

according to Regulation (EC) No. 1907/2006

Revision Date 14.09.2018

Version 21.3

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

1.1 Product identifier

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

REACH Registration Number 01-2119457558-25-XXXX

CAS-No. 67-63-0

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

Identified uses Reagent for analysis, Chemical production

In compliance with the conditions described in the annex to this safety

data sheet.

1.3 Details of the supplier of the safety data sheet

Company Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0

Responsible Department LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone

number

Please contact the regional company representation in your country.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquid, Category 2, H225

Eye irritation, Category 2, H319

Specific target organ toxicity - single exposure, Category 3, Central nervous system, H336

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

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms





Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground/bond container and receiving equipment.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Reduced labelling (≤125 ml)

Hazard pictograms





Signal word

Danger

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Index-No. 603-117-00-0

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

Formula CH₃CH(OH)CH₃ C₃H₅O (Hill)

Index-No. 603-117-00-0 EC-No. 200-661-7

Molar mass 60,1 g/mol

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No. Registration number Classification

2-Propanol (<= 100 %)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

67-63-0 01-2119457558-25-

XXXX Flammable liquid, Category 2, H225

Eye irritation, Category 2, H319

Specific target organ toxicity - single exposure, Category 3, H336

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

3.2 Mixture

Not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air. Call in physician.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

irritant effects, Headache, somnolence, respiratory paralysis, Drowsiness, Dizziness, inebriation, narcosis, Unconsciousness, Coma

Drying-out effect resulting in rough and chapped skin.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, Carbon dioxide (CO2), 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

Combustible.

Pay attention to flashback.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Protected from light.

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

7.3 Specific end use(s)

See exposure scenario in the Annex to this MSDS.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Worker DNEL, longterm	Systemic effects	inhalation	500 mg/m³
Worker DNEL, longterm	Systemic effects	dermal	888 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	inhalation	89 mg/m³
Consumer DNEL, longterm	Systemic effects	dermal	319 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	oral	26 mg/kg Body weight

Predicted No Effect Concentration (PNEC)

PNEC Fresh water	140,9 mg/l
PNEC Fresh water sediment	552 mg/kg
PNEC Marine water	140,9 mg/l
PNEC Marine sediment	552 mg/kg
PNEC Soil	28 mg/kg

8.2 Exposure controls

Engineering measures

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material: Nitrile rubber

Glove thickness: 0,40 mm
Break through time: 480 min

splash contact:

Glove material: polychloroprene

Glove thickness: 0,65 mm
Break through time: 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 730 Camatril® -Velours (full contact), KCL 720 Camapren® (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment

Flame retardant antistatic protective clothing.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepeneur 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

Do not let product enter drains.

Risk of explosion.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form liquid

Colour colourless

Odour alcohol-like

Odour Threshold 1,0 - 196,1 ppm

pH at 20 °C

neutral

Melting point -89,5 °C

Boiling point/boiling range 82,4 °C

at 1.013 hPa

Flash point 12 °C

Method: c.c.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Evaporation rate No information available.

Flammability (solid, gas) No information available.

Lower explosion limit 2 %(V)

Upper explosion limit 13,4 %(V)

Vapour pressure 43 hPa

at 20 °C

Relative vapour density 2,07

Density 0,786 g/cm3

at 20 °C

Relative density No information available.

Water solubility at 20 °C

soluble

Partition coefficient: n- log Pow: 0,05

octanol/water OECD Test Guideline 107

Bioaccumulation is not expected.

Auto-ignition temperature No information available.

Decomposition temperature Distillable in an undecomposed state at normal pressure.

Viscosity, dynamic 2,2 mPa.s

at 20 °C

Explosive properties Not classified as explosive.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Oxidizing properties none

9.2 Other data

Ignition temperature 425 °C

Method: DIN 51794

Minimum ignition energy 0,65 mJ

Conductivity $< 0.1 \mu S/cm$

SECTION 10. Stability and reactivity

10.1 Reactivity

Formation of peroxides possible.

Vapours may form explosive mixture with air.

10.2 Chemical stability

Sensitivity to light

Sensitive to air.

10.3 Possibility of hazardous reactions

Risk of explosion with:

chlorates, Phosgene, organic nitro compounds, hydrogen peroxide, perchlorates, strong oxidising agents, Nitric acid, nitrogen dioxide

Risk of ignition or formation of inflammable gases or vapours with:

Alkali metals, Alkaline earth metals, chromium(VI) oxide

Exothermic reaction with:

Aldehydes, Amines, fuming sulfuric acid, Iron, Aluminium, Chlorine, PHOSPHORUS

TRICHLORIDE, Strong acids, halogen compounds, potassium tert-butanolate

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

rubber, various plastics, oils

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

10.6 Hazardous decomposition products

Peroxides

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: 5.045 mg/kg

(RTECS)

Symptoms: Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and

pneumonitis.

Acute inhalation toxicity

LC50 Rat: 37,5 mg/l; 4 h; vapour

OECD Test Guideline 403

Symptoms: Possible damages:, mucosal irritations

Acute dermal toxicity

LD50 Rabbit: 12.800 mg/kg

(RTECS)

Skin irritation

Rabbit

Result: No skin irritation
OECD Test Guideline 404

Drying-out effect resulting in rough and chapped skin.

Eye irritation

Rabbit

Result: Eye irritation

OECD Test Guideline 405

Causes serious eye irritation.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Sensitisation

Buehler Test Guinea pig

Result: negative

Method: OECD Test Guideline 406

Germ cell mutagenicity

Genotoxicity in vivo

In vivo micronucleus test

Mouse

male and female

Intraperitoneal injection

Bone marrow

Result: negative

Method: OECD Test Guideline 474

Genotoxicity in vitro

Ames test

Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

In vitro mammalian cell gene mutation test

Result: negative

Method: OECD Test Guideline 476

Carcinogenicity

Method: OECD Test Guideline 451

Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

No impairment of reproductive performance in animal experiments. (IUCLID)

Teratogenicity

Did not show teratogenic effects in animal experiments. (IUCLID)

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Target Organs: Central nervous system

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

After absorption:

Headache, Dizziness, inebriation, Unconsciousness, narcosis

After uptake of large quantities:

respiratory paralysis, Coma

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish

flow-through test LC50 Pimephales promelas (fathead minnow): 9.640 mg/l; 96 h

US-EPA

Toxicity to daphnia and other aquatic invertebrates

EC50 Daphnia magna (Water flea): 13.299 mg/l; 48 h

(IUCLID)

Toxicity to algae

IC50 Desmodesmus subspicatus (green algae): > 1.000 mg/l; 72 h

(IUCLID)

Toxicity to bacteria

EC5 Pseudomonas putida: 1.050 mg/l; 16 h

(Lit.)

12.2 Persistence and degradability

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Biodegradability

95 %; 21 d; aerobic

OECD Test Guideline 301E

Readily biodegradable

Theoretical oxygen demand (ThOD)

2.400 mg/g

(Lit.)

Ratio BOD/ThBOD

BOD5 49 %

(IUCLID)

Ratio COD/ThBOD

96 %

(Lit.)

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 0,05

OECD Test Guideline 107

Bioaccumulation is not expected.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects

Discharge into the environment must be avoided.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number UN 1219

14.2 Proper shipping name ISOPROPANOL

14.3 Class 3

14.4 Packing group

14.5 Environmentally hazardous ---

14.6 Special precautions for yes

user

Tunnel restriction code D/E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 UN number UN 1219

14.2 Proper shipping name ISOPROPANOL

14.3 Class 3

14.4 Packing group

14.5 Environmentally hazardous --

14.6 Special precautions for no

user

Sea transport (IMDG)

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

14.1 UN number UN 1219

14.2 Proper shipping name ISOPROPANOL

14.3 Class 3

14.4 Packing group

14.5 Environmentally hazardous --

14.6 Special precautions for yes

user

EmS F-E S-D

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

Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard SEVESO III

Legislation FLAMMABLE LIQUIDS

P5c

Quantity 1: 5.000 t Quantity 2: 50.000 t

Occupational restrictions

Take note of Dir 94/33/EC on the protection of young people at

work.

Regulation (EC) No 1005/2009 on substances that not regulated

deplete the ozone layer

Regulation (EC) No 850/2004 of the European not regulated

Parliament and of the Council of 29 April 2004 on

persistent organic pollutants and amending

Directive 79/117/EEC

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Substances of very high concern (SVHC)

This product does not contain substances

of very high concern according to

Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory

concentration limit of $\geq 0.1 \%$ (w/w).

National legislation

Storage class 3

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out according to regulation (EC) No. 1907/2006 (REACH) for this substance.

SECTION 16. Other information

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

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms





Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

H336 May cause drowsiness or dizziness.

Precautionary statements

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P240 Ground/bond container and receiving equipment.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

EXPOSURE SCENARIO 1 (Industrial use)

1. Industrial use Reagent for analysis, Chemical production)

Sectors of end-use

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

SU9 Manufacture of fine chemicals

SU 10 Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)

Chemical product category

PC19 Intermediate

PC21 Laboratory chemicals

Process categories

PROC1	Use in closed	process, no	o likelihood o	f 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

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)

PROC10 Roller application or brushing

PROC15 Use as laboratory reagent

Environmental Release Categories

ERC1	Manufacture of substances
ERC2	Formulation of preparations

ERC4 Industrial use of processing aids in processes and products, not becoming part of articles

ERC6a Industrial use resulting in manufacture of another substance (use of intermediates)

ERC6b Industrial use of reactive processing aids

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

2. Contributing scenarios: Operational conditions and risk management measures

2.1 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC15

Product characteristics

Concentration of the Substance in Covers the percentage of the substance in the product up to

Mixture/Article 100 %.

Physical Form (at time of use) High volatile liquid

Frequency and duration of use

Frequency of use 5 days/week Frequency of use 8 hours/day

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor Indoor without local exhaust ventilation (LEV)

Organisational measures to prevent /limit releases, dispersion and exposure

Covers daily exposures up to 8 hours.

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).

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Workers

CS	Use descriptor	Exposure duration, route, effect	RCR	Exposure Assessment Method
2.1 PROC1	PROC1	longterm, inhalative, systemic	< 0,001	ECETOC TRA
		longterm, dermal, systemic	< 0,001	ECETOC TRA
		longterm, combined, systemic	< 0,001	
2.1 PROC2	PROC2	longterm, inhalative, systemic	0,05	ECETOC TRA
		longterm, dermal, systemic	0,02	ECETOC TRA
		longterm, combined, systemic	0,052	
2.1	PROC3	longterm, inhalative, systemic	0,125	ECETOC TRA
		longterm, dermal, systemic	< 0,001	ECETOC TRA
		longterm, combined, systemic	0,125	
2.1 PROC4	longterm, inhalative, systemic	0,1	ECETOC TRA	
		longterm, dermal, systemic	0,008	ECETOC TRA
	longterm, combined, systemic	0,108		
2.1 PROC5	longterm, inhalative, systemic	0,25	ECETOC TRA	
		longterm, dermal, systemic	0,15	ECETOC TRA
		longterm, combined, systemic	0,265	
2.1	PROC8a	longterm, inhalative, systemic	0,25	ECETOC TRA
		longterm, dermal, systemic	0,015	ECETOC TRA
		longterm, combined, systemic	0,265	
2.1	PROC8b	longterm, inhalative, systemic	0,25	ECETOC TRA
		longterm, dermal, systemic	0,008	ECETOC TRA
		longterm, combined, systemic	0,258	
2.1 PROC9	PROC9	longterm, inhalative, systemic	0,25	ECETOC TRA
		longterm, dermal, systemic	0,008	ECETOC TRA
		longterm, combined, systemic	0,258	
2.1	PROC10	longterm, inhalative, systemic	0,25	ECETOC TRA
		longterm, dermal, systemic	0,031	ECETOC TRA
		longterm, combined, systemic	0,281	
2.1	PROC15	longterm, inhalative, systemic	0,05	ECETOC TRA
		longterm, dermal, systemic	< 0,001	ECETOC TRA
		longterm, combined, systemic	0,05	

The default parameters and -efficiencies of the applied exposure assessment model were used for the calculation (unless stated differently).

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

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;

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

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).

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

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

EXPOSURE SCENARIO 2 (Professional use)

1. Professional use Reagent for analysis, Chemical production)

Sectors of end-use

SU 22 Professional uses: Public domain (administration, education, entertainment, services,

craftsmen)

Chemical product category

PC21 Laboratory chemicals

Process categories

PROC15 Use as laboratory reagent

Environmental Release Categories

ERC2 Formulation of preparations

ERC6a Industrial use resulting in manufacture of another substance (use of intermediates)

ERC6b Industrial use of reactive processing aids

2. Contributing scenarios: Operational conditions and risk management measures

2.1 Contributing scenario controlling worker exposure for: PROC15

Product characteristics

Concentration of the Substance in Covers the percentage of the substance in the product up to

Mixture/Article 100 %.

Physical Form (at time of use) High volatile liquid

Frequency and duration of use

Frequency of use 5 days/week
Frequency of use 8 hours/day

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor without local exhaust ventilation (LEV)

Organisational measures to prevent /limit releases, dispersion and exposure

Covers daily exposures up to 8 hours.

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur

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

CS	Use descriptor	Exposure duration, route, effect	RCR	Exposure Assessment Method
2.1	PROC15	longterm, inhalative, systemic	0,05	ECETOC TRA
		longterm, dermal, systemic	< 0,001	ECETOC TRA
		longterm, combined, systemic	0,05	

The default parameters and -efficiencies of the applied exposure assessment model were used for the calculation (unless stated differently).

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).

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

according to Regulation (EC) No. 1907/2006

Catalogue No. 109634

Product name 2-Propanol for analysis EMSURE® ACS,ISO,Reag. Ph Eur