarks: The product is not flammable.
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: 15 g/m ³
Flash point	: 157 °C
Autoignition temperature	: 480 °C
Decomposition temperature	: No data available
pH	: 2,7 (20 °C) Concentration: 10 g/l
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Solubility(ies) Water solubility	: 62,9 g/l (20 °C) Method: OECD Test Guideline 105 completely soluble
Partition coefficient: n- octanol/water	: log Pow: 2,44 (40 °C) Method: OECD Test Guideline 117 Bioaccumulation is not expected.
Vapor pressure	: 1,3 hPa (92 °C)



13 hPa (128 °C)

Relative density : 1,234 (20 °C)

Density : 1,23 g/cm³ (20 °C)

Bulk density : 550 - 600 kg/m³

Relative vapour density : 3,46

9.2 Other information

Explosives : No data available

Oxidizing properties : none

Burning rate : No data available

Evaporation rate : No data available

Molecular weight : 100,07 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Hazardous reactions : Violent reactions possible with:

Bases
peroxi compounds
Amines
Alcohols
Strong oxidizing agents



acids

10.4 Conditions to avoid

Conditions to avoid : Strong heating.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 1.794,9 mg/kg

(OECD Test Guideline 401)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Oral - 1.794,9 mg/kg

(ATE value derived from LD50/LC50 value)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - In vitro study

Result: Corrosive - 1 h

(OECD Test Guideline 431)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive - 18 - 24 h

(OECD Test Guideline 405)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Remarks: Risk of blindness!

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: positive

(OECD Test Guideline 429)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

May cause allergic respiratory and skin reactions Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Corrosive to the respiratory tract.



Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

succinic acid anhydride:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 102 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)):
100 mg/l
Exposure time: 72 h
Test Type: static test



Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (activated sludge): > 300 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes

12.2 Persistence and degradability

Components:

succinic acid anhydride:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 20 mg/l
Result: Readily biodegradable.
Biodegradation: ca. 96,55 %
Exposure time: 28 d
Method: OECD Test Guideline 301E
GLP: yes

12.3 Bioaccumulative potential

Components:

succinic acid anhydride:

Partition coefficient: n-octanol/water : log Pow: 2,44 (40 °C)
pH: 5,8
Method: OECD Test Guideline 117
Remarks: Bioaccumulation is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

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 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.



12.7 Other adverse effects

Product:

Additional ecological information : Biological effects:

Harmful effect due to pH shift.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 3261

IMDG : UN 3261

IATA : UN 3261

14.2 UN proper shipping name

ADR : CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
(succinic acid anhydride)

IMDG : CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
(succinic acid anhydride)

IATA : Corrosive solid, acidic, organic, n.o.s.
(succinic acid anhydride)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADR	: 8	
IMDG	: 8	
IATA	: 8	

14.4 Packing group

ADR
Packing group : II
Classification Code : C4



Hazard Identification : 80
Number
Labels : 8
Tunnel restriction code : (E)

IMDG

Packing group : II
Labels : 8
EmS Code : F-A, S-B

IATA (Cargo)

Packing instruction (cargo : 863
aircraft)
Packing instruction (LQ) : Y844
Packing group : II
Labels : Class 8 - Corrosive substances

IATA_P (Passenger)

Packing instruction : 859
(passenger aircraft)
Packing instruction (LQ) : Y844
Packing group : II
Labels : Class 8 - Corrosive substances

14.5 Environmental hazards

ADR

Environmentally : no
hazardous

IMDG

Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing : Conditions of restriction for the
on the market and use of certain dangerous following entries should be
substances, mixtures and articles (Annex XVII) considered:
Number on list 75
If you intend to use this product
as tattoo ink, please contact
your vendor.

REACH - Candidate List of Substances of Very : Not applicable
High Concern for Authorisation (Article 59).

Millipore- 8.00683

Page 14 of 23

The life science business of Merck operates as MilliporeSigma in the US and
Canada



Regulation (EU) No 2024/590 on substances that : Not applicable
deplete the ozone layer

Regulation (EU) 2019/1021 on persistent organic : Not applicable
pollutants (recast)

REACH - List of substances subject to : Not applicable
authorisation (Annex XIV)

Seveso III: Directive 2012/18/EU of the : Not applicable
European Parliament and of the Council
on the control of major-accident hazards
involving dangerous substances.

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

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Eye Dam.	: Serious eye damage
Resp. Sens.	: Respiratory sensitisation
Skin Corr.	: Skin corrosion
Skin Sens.	: Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL -



No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.
Copyright 2025 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

REG_EU / EN



Annex: Exposure scenario

Identified uses:

Use: Industrial use

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
SU 3, SU9, SU 10: Industrial uses: Uses of substances as such or in preparations at industrial sites, Manufacture of fine chemicals, Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
PC19: Intermediate
PC21: Laboratory chemicals
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)
PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
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
ERC1, ERC2, ERC4, ERC6a, ERC6b: Manufacture of substances, Formulation of preparations, Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use resulting in manufacture of another substance (use of intermediates), Industrial use of reactive processing aids

Use: Professional use

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
PC21: Laboratory chemicals
PROC15: Use as laboratory reagent
ERC2, ERC6a, ERC6b: Formulation of preparations, Industrial use resulting in manufacture of another substance (use of intermediates), Industrial use of reactive processing aids

1. Short title of Exposure Scenario: Industrial use

Main User Groups	: SU 3
Sectors of end-use	: SU 3, SU9, SU 10
Chemical product category	: PC19, PC21
Process categories	: PROC1, PROC2, PROC3, PROC4, PROC8b, PROC9, PROC15
Environmental Release Categories	: ERC1, ERC2, ERC4, ERC6a, ERC6b:



2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8b, PROC9, 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, low dustiness

Frequency and duration of use

Frequency of use : 5 days/week

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor with local exhaust ventilation (LEV)

Technical conditions and measures

Provide extraction ventilation at points where emissions occur.

Organisational measures to prevent /limit releases, dispersion and exposure

Covers daily exposures up to 8 hours.

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

Wear protective gloves/ protective clothing/ eye protection/ face protection.

3. Exposure estimation and reference to its source

Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR*
PROC1	ECETOC TRA	acute, inhalative, local			0,024
PROC1	ECETOC TRA	acute, inhalative, systemic			0,001
PROC1	ECETOC TRA	acute, dermal, systemic			0,002
PROC1		acute, combined, systemic			0,003
PROC1	ECETOC TRA	longterm, inhalative, systemic			0,001
PROC1	ECETOC TRA	longterm, dermal, systemic			0,001
PROC1		longterm,			0,002



		combined, systemic			
PROC2	ECETOC TRA	acute, inhalative, local			0,024
PROC2	ECETOC TRA	acute, inhalative, systemic			0,001
PROC2	ECETOC TRA	acute, dermal, systemic			0,008
PROC2		acute, combined, systemic			0,009
PROC2	ECETOC TRA	longterm, inhalative, systemic			0,001
PROC2	ECETOC TRA	longterm, dermal, systemic			0,001
PROC2		longterm, combined, systemic			0,002
PROC3	ECETOC TRA	acute, inhalative, local			0,0244
PROC3	ECETOC TRA	acute, inhalative, systemic			0,01
PROC3	ECETOC TRA	acute, dermal, systemic			0,002
PROC3		acute, combined, systemic			0,012
PROC3	ECETOC TRA	longterm, inhalative, systemic			0,01
PROC3	ECETOC TRA	longterm, dermal, systemic			0,004
PROC3		longterm, combined, systemic			0,014
PROC4	ECETOC TRA	acute, inhalative, local			0,061
PROC4	ECETOC TRA	acute, inhalative, systemic			0,05
PROC4	ECETOC TRA	acute, dermal, systemic			0,041
PROC4		acute, combined, systemic			0,091
PROC4	ECETOC TRA	longterm, inhalative, systemic			0,05



PROC4	ECETOC TRA	longterm, dermal, systemic			0,082
PROC4		longterm, combined, systemic			0,132
PROC8b	ECETOC TRA	acute, inhalative, local			0,244
PROC8b	ECETOC TRA	acute, inhalative, systemic			0,01
PROC8b	ECETOC TRA	acute, dermal, systemic			0,041
PROC8b		acute, combined, systemic			0,051
PROC8b	ECETOC TRA	longterm, inhalative, systemic			0,01
PROC8b	ECETOC TRA	longterm, dermal, systemic			0,082
PROC8b		longterm, combined, systemic			0,092
PROC9	ECETOC TRA	acute, inhalative, local			0,244
PROC9	ECETOC TRA	acute, inhalative, systemic			0,01
PROC9	ECETOC TRA	acute, dermal, systemic			0,041
PROC9		acute, combined, systemic			0,051
PROC9	ECETOC TRA	longterm, inhalative, systemic			0,01
PROC9	ECETOC TRA	longterm, dermal, systemic			0,082
PROC9		longterm, combined, systemic			0,092
PROC15	ECETOC TRA	acute, inhalative, local			0,049
PROC15	ECETOC TRA	acute, inhalative, systemic			0,002
PROC15	ECETOC TRA	acute, dermal, systemic			< 0,001
PROC15		acute, combined,			0,002



		systemic			
PROC15	ECETOC TRA	longterm, inhalative, systemic			0,002
PROC15	ECETOC TRA	longterm, dermal, systemic			< 0,001
PROC15		longterm, combined, systemic			0,002

*Risk characterisation ratio

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

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

1. Short title of Exposure Scenario: Professional use

Main User Groups : **SU 22**
 Sectors of end-use : **SU 22**
 Chemical product category : **PC21**
 Process categories : **PROC15**
 Environmental Release Categories : **ERC2, ERC6a, ERC6b:**

2.2 Contributing scenario controlling worker exposure for: 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, low dustiness

Frequency and duration of use

Frequency of use : 5 days/week

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor with local exhaust ventilation (LEV)

Technical conditions and measures

Provide extraction ventilation at points where emissions occur.

Organisational measures to prevent /limit releases, dispersion and exposure

Covers daily exposures up to 8 hours.

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

Wear protective gloves/ protective clothing/ eye protection/ face protection., In case of



insufficient local exhaust ventilation, respiratory protection must be worn

3. Exposure estimation and reference to its source

Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR*
PROC15	ECETOC TRA	acute, inhalative, local			0,049
PROC15	ECETOC TRA	acute, inhalative, systemic			0,002
PROC15	ECETOC TRA	acute, dermal, systemic			< 0,001
PROC15		acute, combined, systemic			0,002
PROC15	ECETOC TRA	longterm, inhalative, systemic			0,002
PROC15	ECETOC TRA	longterm, dermal, systemic			< 0,001
PROC15		longterm, combined, systemic			0,002

*Risk characterisation ratio

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

For scaling of worker exposure assessments performed with ECETOC TRA, please consult the Merck tool ScIDeEx® at www.merckmillipore.com/scideex.

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).



