Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

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

· **1.1 Product identifier**
· **Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)**
· **SDS number:** CH7479
· **Application of the substance / the mixture** Chemicals products for laboratory

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
CARLO ERBA REAGENTS
Chaussée du Vexin
Parc d'Affaires des Portes - BP616
27106 VAL DE REUIL Cedex
Téléphone: +33 (0)2 32 09 20 00
Télécopie: +33 (0)2 32 09 20 20
· **Further information obtainable from:**
Q.A / Normative
email: MSDS_CER-SDS@cer.dgroup.it
· **1.4 Emergency telephone number:**
Ireland - Tel : 00 353 1 8092568 - 00 353 1 8379964 (24h/24)
EU Tel : 112
National Poisons Information Centre: +353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week)
Healthcare Professionals: +353 (1) 809 2566 (24 hour service)
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**


flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Eye Irrit. 2 H319 Causes serious eye irritation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**


GHS02 GHS07

· **Signal word** Danger
· **Hazard statements**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 1)

· ***Precautionary statements***

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P280	Wear protective gloves / eye protection / face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.

SECTION 3: Composition/information on ingredients

· ***3.2 Chemical characterisation: Mixtures***
· ***Description:*** Mixture made by the following substances:

· ***Dangerous components:***

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 RTECS: KQ 6300000 Reg.nr.: 01-2119457610-43	Ethyl alcohol Flam. Liq. 2, H225; Eye Irrit. 2, H319	50-100%
CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 Reg.nr.: 01-2119457558-25	propan-2-ol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	<2.5%
CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3 RTECS: EL 6475000 Reg.nr.: 01-2119457290-43	Methyl ethyl ketone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	<2.5%

SECTION 4: First aid measures

· ***4.1 Description of first aid measures***
· ***After inhalation:*** Supply fresh air; consult a doctor in case of complaints.
· ***After skin contact:***
Immediately wash with water and soap and rinse thoroughly. Wash contaminated clothing before reuse.
If skin irritation continues, consult a doctor.
· ***After eye contact:***
Rinse opened eye for several minutes under running water. Then consult a doctor.
Seek immediate medical advice.
· ***After swallowing:*** Call for a doctor immediately.
· ***4.2 Most important symptoms and effects, both acute and delayed*** No further relevant information available.
· ***4.3 Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 2)

SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***
· ***Suitable extinguishing agents:*** *CO2 or alcohol resistant foam.*
· ***For safety reasons unsuitable extinguishing agents:*** *Water with full jet.*
· ***5.2 Special hazards arising from the substance or mixture*** *Carbon monoxide and carbon dioxide*
· ***5.3 Advice for firefighters***
· ***Protective equipment:*** *Do not inhale gases in case or fire or combustion.*
· ***Additional information*** *Keep receptacles cool with water spray.*

SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Keep away any ignition source.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· ***6.2 Environmental precautions:***
Do not allow to penetrate the ground/soil.
Dilute with plenty of water after collecting the liquid.
Prevent seepage into sewage system, workpits and cellars.
· ***6.3 Methods and material for containment and cleaning up:***
Collect the liquid with vacuum in a suitable container and absorb the remainder with a porous material (diatomite, acid binders, universal binders, etc).
Ensure adequate ventilation.
· ***6.4 Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling***
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Pneumatic conveyance only with nitrogen or other inert gases.
· ***Information about fire - and explosion protection:***

Keep ignition sources away - Do not smoke.

Protect from heat.
Protect against electrostatic charges.
Use explosion-proof apparatus / fittings and spark-proof tools.

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:***
Store in a cool location.
Use only receptacles specifically permitted for this substance/product.
· ***Information about storage in one common storage facility:*** *Not required.*
· ***Further information about storage conditions:*** *Store in cool, dry conditions in well sealed receptacles.*

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 3)

· ***7.3 Specific end use(s)*** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

· ***8.1 Control parameters***
· ***Additional information about design of technical facilities:*** *No further data; see section 7.*

· **Ingredients with limit values that require monitoring at the workplace:**	
CAS: 64-17-5 Ethyl alcohol	
WEL	Long-term value: 1920 mg/m³, 1000 ppm
CAS: 67-63-0 propan-2-ol	
WEL	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm
CAS: 78-93-3 Methyl ethyl ketone	
WEL	Short-term value: 899 mg/m³, 300 ppm Long-term value: 600 mg/m³, 200 ppm Sk, BMGV

· **DNELs**		
CAS: 64-17-5 Ethyl alcohol		
Dermal	DNEL (workers-systemic chronic effects)	343 mg/kg
Inhalative	DNEL (workers-local effects Acute)	19 mg/m3
	DNEL (workers-systemic chronic effects)	950 mg/m3

· **PNECs**	
CAS: 64-17-5 Ethyl alcohol	
PNEC (Fresh water)	0.96 mg/l
PNEC (Freshwater sediment)	3.6 mg/kg
PNEC (Marine water)	0.79 mg/l
PNEC (Seawater sediment)	2.9 mg/l
PNEC (STP)	580 mg/l
PNEC (Soil)	0.63 mg/kg

· **Ingredients with biological limit values:**	
CAS: 78-93-3 Methyl ethyl ketone	
BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

· ***Additional information:*** *The lists valid during the making were used as basis.*

· ***8.2 Exposure controls***
· ***Personal protective equipment:***
· ***General protective and hygienic measures:***
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
· ***Respiratory protection:***
Use suitable respiratory protective device only when aerosol or mist is formed.
Filter P2

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 4)

· ***Protection of hands:***
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Protective gloves

Rubber gloves
Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.
· ***Material of gloves***
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· ***Penetration time of glove material***
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· ***Eye protection:***

Tightly sealed goggles

· ***Body protection:***
Protective work clothing
In case of pouring big amounts or disconnecting pipes.
· ***Limitation and supervision of exposure into the environment***
In case of unintended release of the product: See section 6 of the Safety Data Sheet.
· ***Risk management measures*** *Keep good industrial hygiene.*

SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***
· ***Molecular weight***
· ***Appearance:***

Form:	*Fluid*
Colour:	*Colourless*
· ***Odour:***	*Alcohol-like*
· ***Odour threshold:***	*Not determined.*

· ***Important information on protection of health and environment, and on safety.***

64-17-5	*Ethyl alcohol*	*MIE (TRGS-727) 0,28 mJ*

· ***Change in condition***

Melting point/freezing point:	*Undetermined.*
Initial boiling point and boiling range:	*78 °C*
· ***Flash point:***	*13 °C*
· ***Flammability (solid, gas):***	*Highly flammable.*
· ***Auto-ignition temperature:***	*425 °C*
· ***Decomposition temperature:***	*Not determined.*
· ***Ignition temperature:***	*Product is not selfigniting.*
· ***Explosive properties:***	*Product is not explosive. However, formation of explosive air/vapour mixtures are possible.*

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 Version number 10 Revision: 27.06.2023

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 5)

· **Explosion limits:**	
Lower:	3.5 Vol %
Upper:	15 Vol %
· **Vapour pressure at 20 °C:**	59 hPa
· **Density at 20 °C:**	0.808 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Fully miscible.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent separation test:**	
Organic solvents:	91.0 %
Solids content:	0.0 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** See 10.3
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** Carbon monoxide, Carbon dioxide.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

CAS: 64-17-5 Ethyl alcohol

Oral	LD50	6,200-15,000 mg/kg (rat)
Dermal	LD50	17,100 mg/kg (rabbit)
Inhalative	LC50/4 h	117 mg/L (rat)
	LC50	>50 mg/m³ (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation**
Strong irritant with the danger of severe eye injury.
Causes serious eye irritation.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 6)

· ***Target organ information***
· ***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)***
· ***Germ cell mutagenicity*** *Based on available data, the classification criteria are not met.*
· ***Carcinogenicity*** *Based on available data, the classification criteria are not met.*
· ***Reproductive toxicity*** *Based on available data, the classification criteria are not met.*
· ***STOT-single exposure*** *Based on available data, the classification criteria are not met.*
· ***STOT-repeated exposure*** *Based on available data, the classification criteria are not met.*
· ***Aspiration hazard*** *Based on available data, the classification criteria are not met.*

SECTION 12: Ecological information

· ***12.1 Toxicity***

· ***Aquatic toxicity:***	
CAS: 64-17-5 Ethyl alcohol	
EC50/48h	*5,012 mg/l (Daphnia) (freshwater)*
EC50	*72 mg/L (algae)*
LC50/96h	*11,200 mg/l (fishes) (freshwater)*

· ***12.2 Persistence and degradability*** *No further relevant information available.*
· ***Method***
· ***Ecological information*** *Not available*
· ***12.3 Bioaccumulative potential*** *No further relevant information available.*
· ***12.4 Mobility in soil*** *No further relevant information available.*
· ***Additional ecological information:***
· ***General notes:***
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*
· ***12.6 Other adverse effects*** *No further relevant information available.*

*
SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Reutilise if possible or contact a waste processors for recycling or safe disposal.
· ***Uncleaned packaging:***
· ***Recommendation:***
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
· ***Recommended cleansing agents:*** *Water, if necessary together with cleansing agents.*

SECTION 14: Transport information

· ***14.1 UN-Number***
· ***ADR/RID, IMDG, IATA*** *UN1993*

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 Version number 10 Revision: 27.06.2023

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 7)

· **14.2 UN proper shipping name**
· **ADR/RID** 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), special provision 640D
· **IMDG** FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))
· **IATA** Flammable liquid, n.o.s. (Ethanol)

· **14.3 Transport hazard class(es)**

· **ADR/RID**

· **Class** 3 (F1) Flammable liquids.
· **Label** 3

· **IMDG, IATA**

· **Class** 3 Flammable liquids.
· **Label** 3

· **14.4 Packing group**
· **ADR/RID, IMDG, IATA** II

· **14.5 Environmental hazards:** Not applicable.

· **14.6 Special precautions for user** Warning: Flammable liquids.
· **Hazard identification number (Kemler code):** 33
· **EMS Number:** F-E,S-E
· **Stowage Category** A

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR/RID**
· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
· **Transport category** 2
· **Tunnel restriction code** D/E

· **IMDG**
· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 8)

· **UN "Model Regulation":**	UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), 3, II

SECTION 15: Regulatory information

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

· **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

· **SARA Section 313 (specific toxic chemical listings)**

CAS: 67-63-0	propan-2-ol

· **Prop 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

· **Chemical safety assessment**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	50-100

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Other regulations, limitations and prohibitive regulations**
735.3 g/l
91.00 %
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
· **Department issuing SDS:** Q.A./Normative
· **Abbreviations and acronyms:**
RCR : Risk Characterisation Ratio
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 9)

vPvB: very Persistent and very Bioaccumulative
IMO : International Maritime Oragnization
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· ***Sources***
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006, UK REACH, in the latest valid version.
Regulation (EC) N° 1272/2008 of the European Parliament and of the Council of 16 December 2008, GB CLP, in the latest valid version.
Globally Harmonized System, GHS
ADR/RID, IMDG, IATA
PubChem : an open chemistry database at the National Institutes of Health (NIH)
ECHA : European CHemicals Agency
GESTIS : Information system on hazardous substances of the German Social Accident Insurance

· **** Data compared to the previous version altered.*** .

(Contd. on page 11)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 10)

Annex: Exposure scenario 1

· ***Short title of the exposure scenario***
· ***Sector of Use***
Industrial use.
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU9 Manufacture of fine chemicals
· ***Process category***
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
· ***Environmental release category***
ERC1 Manufacture of the substance
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***Conditions of use*** *Customary application according to section 1.*
· ***Duration and frequency*** *5 workdays/week.*
· ***Worker***
5 workdays/week.
8hrs (full working shift).
· ***Physical parameters***
The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.
· ***Physical state*** *Fluid*
· ***Concentration of the substance in the mixture*** *Raw material.*
· ***Used amount per time or activity*** *200000 tons per year*
· ***Other operational conditions*** *Observe the general safety regulations when handling chemicals.*
· ***Other operational conditions affecting environmental exposure***
Observe section 6 of the Safety Data Sheet (Accidental release measures).
· ***Other operational conditions affecting worker exposure***
Take precautionary measures against static discharge.
Keep away from sources of ignition - No smoking.
Keep container tightly closed.
· ***Risk management measures***
· ***Worker protection***
· ***Organisational protective measures***
Keep good industrial hygiene.
Ensure that activities are executed by specialists or authorised personnel only.
Deploy only trained chemical workers.
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.
For special applications, it is recommended to verify the chemical resistance of the above stated protective gloves with the manufacturer.
Provide sufficient washing facilities.
Work clothes must not consist of textiles that exhibit dangerous melting behaviour in case of fire.

(Contd. on page 12)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 Version number 10 Revision: 27.06.2023

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 11)

· **Technical protective measures**
The work process has to be performed under closed conditions.
Provide explosion-proof electrical equipment.
Ensure good ventilation/exhaustion at the workplace.
· **Personal protective measures**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Rubber gloves
Tightly sealed goggles
The usual precautionary measures are to be adhered to when handling chemicals.
Detailed measures on hand protection according to Safety Data Sheet, section 8.
Use suitable respiratory protective device only when aerosol or mist is formed.
Filter AX
Filter P2
· **Environmental protection measures**
· **Water** Do not allow to reach sewage system.
· **Soil** Prevent contamination of soil.
· **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.
· **Disposal measures**
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· **Disposal procedures**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Worker (dermal)**
The highest dermal exposure to be expected is 13.71 mg / kg / day.
The exposure estimation was carried out in accordance with ECETOC TRA.
· **Worker (inhalation)**
The highest inhalative exposure to be expected is 50 ppm.
The exposure estimation was carried out in accordance with ECETOC TRA.
· **Environment**
The highest environmental exposure to be expected in purification plants is 5.65 mg / L.
The highest environmental exposure to be expected for surface waters is 0.0742 mg / L.
The highest environmental exposure to be expected for soil is 0.00736 mg / kg wet weight.
· **Guidance for downstream users**
For the risk assessment, the tools recommended by ECHA can be used.
Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

(Contd. on page 13)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 12)

Annex: Exposure scenario 2

· ***Short title of the exposure scenario*** *Formulation or re-packing*
· ***Sector of Use***
Industrial use.
Substance for the industrial manufacture of preparations/mixtures.
· ***Process category***
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC14 Tabletting, compression, extrusion, pelletisation, granulation
· ***Environmental release category*** *ERC2 Formulation into mixture*
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***Conditions of use***
According to directions for use.
Customary application according to section 1.
· ***Duration and frequency*** *5 workdays/week.*
· ***Worker*** *Long-term.*
· ***Environment*** *The product must not be released into the environment.*
· ***Physical parameters***
The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.
· ***Physical state*** *Fluid*
· ***Concentration of the substance in the mixture*** *Raw material.*
· ***Used amount per time or activity***
30000 tons per year
100000 kg per day
· ***Other operational conditions*** *Observe the general safety regulations when handling chemicals.*
· ***Other operational conditions affecting environmental exposure*** *No special measures required.*
· ***Other operational conditions affecting worker exposure***
Observe section 6 of the Safety Data Sheet (Accidental release measures).
Take precautionary measures against static discharge.
Keep away from sources of ignition - No smoking.
· ***Risk management measures***
· ***Worker protection***
· ***Organisational protective measures***
Keep good industrial hygiene.
Ensure that activities are executed by specialists or authorised personnel only.
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.
Provide sufficient washing facilities.
Work clothes must not consist of textiles that exhibit dangerous melting behaviour in case of fire.
· ***Technical protective measures***
Carry out filling operations only at sites with extractors available.
Provide explosion-proof electrical equipment.
Ensure good ventilation/exhaustion at the workplace.
· ***Personal protective measures***
Protective work clothing
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 14)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 13)

Protective gloves
Rubber gloves
Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.
Tightly sealed goggles
The usual precautionary measures are to be adhered to when handling chemicals.
Detailed measures on hand protection according to Safety Data Sheet, section 8.
Use suitable respiratory protective device only when aerosol or mist is formed.
Filter P2
· ***Environmental protection measures***
· ***Water*** *Do not allow to reach sewage system.*
· ***Soil*** *Prevent contamination of soil.*
· ***Notes*** *In case of unintended release of the product: See section 6 of the Safety Data Sheet.*
· ***Disposal measures*** *Ensure that waste is collected and contained.*
· ***Disposal procedures***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· ***Waste type*** *Partially emptied and uncleaned packaging*
· ***Exposure estimation***
· ***Worker (dermal)***
The highest dermal exposure to be expected is 13.71 mg / kg / day.
The exposure estimation was carried out in accordance with ECETOC TRA.
· ***Worker (inhalation)***
The highest inhalative exposure to be expected is 50 ppm.
The exposure estimation was carried out in accordance with ECETOC TRA.
· ***Environment***
The highest environmental exposure to be expected in purification plants is 0.00533 mg / L.
The highest environmental exposure to be expected for surface waters is 0.00291 mg / L.
The highest environmental exposure to be expected for soil is 0.00162 mg / kg wet weight.
· ***Guidance for downstream users***
For the risk assessment, the tools recommended by ECHA can be used.
Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

(Contd. on page 15)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 Version number 10 Revision: 27.06.2023

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 14)

Annex: Exposure scenario 3

· **Short title of the exposure scenario** Chemicals products for laboratory
· **Sector of Use** Industrial use.
· **Process category** PROC15 Use as laboratory reagent
· **Environmental release category**
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
· **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
· **Conditions of use**
Customary application according to section 1.
According to directions for use.
· **Duration and frequency** 5 workdays/week.
· **Worker** 8hrs (full working shift).
· **Physical parameters**
The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.
· **Physical state** Fluid
· **Concentration of the substance in the mixture** Raw material.
· **Used amount per time or activity**
20 tons per year
1000 kg per day
· **Other operational conditions** Observe the general safety regulations when handling chemicals.
· **Other operational conditions affecting environmental exposure** No special measures required.
· **Other operational conditions affecting worker exposure**
Take precautionary measures against static discharge.
Keep away from sources of ignition - No smoking.
· **Risk management measures**
· **Worker protection**
· **Organisational protective measures**
Keep good industrial hygiene.
Ensure that activities are executed by specialists or authorised personnel only.
Provide sufficient washing facilities.
Work clothes must not consist of textiles that exhibit dangerous melting behaviour in case of fire.
· **Technical protective measures**
Provide explosion-proof electrical equipment.
Ensure good ventilation/exhaustion at the workplace.
· **Personal protective measures**
Do not inhale gases / fumes / aerosols.
Tightly sealed goggles
The usual precautionary measures are to be adhered to when handling chemicals.
Detailed measures on hand protection according to Safety Data Sheet, section 8.
Use suitable respiratory protective device only when aerosol or mist is formed.
Filter P2
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Protective gloves
Rubber gloves
Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.
Protective work clothing
· **Environmental protection measures**
· **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.

(Contd. on page 16)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.06.2023 *Version number 10* *Revision: 27.06.2023*

Trade name: Complete denaturing Ethanol (3199/93/EC in the latest valid version)

(Contd. of page 15)

· ***Disposal measures*** *Ensure that waste is collected and contained.*
· ***Disposal procedures***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· ***Waste type*** *Partially emptied and uncleaned packaging*
· ***Exposure estimation***
· ***Worker (dermal)***
The highest dermal exposure to be expected is 0.34 mg / kg / day.
The exposure estimation was carried out in accordance with ECETOC TRA.
· ***Worker (inhalation)***
The highest inhalative exposure to be expected is 10 ppm.
The exposure estimation was carried out in accordance with ECETOC TRA.
· ***Environment***
The highest environmental exposure to be expected in purification plants is 1 mg / L.
The highest environmental exposure to be expected for surface waters is 0.0155 mg / L.
The highest environmental exposure to be expected for soil is 0.00215 mg / kg wet weight.
· ***Guidance for downstream users***
For the risk assessment, the tools recommended by ECHA can be used.
Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.