



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14 PAGE 1 OF 10

| Product Name | | Ethanol IDA Grades | | | | |
|----------------------------------|------------------------|------------------------------|-----------------|------------------------------|-----------------|-------------------------|
| Alternative Name | | Industrial Denatured Alcohol | | | | |
| Product Grade | | IMS/3 (05/02) | | | | |
| Parameter | Units | IDA 95 | IDA 96 | IDA 99 | IDA 100 | Test Method |
| Alcohol Content | % volume at 20°C | 95.1 max | 96.1 max | 99.5 max | 100 max | OIML |
| Water Content | | 94.7 min | 95.7 min | 99.1 min | 99.7 min | |
| Acidity | % mass | 8.0 max | 6.6 max | 1.43 max | 0.5 max | BS 2511 |
| | % mass as acetic acid | 0.003 max | 0.003 max | 0.003 max | 0.003 max | B P Method |
| Total Carbonyls | (fixed) | | | | | |
| Appearance | % mass as acetaldehyde | 0.1 max | 0.1 max | 0.1 max | 0.1 max | BS 6392/3 ISO 1388/4 |
| | | Clear | Clear | Clear | Clear | |
| | | Colourless | Colourless free | colourless free | colourless free | BP Method |
| | | free from | from suspended | from suspended | from suspended | |
| | | suspended | matter | matter | matter | |
| Colour | Hazen | | | | | |
| Miscibility With | | 20 max | 20 max | 20 max | 20 max | B P Method |
| Water | | | | | | BS6392/9 |
| Residue On | | Complete | Complete | Complete | Complete | ISO 1388/2 |
| Evaporation | | | | | | BS 4524 |
| | % mass | 0.010 max | 0.010 max | 0.010 max | 0.010 max | ISO 759 |
| PROPERTY | | CONDITIONS | | UNIT | | VALUE |
| Molecular mass | | | | | | 46.07 |
| Density | | 20°C | | kg/litre (vacuo) | | 0.7894 |
| Coefficient of Cubical expansion | | 20°C | | per °C | | 1.08 x 10 ⁻³ |
| Litres per Tonne | | 20°C | | litres/T (in air) | | 1268.6 |
| Melting point | | | | °C | | -112.3 |
| Boiling point | | 1.013 bar | | °C | | 78.32 |
| Change in boiling point | | 1.013 bar | | °C/mbar | | 0.025 |
| Vapour pressure | | 20°C | | m/bar | | 58.1 |
| Flammable limits | | | | | | |
| | Upper | 20°C | | % volume | | 19.0 |
| | Lower | 20°C | | % volume | | 3.5 |
| Flash point | | Abel closed cup | | °C | | 12 |
| Auto ignition temperature | | | | °C | | 365 |
| Specific heat (liquid) | | 20°C | | kJ/kg°C | | 2.399 |
| Specific heat (vapour) | | 90°C | | kJ/kg°C | | 1.70 |
| Latent heat | | | | | | |
| | (of fusion) | | | kJ/kg | | 104.3 |
| | (of vaporisation) | 78.3°C | | kJ/kg | | 855.4 |
| Heat of combustion | | 20°C | | Mj/kg | | 30.15 |
| Critical temperature | | | | °C | | 240.77 |
| Critical pressure | | | | bar | | 64 |
| Critical volume | | | | m ³ /kg mole | | 0.1669 |
| Volume Resistivity | | 25°C | | ohm.m | | 7.0 x 10 ³ |
| Thermal Conductivity | | 20°C | | mW/m.°C | | 167.26 |
| Dielectric constant | | °C | | | | 25.7 |
| Refractive index | | 20°C | | n ²⁰ _D | | 1.3614 |
| Absolute viscosity | | 20°C | | cP | | 1.22 |
| Solubility in water | | 20°C | | g/kg | | Complete |
| water in solvent | | 20°C | | g/kg | | Complete |
| Evaporation rate | | 20°C | | | | 3.4 |
| Relative to n-BuAc = 1 | | | | | | |



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14

PAGE 2 OF 10

NOTES

Exclusion of Liability

Information contained in this publication is accurate to the best of the knowledge and belief of Tennants.

Any information or advice obtained from Tennants otherwise than by means of this publication and whether relating to Tennants materials or other materials, is also given in good faith. However, it remains at all times the responsibility of the customer to ensure that Tennants materials are suitable for the particular purpose intended.

Tennants accepts no liability whatsoever (except as otherwise provided by law) arising out of the use of information supplied, the application, adaptation or processing of the products described herein, the use of other materials in lieu of Tennants materials or the use of Tennants materials in conjunction with such other materials.

Health and Safety

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14

PAGE 3 OF 10

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Product Name Ethanol Blend - IDA
HMRC Tariff Number 2207 20 00 90
REACH Registration Number 01-2119457610-43-XXXX/01-2119457610-43-XXXX

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

Identified use(s) Industrial use, raw material for pharmaceutical products, raw material for plastics additives, raw material for lubricants and lubricant additives
Uses advised against No information provided

1.3 Details of the supplier of the safety data sheet

Tennants Distribution Limited
Hazelbottom Road
Cheetham
Manchester
M8 0GR
Tel: 44(0)161 205 4454
Fax: 44(0) 161 203 4298
Email: msds@tennantsdistribution.com

1.4 Emergency telephone number

Tel: 44(0)844 335 0001 (24 hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation 1272/2008 (CLP)

Flammable liquids, Category 2
Eye irritation, Category 2, Eyes
Specific target organ toxicity - single exposure, Category 2

H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H371: May cause damage to organs.

2.1.2 EEC Directive 67/548/EEC & Directive 1999/45/EC

Highly flammable R11: Highly flammable

2.2 Label elements

2.2.1 According to Regulation (EC) No. 1272/2008 (CLP).

Hazard Pictogram



Signal word(s) Danger.

Hazard statement(s)

H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H371: May cause damage to organs..

Precautionary statement(s)

Prevention

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P243: Take precautionary measures against static discharge.

Response

P303+P361+P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ 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.
P309+P311: IF exposed or if you feel unwell: Call a POISON CENTRE or doctor/ physician.

Storage

P403+P235: Store in a well-ventilated place. Keep cool

2.3. Other hazards

Vapours may form explosive mixtures with air.
Vapours may spread long distances and ignite.
Irritating to eyes



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14 PAGE 4 OF 10

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Hazardous Components

Ethanol; ethyl alcohol

| | |
|---------------------------------|--|
| Content | >=95 - <=100 |
| REACH Registration number | 01-2119457610-43-XXXX |
| CAS-No. | 64-17-5 |
| EC No. | 200-578-6 |
| Classification | |
| (67/548/EEC) | F; R11 |
| (Regulation (EC) No. 1272/2008) | Flam. Liq. 2; H225. Eye Irrit. 2; H319 |

Methanol

| | |
|---------------------------------|--|
| Content | >=1 - <3 |
| REACH Registration number | 01-2119433307-44-XXXX |
| CAS-No. | 67-56-1 |
| EC No. | 200-659-6 |
| Classification | |
| (67/548/EEC) | F; R11 T; R23/24/25, R39/23/24/25 |
| (Regulation (EC) No. 1272/2008) | Flam. Liq. 2; H225. Acute Tox. 3; H301. Acute Tox. 3: H311. Acute Tox. 3; H331. STOT SE 1: H370 |

Purchased components of the mixture without a registration number are pre-registered or excluded from REACH. To date the suppliers have sent us no information regarding a subsequent registration
For the full text of the R Phrases mentioned in this Section, see Section 16
For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4.1 Description of first aid measures

General Advice

Take off all contaminated clothing immediately

Inhalation

Move to fresh air

Skin contact

Wash off immediately with plenty of water

Eye contact

Immediately flush eye(s) with plenty of water. If eye irritation persists, consult a specialist

Ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

4.2 Most important symptoms and effects, both acute and delayed

Risks: Irritant effect

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: For specialist advise physicians should contact the Poisons Information Service

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media: Water spray. Dry powder. Alcohol-resistant foam. Carbon dioxide (CO₂) in enclosed spaces

Unsuitable extinguishing media: High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting: Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. When fighting fires in enclosed spaces: caution, danger of suffocation!

5.3 Advice for fire-fighters

Protective equipment for fire-fighters: Use personal protective equipment. Wear self-contained breathing apparatus for fire-fighting if necessary.

Further information: Cool containers / tanks with water spray. Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Keep away from sources of ignition - No smoking



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14 PAGE 5 OF 10

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Do not allow material to contaminate ground water system

6.3 Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13)

6.4 Reference to other sections

For personal protection see section 8

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on protection against fire and explosion: Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Use only explosion-proof equipment

Temperature class: T2

Fire-fighting class: Fires involving liquids or liquid containing substances. Also includes substances which become liquid at elevated temperatures

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cool, well-ventilated place.

German storage class: 3 Flammable Liquids

7.3 Specific end use(s)

Consult the technical guidelines for the use of this substance/mixture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

| Components | CAS-No. | Value | Control parameters | Update | Basis |
|------------|---------|-------|-----------------------------------|---------|----------|
| EtOH | 64-17-5 | TWA | 1,000 ppm 1,920 mg/m ³ | 12 2011 | EH40 WEL |
| Methanol | 67-56-1 | TWA | 200 ppm 260 mg/m ³ | 12 2009 | ECTLV |
| | | TWA | 200 ppm 266 mg/m ³ | 12 2011 | EH40 WEL |
| | | STEL | 250 ppm 333 mg/m ³ | 12 2011 | EH40 WEL |
| | | TWA | 200 ppm 260 mg/m ³ | 12 2009 | ECTLV |
| | | TWA | 200 ppm 266 mg/m ³ | 12 2011 | EH40 WEL |
| | | STEL | 250 ppm 333 mg/m ³ | 12 2011 | EH40 WEL |

DNEL

ethanol; ethyl alcohol

End Use: Workers Exposure routes: Inhalation. Potential health effects: Acute effects, Local effects. Value: 1900 mg/m³

End Use: Workers. Exposure routes: Skin contact. Potential health effects: Chronic effects. Value: 343 mg/kg

End Use: Workers. Exposure routes: Inhalation. Potential health effects: Chronic effects. Value: 950 mg/m³

End Use: Consumers. Exposure routes: Inhalation. Potential health effects: Acute effects, Local effects. Value: 950 mg/m³

End Use: Consumers. Exposure routes: Skin contact. Potential health effects: Chronic effects. Value: 206 mg/kg

End Use: Consumers. Exposure routes: Inhalation. Potential health effects: Chronic effects. Value: 114 mg/m³

End Use: Consumers. Exposure routes: Ingestion. Potential health effects: Chronic effects. Value: 87 mg/kg

methanol

End Use: Workers Exposure routes: Skin contact Potential health effects: Acute effects Value: 40 mg/kg

End Use: Workers Exposure routes: Inhalation Potential health effects: Acute effects Value: 260 mg/m³ 200 ppm

End Use: Workers Exposure routes: Inhalation Potential health effects: Acute effects, Local effects Value: 260 mg/m³ 200



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14 PAGE 6 OF 10

ppm

End Use: Workers Exposure routes: Skin contact Potential health effects: Chronic effects Value: 40 mg/kg

End Use: Workers Exposure routes: Inhalation Potential health effects: Chronic effects Value: 260 mg/m³ 200 ppm

End Use: Workers. Exposure routes: Inhalation. Potential health effects: Chronic effects, Local effects

Value: 260 mg/m³ 200 ppm

End Use: Consumers. Exposure routes: Skin contact. Potential health effects: Acute effects. Value: 8 mg/kg

End Use: Consumers. Exposure routes: Inhalation. Potential health effects: Acute effects. Value: 50 mg/m³

End Use: Consumers. Exposure routes: Ingestion. Potential health effects: Acute effects. Value: 8 mg/kg

End Use: Consumers. Exposure routes: Inhalation. Potential health effects: Acute effects, Local effects

Value: 50 mg/m³

End Use: Consumers. Exposure routes: Skin contact. Potential health effects: Chronic effects. Value: 8 mg/kg

End Use: Consumers. Exposure routes: Inhalation. Potential health effects: Chronic effects. Value: 50 mg/m³

End Use: Consumers. Exposure routes: Ingestion. Potential health effects: Chronic effects. Value: 8 mg/kg

End Use: Consumers. Exposure routes: Inhalation. Potential health effects: Chronic effects, Local effects

Value: 50 mg/m³

Predicted No Effect Concentrations (PNEC):

ethanol; ethyl alcohol

Fresh water Value: 0.96 mg/l

Marine water Value: 0.79 mg/l

Sediment (Fresh water) Value: 3.6 mg/kg

Soil Value: 0.63 mg/kg

methanol

Fresh water Value: 154 mg/l

Marine water Value: 15.4 mg/l

Sediment (Fresh water) Value: 570.4 mg/kg

Soil Value: 23.5 mg/kg

8.2 Exposure controls

Appropriate engineering controls

Provide sufficient air exchange and/or exhaust in work rooms

Respiratory protection

No personal respiratory protective equipment normally required. In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a type A filter or appropriate combined filter (e.g. where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141

Hand protection

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature).

Gloves suitable for permanent contact: Material: butyl-rubber. Break through time: \geq 480 min. Material thickness: 0.5 mm. Material: Fluorkautschuk. Break through time: \geq 480 min. Material thickness: 0.4 mm

Gloves suitable for splash protection: Material: Polychloroprene. Break through time: \geq 120 min. Material thickness: 0.5 mm

Unsuitable gloves: Material: Natural rubber/natural latex, Nitrile rubber/nitrile latex

Eye protection

Tightly fitting safety goggles

Hygiene measures

Take off all contaminated clothing immediately

Protective measures

Do not breathe vapours or spray mist

Environmental protection

General advice: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Do not allow material to contaminate ground water system



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14 PAGE 7 OF 10

| | |
|---|---|
| 9. PHYSICAL AND CHEMICAL PROPERTIES | |
| 9.1 Information on basic physical and chemical properties | |
| Appearance | Liquid |
| Colour | Colourless |
| Odour | Alcohol-like |
| Odour Threshold | No data available |
| pH | Not applicable |
| Melting Point/Range | ca. -114°C |
| Boiling Point/ Range | ca. 75 – 78°C |
| Flash Point | 12°C ASTM D 56 |
| Evaporation Rate | No data available |
| Lower Explosion Limit | ca. 3.5% (V) |
| Upper Explosion Limit | ca. 15% (V) |
| Vapour Pressure | ca. 58 hPa, 20°C |
| Relative Vapour Density | 1.03, 20°C |
| Density | ca. 0.8 g/cm ³ |
| Water Solubility | Completely miscible |
| Partition Coefficient: n-octanol/water | log Pow: -0.35, 20°C |
| Autoignition Temperature | 363°C |
| Thermal Decomposition | Distils without decomposition at atmospheric pressure |
| Viscosity, Dynamic | 1.19 mPas, 20°C |
| Explosive Properties | Not explosive |
| Oxidising Properties | No oxidising properties |
| 9.2 Other information | |
| Refractive Index | 1.361, ISO 5661 |
| 10. STABILITY AND REACTIVITY | |
| 10.1 Reactivity | |
| Vapours may form explosive mixtures with air | |
| 10.2 Chemical stability | |
| Stable under normal conditions | |
| 10.3 Possibility of hazardous reactions | |
| Hazardous reactions: Vapours may form explosive mixture with air | |
| 10.4 Conditions to avoid | |
| Heat, flame and sparks. Extremes of temperature and direct sunlight | |
| 10.5 Incompatible materials | |
| Materials To Avoid: Alkali metals. Acetic anhydride | |
| 10.6 Hazardous decomposition products | |
| None known | |
| 11. TOXICOLOGICAL INFORMATION | |
| 11.1 Information on toxicological effects | |
| Component: ethanol; ethyl alcohol | |
| Acute Oral Toxicity: LD50: > 2,000 mg/kg, rat, OECD Test Guideline 401, GLP: no, (literature value) | |
| Acute Inhalation Toxicity: LC50: > 20 mg/l, 4 h, mouse, (literature value) | |
| Acute Dermal Toxicity: LD50: > 2,000 mg/kg, rabbit, OECD Test Guideline 402, GLP: no, (literature value) | |
| Other Health Effects | |
| This substance has no evidence of carcinogenic properties. | |
| Skin corrosion/irritation | |
| rabbit, Result: not irritating, OECD Test Guideline 404, GLP: yes, (literature value) | |
| Serious eye damage/irritation | |
| rabbit, Result: irritating, OECD Test Guideline 405, (literature value) | |
| Respiratory or skin sensitisation | |
| Maximisation Test, guinea pig, Result: not sensitizing, OECD Test Guideline 406, GLP: yes, (literature value) | |
| Germ cell mutagenicity | |
| Genotoxicity in vitro: Ames test, Salmonella typhimurium, with and without, Result: not mutagenic, OECD Test Guideline 471, GLP: no, (literature value) | |



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14

PAGE 8 OF 10

STOT – Repeated exposure

rat, Oral, Exposure time: 90-day, NOAEL: 1,730 mg/kg, LOAEL: 3,160 mg/kg

methanol

Acute oral toxicity: LD50: > 2,000 mg/kg, rat, GLP: no, (literature value)

Acute inhalation toxicity: LC50: > 20 mg/l, 4 h, rat, GLP: no, (literature value)

Acute dermal toxicity: LD50: > 2,000 mg/kg, rabbit, GLP: no, (literature value)

Skin corrosion/irritation: rabbit, Result: irritating, GLP: no, (literature value)

Serious eye damage/eye irritation: rabbit, Result: irritating, GLP: no, (literature value)

Respiratory or skin sensitisation: Maximisation Test, guinea pig, Result: not sensitizing, GLP: no, (literature value)

Germ cell mutagenicity

Genotoxicity in vitro: Ames test, Salmonella typhimurium, with and without, Result: not mutagenic, Mutagenicity

(Salmonella typhimurium - reverse mutation assay), GLP: no, (literature value)

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment

12.1 Toxicity

Components

ethanol; ethyl alcohol

Toxicity to fish: LC50: > 100 mg/l, 48 h, Leuciscus idus, static test, OECD Test Guideline 203, GLP: no, (literature value)

Toxicity to daphnia and other aquatic invertebrates: EC50: > 100 mg/l, 24 h, Daphnia magna, static test, OECD Test Guideline 202, GLP: yes, (literature value)

Toxicity to algae: EC50: > 100 mg/l, Chlorella pyrenoidosa, static test, OECD Test Guideline 201, GLP: no, (literature value)

methanol

Toxicity to fish: LC50: >100 mg/l, 96h, Salmo gairdneri, semi-static test, literature value)

Toxicity to daphnia and other aquatic invertebrates: EC50: > 100 mg/l, 48 h, Daphnia magna, static test, (literature value)

Toxicity to algae: EC50: > 100 mg/l, 8 d, Scenedesmus quadricauda, static test, (literature value)

12.2 Persistence and degradability

Components

ethanol; ethyl alcohol

Biodegradability: aerobic, > 70 %, Result: Readily biodegradable., Exposure time: 5 d, OECD Test Guideline 301 D, GLP: no, (literature value)

methanol

Biodegradability: aerobic, > 60 %, Result: Readily biodegradable., Exposure time: 5 d, activated sludge of a predominantly domestic sewage, OECD Test Guideline 301 D, GLP: no

12.3 Bio accumulative potential

Components

ethanol; ethyl alcohol

Bioaccumulation: No bioaccumulation is to be expected (log Pow <= 4).

methanol

Bioaccumulation: No bioaccumulation is to be expected (log Pow <= 4).

12.4 Mobility in soil

Components

ethanol; ethyl alcohol

Mobility: No information available

methanol

Mobility: No information available

12.5 Results of PBT and vPvB assessment

Components

ethanol; ethyl alcohol

Assessment: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

methanol: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

Components

ethanol; ethyl alcohol

Chemical Oxygen Demand (COD): ca. 1,700 mg/g, Directive 84/449/EEC, C.9, GLP: no data



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14 PAGE 9 OF 10

Additional ecological information: No data available

methanol

Additional ecological information: In the range of water solubility not toxic under test conditions

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Can be incinerated, when in compliance with local regulations

Contaminated packaging: Contaminated packaging should be emptied optimally and after being suitably cleaned returned for re-use

14. TRANSPORT INFORMATION

14.1 UN No.

ADR/RID/IMDG/IATA

1170

14.2 Proper Shipping Name

ADR/RID/IMDG

ETHANOL SOLUTION, ETHYL ALCOHOL, ETHANOL,
ETHYL ALCOHOL SOLUTION

IATA

ETHANOL

14.3 Transport Hazard Class

ADR/RID/IMDG/IATA

3

14.4 Packing Group

ADR

Packaging Group

II

Classification Code

F1

Hazard Identification No.

33

Labels

3

Tunnel Restriction Code

(D/E)

RID

Classification

II

Classification Code

F1

Hazard Identification No.

33

Labels

3

IMDG

Packaging Group

II

Labels

3

EmS Number

F-E, S-D

IATA

Packing Instruction (cargo aircraft)

364

Packaging Group

II

Labels

3

14.5 Environmental hazards

ADR/RID/IMDG/IATA

Environmentally Hazardous

No

14.6 Special precautions for users

No data

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

Ship type: -

Pollution category: Z

15. REGULATORY INFORMATION

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

Candidate List of Substances of Very High Concern for Authorisation

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Major Accident Hazard List

96/82/EC Highly flammable Quantity 1: 5,000 t Quantity 2: 50,000 t

96/82/EC Methanol 26 Quantity 1: 500 t Quantity 2: 5,000 t

Other Regulations

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

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance



PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)

(IDA) REVISION:3 DATED: 21/01/14 PAGE 10 OF 10

16. OTHER INFORMATION

Full text of R Phrases referred to under sections 2 and 3

R11: Highly flammable.

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.

R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

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

H225: Highly flammable liquid and vapour.

H301: Toxic if swallowed.

H311: Toxic in contact with skin.

H319: Causes serious eye irritation.

H331: Toxic if inhaled.

H370: Causes damage to organs.

H371: May cause damage to organs.

Identified uses

Manufacture/Intermediate: Industrial uses: Uses of substances as such or in preparations at industrial sites

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

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

Use in non-spray applications: Industrial uses: Uses of substances as such or in preparations at industrial sites

Use in spray applications: Industrial uses: Uses of substances as such or in preparations at industrial sites

Use in non-spray applications: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Use in spray applications: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Domestic Fuel: Consumer uses: Private households (= general public = consumers)

Use in products (< 50g / event): Consumer uses: Private households (= general public = consumers)

Enclosed systems: Consumer uses: Private households (= general public = consumers)

Use in coatings and paints: Consumer uses: Private households (= general public = consumers)

Use in antifreeze, de-icing and screen wash products: Consumer uses: Private households (= general public = consumers)

Cleaning products: Consumer uses: Private households (= general public = consumers)

Use as laboratory agent: Industrial uses: Uses of substances as such or in preparations at industrial sites

Laboratory agent: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Heat transfer fluid or other functional fluid: Industrial uses: Uses of substances as such or in preparations at industrial sites

Heat transfer fluid or other functional fluid: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Source of key data used to compile the data sheet

Supplier information

Modifications from last revision

The Safety Data Sheets have been revised throughout in accordance with Regulation (EC) No. 1207/2006 and amendments

Date: 21/01/14

Copyright© Tennants Distribution Ltd (2014)

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Sectors of end-use | SU 3, SU8, SU9: Industrial uses: Uses of substances as such or in preparations at industrial sites, Manufacture of bulk, large scale chemicals (including petroleum products), Manufacture of fine chemicals |
| Process categories | <p>PROC1: Use in closed process, no likelihood of exposure</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Use in closed batch process (synthesis or formulation)</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities</p> |
| Environmental Release Categories | : ERC1, ERC4, ERC6a: Manufacture of substances, 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) |

2.1 Contributing scenario controlling environmental exposure:

ERC1, ERC4, ERC6a: Manufacture of substances, 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)

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|------------------------|------------------|
| Annual amount per site | : 400,000,000 kg |
|------------------------|------------------|

Frequency and duration of use

| | |
|---------------------|-----------------|
| Continuous exposure | : 350 days/year |
|---------------------|-----------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | : Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Other given operational conditions affecting environmental exposure

| | |
|-----------------------------------|--------|
| Emission or Release Factor: Air | : 70 % |
| Emission or Release Factor: Water | 87 % |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Conditions and measures related to municipal sewage treatment plant

Effectiveness (of a measure) : 90 %
Sludge Treatment : Disposal, Recovery Methods

Conditions and measures related to external treatment of waste for disposal

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

2.2 Contributing scenario controlling worker exposure:

PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Liquid substance
Vapour pressure : 57.3 hPa

Amount used

Remarks : Not applicable.

Frequency and duration of use

Frequency of use : > 4 days/week
Frequency of use : > 240 days/year
Application duration : >4 h

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm2)
Remarks : PROC1, PROC2
Dermal exposure : Both hands (960 cm2)
Remarks : PROC8a, PROC8b

Other operational conditions affecting workers exposure

Outdoor / Indoor : Outdoor
Other Operational Conditions affecting worker exposure : Assumes a good basic standard of occupational hygiene is implemented.

Contributing Scenario

General exposures

Risk Management Measures

No other specific measures identified.
Handle substance within a predominantly closed system provided with extract ventilation., Ensure material transfers are under containment or extract ventilation., Provide extraction ventilation at points where emissions occur. Wear suitable gloves tested to EN374. Use suitable eye protection.

3. Exposure estimation and reference to its source

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC1 ERC4 ERC6a | ECETOC TRA, EUSES | | Fresh water | | < 0.0001 mg/L | 0.000028 |
| | | | Marine water | | < 0.0001 mg/L | 0.000003 |
| | | | Soil | | 0.0012 mg/kg dwt | 0.00188 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|-------------------|----------|
| PROC1 | ECETOC TRA, EUSES | Inhalation | | 0.01 ppm | 0.00002 |
| | | | | 0.0192 mg/m3 | 0.00002 |
| | | Skin contact | | 0.3429 mg/kg/day | 0.002212 |
| PROC2 | ECETOC TRA, EUSES | Inhalation | | 10 ppm | 0.020219 |
| | | | | 19.2083 mg/m3 | 0.020219 |
| | | Skin contact | | 1.3714 mg/kg/day | 0.008847 |
| PROC8a | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.042 mg/m3 | 0.101097 |
| | | Skin contact | | 13.714 mg/kg/day | 0.088479 |
| PROC8b | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.042 mg/m3 | 0.101097 |
| | | Skin contact | | 6.8571 mg/kg/day | 0.044239 |
| PROC9 | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.042 mg/m3 | 0.101097 |
| | | Skin contact | | 6.8571 mg/kg/day | 0.044239 |
| | ECETOC TRA, EUSES | | | | |

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|---|
| Main User Groups | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Sectors of end-use | SU 3, SU8, SU9: Industrial uses: Uses of substances as such or in preparations at industrial sites, Manufacture of bulk, large scale chemicals (including petroleum products), Manufacture of fine chemicals |
| Process categories | PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) |
| Environmental Release Categories | : ERC2: Formulation of preparations |

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

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 75,000,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 300 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|-----------------------------|---|
| Other dataOther information | : Receiving surface water flow is 18000 m3/d. |
|-----------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--------|
| Percentage removed from waste eater | : 90 % |
|-------------------------------------|--------|

Conditions and measures related to external treatment of waste for disposal

| | |
|------------------|--|
| Disposal methods | : Dispose of as hazardous waste in compliance with local and national regulations. |
|------------------|--|

2.2 Contributing scenario controlling worker exposure:

PROC8a, PROC8b, PROC9: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, Transfer of substance or

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Physical Form (at time of use) | Liquid substance |
| Vapour pressure | 58.5 hPa |
| Process Temperature | 20 °C |

Amount used

Remarks : Not applicable.

Frequency and duration of use

| | |
|-------------------|-------------------|
| Frequency of use | > 4 workdays/week |
| Frequency of use | 240 days/year |
| Exposure duration | > 4 h |

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm2)

Other operational conditions affecting workers exposure

| | |
|--|---|
| Outdoor / Indoor | Outdoor |
| Outdoor / Indoor | Indoor |
| Ventilation rate per hour | 15 |
| Other Operational Conditions affecting worker exposure | Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenario

Risk Management Measures

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|---------|
| ERC2 | ECETOC TRA | | Fresh water | | 0.52 mg/L | 0.108 |
| | | | Marine water | | 0.0515 mg/L | 0.013 |
| | | | Soil | | 0.007 mg/kg dwt | 0.00222 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|-------------------|----------|
| PROC8a | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | Skin contact | | 13.7143 | 0.088794 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | | | | | |
|--------|----------------------|--------------|--|----------------------|----------|
| | | | | mg/kg/day | |
| PROC8b | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | Skin contact | | 13.7143 mg/kg/day | 0.088794 |
| | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | Skin contact | | 13.7143 mg/kg/day | 0.088794 |

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Sectors of end-use | SU 3, SU 10: Industrial uses: Uses of substances as such or in preparations at industrial sites, Formulation |
| Process categories | PROC3: Use in closed batch process (synthesis or formulation) PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation |
| Environmental Release Categories | : ERC2: Formulation of preparations |

2.1 Contributing scenario controlling environmental exposure:

ERC2: Formulation of preparations

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|----------------|
| Annual amount | 280,000,000 kg |
|---------------|----------------|

Frequency and duration of use

| | |
|---------------------|-----------------|
| Continuous exposure | : 300 days/year |
|---------------------|-----------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | : Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--|
| Percentage removed from waste eater | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |

Conditions and measures related to external treatment of waste for disposal

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Disposal methods Dispose of as hazardous waste in compliance with local and national regulations.

2.2 Contributing scenario controlling worker exposure:

PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14: Use in closed batch process (synthesis or formulation), Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact), Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), Production of preparations or articles by tableting, compression, extrusion, pelletisation

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Physical Form (at time of use) | Liquid substance |
| Vapour pressure | 57.3 hPa |
| Process Temperature | 20 °C |

Amount used

| | |
|---------|-----------------|
| Remarks | Not applicable. |
|---------|-----------------|

Frequency and duration of use

| | |
|------------------|-------------------|
| Frequency of use | > 4 workdays/week |
| Frequency of use | 240 days/year |

Human factors not influenced by risk management

| | |
|-----------------|--|
| Dermal exposure | Palms of both hands (480 cm ²) |
| Remarks | PROC3 |
| Dermal exposure | Both hands (960 cm ²) |
| Remarks | PROC8a, PROC8b |

Other operational conditions affecting workers exposure

| | |
|--|---|
| Outdoor / Indoor | Indoor |
| Ventilation rate per hour | 15 |
| Other Operational Conditions affecting worker exposure | Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenario

Risk Management Measures

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|--------|
| ERC2 | ECETOC TRA | | Fresh water | | 0.185 mg/L | 0.193 |
| | | | Marine water | | 0.0186 mg/L | 0.0235 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Soil

0.0117
mg/kg_dwt

0.0186

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|-------------------|----------|
| PROC3 | ECETOC TRA, EUSES | Inhalation | | 25 ppm | 0.050548 |
| | | | | 48.0208 mg/m3 | 0.050548 |
| | | Skin contact | | 0.3429 mg/kg/day | 0.002212 |
| PROC5 | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | Skin contact | | 13.7143 mg/kg/day | 0.088479 |
| PROC8a | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | Skin contact | | 13.7143 mg/kg/day | 0.088479 |
| PROC8b | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | | | 6.8571 mg/kg/day | 0.044239 |
| PROC9 | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | Skin contact | | 6.8571 mg/kg/day | 0.044239 |
| PROC14 | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | Skin contact | | 3.4826 mg/kg/day | 0.02212 |

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Sectors of end-use | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Process categories | PROCIO: Roller application or brushing PROC13: Treatment of articles by dipping and pouring |
| Environmental Release Categories | ERC4: Industrial use of processing aids in processes and products, not becoming part of articles |

2.1 Contributing scenario controlling environmental exposure:

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

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 27,500,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 300 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--|
| Percentage removed from waste eater | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |

Conditions and measures related to external treatment of waste for disposal

| | |
|------------------|--|
| Disposal methods | : Dispose of as hazardous waste in compliance with local and national regulations. |
|------------------|--|

2.2 Contributing scenario controlling worker exposure:

PROCIO, PROC13: Roller application or brushing, Treatment of articles by dipping and pouring

Product characteristics

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Physical Form (at time of use) Liquid substance
Vapour pressure 57.3 hPa
Process Temperature 20 °C

Amount used

Remarks Not applicable.

Frequency and duration of use

Frequency of use > 4 workdays/week
Frequency of use 240 days/year
Application duration >4 h

Human factors not influenced by risk management

Dermal exposure Palms of both hands (480 cm2)
Remarks PROC13
Dermal exposure Both hands (960 cm2)
Remarks PROCIO

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor
Ventilation rate per hour 15
Outdoor / Indoor Outdoor
Other Operational Conditions Affects a good basic standard of occupational hygiene is
affecting worker exposure implemented.

Contributing Scenario

Risk Management Measures

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|---------|
| ERC4 | ECETOC TRA | | Fresh water | | 0.039 mg/L | 0.0406 |
| | | | Marine water | | 0.0039 mg/L | 0.00494 |
| | | | Soil | | 0.0091 mg/kg/day | 0.0144 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|-------------------|----------|
| PROCIO | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |
| | | Skin contact | | 27.4286 mg/kg/day | 0.176959 |
| PROC13 | ECETOC TRA, EUSES | Inhalation | | 50 ppm | 0.101097 |
| | | | | 96.0417 mg/m3 | 0.101097 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | | | | | |
|--|--|--------------|--|----------------------|----------|
| | | Skin contact | | 13.7143 mg/kg/day | 0.088479 |
|--|--|--------------|--|----------------------|----------|

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|---|
| Main User Groups | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Sectors of end-use | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Process categories | PROC7: Industrial spraying |
| Environmental Release Categories | ERC4: Industrial use of processing aids in processes and products, not becoming part of articles |

2.1 Contributing scenario controlling environmental exposure:

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

Product characteristics

| | |
|---|---|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 25 %. |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 27,500,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|-----------------|
| Continuous exposure | : 300 days/year |
|---------------------|-----------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | : Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Other given operational conditions affecting environmental exposure

| | |
|----------------------------------|--------|
| Emission or Release Factor: Air | : 70 % |
| Emission or Release Factor: Soil | : 70 % |

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--|
| Percentage removed from waste eater | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |

Conditions and measures related to external treatment of waste for disposal

| | |
|------------------|--|
| Disposal methods | : Dispose of as hazardous waste in compliance with local and national regulations. |
|------------------|--|

2.2 Contributing scenario controlling worker exposure:

PROC7: Industrial spraying

Product characteristics

| | |
|---|---|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 25 %. |
|---|---|

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Mixture/Article 25 %.
Physical Form (at time of use) Liquid substance
Vapour pressure 57.3 hPa
Process Temperature 20 °C

Amount used

Remarks Not applicable.

Frequency and duration of use

Frequency of use > 4 workdays/week
Frequency of use 240 days/year
Exposure duration >4 h

Human factors not influenced by risk management

Dermal exposure : Two hands and forearms (1500 cm2)

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor
Ventilation rate per hour 15
Other Operational Conditions Affects a good basic standard of occupational hygiene is
affecting worker exposure implemented.

Contributing Scenario

Risk Management Measures

Wear suitable respiratory protection (conforming to EN140 with Type A filter or better) and gloves (type EN374) if regular skin contact likely.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|---------|
| ERC4 | ECETOC TRA | | Fresh water | | 0.039 mg/L | 0.0406 |
| | | | Marine water | | 0.0039 mg/L | 0.00494 |
| | | | Soil | | 0.0091 mg/kg dwt | 0.0144 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|-------------------|----------|
| PROC7 | ECETOC TRA, EUSES | Inhalation | | 250 ppm | 0.505483 |
| | | | | 480.2083 mg/m3 | 0.505483 |
| | | Skin contact | | 42.8571 mg/kg/day | 0.276497 |
| PROC7 | ECETOC TRA, EUSES | Inhalation | | 125 ppm | 0.025274 |
| | | | | 24.0104 mg/m3 | 0.025274 |
| | | Skin contact | | 2.1429 | 0.013825 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |
| Sectors of end-use | SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |
| Process categories | PROCIO: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC19: Hand-mixing with intimate contact and only PPE available |
| Environmental Release Categories | ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems |

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

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 10,000,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|-----------------|
| Continuous exposure | : 365 days/year |
|---------------------|-----------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | : Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|------------------------------|--|
| Effectiveness (of a measure) | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |
| Remarks | : Ensure all waste water is collected and treated via a WWTP. |

Conditions and measures related to external treatment of waste for disposal

| | |
|------------------|--|
| Disposal methods | : Dispose of as hazardous waste in compliance with local and national regulations. |
|------------------|--|

2.2 Contributing scenario controlling worker exposure:

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

PROCIO, PR0C13, PR0C14, PR0C19: Roller application or brushing, Treatment of articles by dipping and pouring, Production of preparations or articles by tableting, compression, extrusion, pelletisation, Hand-mixing with intimate contact and only PPE available

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Physical Form (at time of use) | Liquid substance |
| Vapour pressure | 57.3 hPa |
| Process Temperature | 20 °C |

Amount used

| | |
|---------|-----------------|
| Remarks | Not applicable. |
|---------|-----------------|

Frequency and duration of use

| | |
|------------------|-------------------|
| Frequency of use | > 4 workdays/week |
| Frequency of use | 240 days/year |
| Frequency of use | > 4 hours/day |

Human factors not influenced by risk management

| | |
|-----------------|-----------------------------------|
| Dermal exposure | Palms of both hands (480 cm2) |
| Remarks | PROC13, PROC14 |
| Dermal exposure | Both hands (960 cm2) |
| Remarks | PROCIO |
| Dermal exposure | Two hands and forearms (1980 cm2) |
| Remarks | PROC19 |

Other operational conditions affecting workers exposure

| | |
|--|---|
| Outdoor/Indoor | : Indoor, Outdoor |
| Other Operational Conditions affecting worker exposure | : Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenario

PROC19

Risk Management Measures

: Avoid carrying out operation for more than 4 hours., , or:, Limit the substance content in the product to 25 %.
Use suitable eye protection.Wear suitable gloves tested to EN374.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|---------|
| ERC8a ERC8d | ECETOC TRA | | Fresh water | | 0.045 mg/L | 0.0469 |
| | | | Marine water | | 0.0044 mg/L | 0.00557 |
| | | | Soil | | 0.0003 mg/kg dwt | 0.00476 |

Health

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|--------------------|----------|
| PROCIO | ECETOC TRA, EUSES | Inhalation | | 100 ppm | 0.202193 |
| | | | | 192.0833 mg/m3 | 0.202193 |
| | | Skin contact | | 27.4286 mg/kg/day | 0.176959 |
| PROC13 | ECETOC TRA, EUSES | Inhalation | | 100 ppm | 0.202193 |
| | | | | 192.0833 mg/m3 | 0.202193 |
| | | Skin contact | | 13.7143 mg/kg/day | 0.088479 |
| PROC14 | ECETOC TRA, EUSES | Inhalation | | 100 ppm | 0.202193 |
| | | | | 192.0833 mg/m3 | 0.202193 |
| | | Skin contact | | 3.4286 mg/kg/day | 0.02212 |
| PROC19 | ECETOC TRA, EUSES | Inhalation | | 100 ppm | 0.202193 |
| | | | | 192.0833 mg/m3 | 0.202193 |
| | | Skin contact | | 28.2857 mg/kg/day | 0.182489 |
| PROC19 | ECETOC TRA, EUSES | Inhalation | | 60 ppm | 0.121316 |
| | | | | 115.25 mg/m3 | 0.121316 |
| | | Skin contact | | 141.4286 mg/kg/day | 0.912443 |
| PROC19 | ECETOC TRA, EUSES | Inhalation | | 60 ppm | 0.121316 |
| | | | | 115.25 mg/m3 | 0.121316 |
| | | Skin contact | | 84.8572 mg/kg/day | 0.547466 |
| PROC19 | ECETOC TRA, EUSES | Inhalation | | 20 ppm | 0.040439 |
| | | | | 38.4167 mg/m3 | 0.040439 |
| | | Skin contact | | 28.2857 mg/kg/day | 0.182489 |
| PROC19 | ECETOC TRA, EUSES | Inhalation | | 36 ppm | 0.072789 |
| | | | | 69.15 mg/m3 | 0.072789 |
| | | Skin contact | | 84.8572 mg/kg/day | 0.547466 |
| PROC19 | ECETOC TRA, EUSES | Inhalation | | 70 ppm | 0.141535 |
| | | | | 134.4583 mg/m3 | 0.141535 |
| | | Skin contact | | 141.4286 mg/kg/day | 0.912443 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |
| Sectors of end-use | SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |
| Process categories | PROC11: Non industrial spraying |
| Environmental Release Categories | ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems |

2.1 Contributing scenario controlling environmental exposure:

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Product characteristics

| | |
|---|---|
| Concentration of the Substance in Mixture/Article | : Covers the percentage of the substance in the product up to 25 %. |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 10,000,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 365 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|------------------------------|--|
| Effectiveness (of a measure) | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |
| Remarks | : Ensure all waste water is collected and treated via a WWTP. |

Conditions and measures related to external treatment of waste for disposal

| | |
|------------------|--|
| Disposal methods | : Dispose of as hazardous waste in compliance with local and national regulations. |
|------------------|--|

2.2 Contributing scenario controlling worker exposure:

PROC11: Non industrial spraying

Product characteristics

| | |
|---|---|
| Concentration of the Substance in Mixture/Article | : Covers the percentage of the substance in the product up to 25 %. |
| Physical Form (at time of use) | : Liquid substance |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Vapour pressure 57.3 hPa
Process Temperature 20 °C

Amount used

Remarks : Not applicable.

Frequency and duration of use

Frequency of use > 4 workdays/week
Frequency of use 300 days/year

Human factors not influenced by risk management

Dermal exposure : Two hands and forearms (1500 cm²)

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor, Outdoor
Ventilation rate per hour 15

Contributing Scenario

Risk Management Measures

- : Avoid carrying out operation for more than 4 hours., , or:, Limit the substance content in the product to 5 %.
Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Wear suitable gloves tested to EN374.
- : Avoid carrying out operation for more than 1 hour., , or:, Limit the substance content in the product to 25 %.
Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Wear suitable gloves tested to EN374.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|---------|
| ERC8a ERC8d | ECETOC TRA | | Fresh water | | 0.045 mg/L | 0.0469 |
| | | | Marine water | | 0.0044 mg/L | 0.00557 |
| | | | Soil | | 0.0003 mg/kg dwt | 0.00476 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|----------------------------|----------|
| PROC11 | ECETOC TRA, EUSES | Inhalation | | 350 ppm | 0.707675 |
| | | | | 672.2917 mg/m ³ | 0.707675 |
| | | Skin contact | | 21.4286 | 0.138249 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | | | | | |
|--------|----------------------|--------------|--|----------------------|----------|
| | | | | mg/kg/day | |
| PROC11 | ECETOC TRA, EUSES | Inhalation | | 300 ppm | 0.606579 |
| | | | | 576.25 mg/m3 | 0.606579 |
| | | Skin contact | | 64.2857 mg/kg/day | 0.414747 |
| PROC11 | ECETOC TRA, EUSES | Inhalation | | 100 ppm | 0.202193 |
| | | | | 192.0833 mg/m3 | 0.202193 |
| | | Skin contact | | 21.4286 mg/kg/day | 0.138249 |
| PROC11 | ECETOC TRA, EUSES | Inhalation | | 180 ppm | 0.363947 |
| | | | | 345.75 mg/m3 | 0.363947 |
| | | Skin contact | | 21.4286 mg/kg/day | 0.138249 |
| PROC11 | ECETOC TRA, EUSES | Inhalation | | 100 ppm | 0.202193 |
| | | | | 192.0833 mg/m3 | 0.202193 |
| | | Skin contact | | 2.1429 mg/kg/day | 0.013825 |
| PROC11 | ECETOC TRA, EUSES | Inhalation | | 350 ppm | 0.707675 |
| | | | | 672.2917 mg/m3 | 0.707675 |
| | | Skin contact | | 21.4286 mg/kg/day | 0.138249 |

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 21: Consumer uses: Private households (= general public = consumers) |
| Sectors of end-use | SU 21: Consumer uses: Private households (= general public = consumers) |
| Chemical product category | PC13: Fuels |
| Environmental Release Categories | ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems |

2.1 Contributing scenario controlling environmental exposure:

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 10,000,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 365 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

2.2 Contributing scenario controlling consumer exposure for: PC13: Fuels

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Physical Form (at time of use) | Liquid substance |
| Vapour pressure | 57.3 hPa |
| Process Temperature | 20 °C |

Amount used

| | |
|-----------------------|-----|
| Amount used per event | 1 l |
|-----------------------|-----|

Frequency and duration of use

| | |
|-------------------|---------------|
| Frequency of use | : 1 days/week |
| Exposure duration | : 5 min |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Other given operational conditions affecting consumers exposure

Outdoor/Indoor : Indoor, Outdoor

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Application Route : Consumer use
Consumer Measures : No specific measures identified., Use suitable eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|--------|
| ERC8a | ECETOC TRA | | Fresh water | | 0.0447 mg/L | 0.025 |
| | | | Marine water | | 0.0044 mg/L | 0.0043 |
| | | | Soil | | 0.0003 mg/kg dwt | 0.0433 |
| ERC8d | ECETOC TRA | | Fresh water | | 0.0447 mg/L | 0.025 |
| | | | Marine water | | 0.0044 mg/L | 0.0043 |
| | | | Soil | | 0.0003 mg/kg dwt | 0.0043 |

Health

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | : SU 21: Consumer uses: Private households (= general public = consumers) |
| Sectors of end-use | : SU 21: Consumer uses: Private households (= general public = consumers) |
| Chemical product category | PC1: Adhesives, sealants PC3: Air care products PC8: Biocidal products (e.g. Disinfectants, pest control) PC12: Fertilizers PC14: Metal surface treatment products, including galvanic and electroplating products PC15: Non-metal-surface treatment products PC18: Ink and toners PC23: Leather tanning, dye, finishing, impregnation and care products PC24: Lubricants, greases, release products PC27: Plant protection products PC28: Perfumes, fragrances PC30: Photo-chemicals PC31: Polishes and wax blends PC34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids PC39: Cosmetics, personal care products |
| Environmental Release Categories | : ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems |

2.1 Contributing scenario controlling environmental exposure:

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 10,000,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 365 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | : Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------|--------|
| Percentage removed from waste | : 90 % |
|-------------------------------|--------|

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

eater

Sludge Treatment : Can be landfilled or incinerated, when in compliance with local regulations.

Conditions and measures related to external treatment of waste for disposal

Waste treatment : No specific measures identified.

Conditions and measures related to external recovery of waste

Remarks : No specific measures identified.

2.2 Contributing scenario controlling consumer exposure for: PC1, PC3, PC8, PC12, PC14, PC15, PC18, PC23, PC24, PC27, PC28, PC30, PC31, PC34, PC39: Adhesives, sealants, Air care products, Biocidal products (e.g. Disinfectants, pest control), Fertilizers, Metal surface treatment products, including galvanic and electroplating products, Non-metal-surface treatment products, Ink and toners, Leather tanning, dye, finishing, impregnation and care products, Lubricants, greases, release products, Plant protection products, Perfumes, fragrances, Photo-chemicals, Polishes and wax blends, Textile dyes, finishing and impregnating products; including bleaches and other processing aids, Cosmetics, personal care products

Product characteristics

| | |
|---|---|
| Concentration of the Substance in Mixture/Article | Covers percentage substance in the product up to 1 %., PC24, PC31 |
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 5%., PC5, PC10, PC22, PC23, PC27, PC30, PC34 |
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 25%., PC1, PC8, PC14, PC15, PC18 |
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently)., PC3, PC28 |
| Physical Form (at time of use) | Liquid substance |
| Vapour pressure | 57.3 hPa |
| Process Temperature | 20 °C |

Amount used

| | |
|-----------------------|---|
| Amount used per event | 0.05 kg |
| Remarks | PC24, PC31 |
| Amount used per event | 0.05 kg |
| Remarks | PC5, PC10, PC22, PC23, PC27, PC30, PC34 |
| Amount used per event | 0.05 kg |
| Remarks | PC1, PC8, PC14, PC15, PC18 |
| Amount used per event | 0.01 kg |
| Remarks | PC3, PC28 |

Frequency and duration of use

| | |
|-------------------|---------------|
| Frequency of use | 365 days/year |
| Exposure duration | 4 h |

Other given operational conditions affecting consumers exposure

| | |
|----------------|-----------|
| Outdoor/Indoor | : Indoor |
| Room size | : 20 m3 |
| Outdoor/Indoor | : Outdoor |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC8a ERC8d | ECETOC TRA | | Fresh water | | 0.0447 mg/L | 0.0466 |
| | | | Marine water | | 0.0044 mg/L | 0.00557 |
| | | | Soil | | 0.0003 mg/kg dwt | 0.000476 |

Health

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 21: Consumer uses: Private households (= general public = consumers) |
| Sectors of end-use | SU 21: Consumer uses: Private households (= general public = consumers) |
| Chemical product category | PC16: Heat transfer fluids PC17: Hydraulic fluids |
| Environmental Release Categories | ERC9a, ERC9b: Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems |

2.1 Contributing scenario controlling environmental exposure:

ERC9a, ERC9b: Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 10,000,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 365 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

2.2 Contributing scenario controlling consumer exposure for: PC16, PC17: Heat transfer fluids, Hydraulic fluids

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Physical Form (at time of use) | Liquid substance |
| Vapour pressure | 57.3 hPa |
| Process Temperature | 20 °C |

Amount used

| | |
|---------|-----------------|
| Remarks | Not applicable. |
|---------|-----------------|

Frequency and duration of use

| | |
|------------------|-----------------|
| Frequency of use | 1 - 5 days/year |
|------------------|-----------------|

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Application Route : Consumer use
Consumer Measures : Use suitable eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC9a ERC9b | ECETOC TRA | | Fresh water | | 0.0155 mg/L | 0.0161 |
| | | | Marine water | | 0.0014 mg/L | 0.00184 |
| | | | Soil | | 0.0001 mg/kg dwt | 0.000206 |

Health

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)
Sectors of end-use : **SU 21:** Consumer uses: Private households (= general public = consumers)
Chemical product category : **PC9a:** Coatings and paints, thinners, paint removers
PC9c: Finger paints
Environmental Release Categories : **ERC8a, ERC8d:** Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure:

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 25 %.
Viscosity, dynamic : 1.2 mPas at 20 °C

Amount used

Annual amount : 10,000,000 kg

Frequency and duration of use

Continuous exposure : 365 days/year

Environment factors not influenced by risk management

Other data/Other information : Receiving surface water flow is 18000 m3/d.

Conditions and measures related to municipal sewage treatment plant

Percentage removed from waste eater : 90 %
Sludge Treatment : Can be landfilled or incinerated, when in compliance with local regulations.

Conditions and measures related to external treatment of waste for disposal

Waste treatment : No specific measures identified.

2.2 Contributing scenario controlling consumer exposure for: PC9a, PC9c: Coatings and paints, thinners, paint removers, Finger paints

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use) : Liquid substance
Vapour pressure : 57.3 hPa

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Process Temperature 20 °C

Amount used

Amount used per event : 0.250 kg

Frequency and duration of use

Frequency of use : 1 - 5 days/year

Exposure duration : 20-60 min

Human factors not influenced by risk management

Dermal exposure : Covers skin contact area up to 428.00 cm2

Other given operational conditions affecting consumers exposure

Outdoor/Indoor : Indoor

Room size : 20 m3

Outdoor/Indoor : Outdoor

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Application Route : Consumer use

Consumer Measures : Ensure doors and windows are opened.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC8a ERC8d | ECETOC TRA | | Fresh water | | 0.0447 mg/L | 0.0466 |
| | | | Marine water | | 0.0044 mg/L | 0.00557 |
| | | | Soil | | 0.0003 mg/kg dw | 0.000476 |

Health

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 21: Consumer uses: Private households (= general public = consumers) |
| Sectors of end-use | SU 21: Consumer uses: Private households (= general public = consumers) |
| Chemical product category | PC4: Anti-Freeze and de-icing products |
| Environmental Release Categories | ERC8d: Wide dispersive outdoor use of processing aids in open systems |

2.1 Contributing scenario controlling environmental exposure:

ERC8d: Wide dispersive outdoor use of processing aids in open systems

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|----------------|
| Annual amount | 125,000,000 kg |
|---------------|----------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 365 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | : Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--|
| Percentage removed from waste eater | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |

Conditions and measures related to external treatment of waste for disposal

| | |
|---------|--------------------------------|
| Remarks | : Use suitable eye protection. |
|---------|--------------------------------|

2.2 Contributing scenario controlling consumer exposure for: PC4: Anti-Freeze and de-icing products

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Physical Form (at time of use) | Liquid substance |
| Vapour pressure | 57.3 hPa |
| Process Temperature | 20 °C |

Amount used

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Amount used per event : 0.05 kg

Frequency and duration of use

Frequency of use : 50 days/year
Exposure duration : < 5 min

Human factors not influenced by risk management

Dermal exposure : Covers skin contact area up to 214.40 cm²

Other given operational conditions affecting consumers exposure

Outdoor/Indoor : Indoor, Outdoor

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Consumer Measures : No specific measures identified.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC8d | ECETOC TRA | | Fresh water | | 0.014 mg/L | 0.0146 |
| | | | Marine water | | 0.0013 mg/L | 0.00165 |
| | | | Soil | | 0.0001 mg/kg dwt | 0.000206 |

Health

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)
Sectors of end-use : **SU 21:** Consumer uses: Private households (= general public = consumers)
Chemical product category : **PC35:** Washing and cleaning products (including solvent based products)
Environmental Release Categories : **ERC8a, ERC8d:** Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure:

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 25 %.
Viscosity, dynamic : 1.2 mPas at 20 °C

Amount used

Annual amount : 40,000,000 kg

Frequency and duration of use

Continuous exposure : 365 days/year

Environment factors not influenced by risk management

Other data/Other information : Receiving surface water flow is 18000 m3/d.

Conditions and measures related to municipal sewage treatment plant

Percentage removed from waste eater : 90 %
Sludge Treatment : Can be landfilled or incinerated, when in compliance with local regulations.

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

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 5%.
Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use) : Liquid substance
VaDour Dressure : 57.3 hPa

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Process Temperature 20 °C

Amount used

Amount used per event : 0.250 kg

Frequency and duration of use

Frequency of use : 365 hours/day

Exposure duration : 15 min -1 h

Other given operational conditions affecting consumers exposure

Outdoor/Indoor : Indoor, Outdoor

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Application Route : Consumer use

Consumer Measures : No specific measures identified.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC8a ERC8d | ECETOC TRA | | Fresh water | | 0.0818 mg/L | 0.0852 |
| | | | Marine water | | 0.008 mg/L | 0.0102 |
| | | | Soil | | 0.0004 mg/kg dwt | 0.000716 |

Health

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

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Sectors of end-use | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Process categories | PROC15: Use as laboratory reagent |
| Environmental Release Categories | ERC2, ERC4, ERC8a: Formulation of preparations, Industrial use of processing aids in processes and products, not becoming part of articles, Wide dispersive indoor use of processing aids in open systems |

2.1 Contributing scenario controlling environmental exposure:

ERC2, ERC4, ERC8a: Formulation of preparations, Industrial use of processing aids in processes and products, not becoming part of articles, Wide dispersive indoor use of processing aids in open systems

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|--------------|
| Annual amount | 5,000,000 kg |
|---------------|--------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 300 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | : Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--|
| Percentage removed from waste eater | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |
| Remarks | : Ensure all waste water is collected and treated via a WWTP. |

2.2 Contributing scenario controlling worker exposure:

PROC15: Use as laboratory reagent

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Physical Form (at time of use) | Liquid substance |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Vapour pressure 57.3 hPa
Process Temperature 20 °C

Amount used

Remarks Not applicable.

Frequency and duration of use

Frequency of use > 4 workdays/week
Frequency of use 240 days/year
Exposure duration 1 - 4 h

Human factors not influenced by risk management

Dermal exposure : Palm of one hand (240 cm²)

Other operational conditions affecting workers exposure

Outdoor/Indoor : Indoor
Other Operational Conditions : Assumes a good basic standard of occupational hygiene is affecting worker exposure implemented.

Contributing Scenario

Laboratory activities

Risk Management Measures

: No specific measures identified. Use suitable eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC2 ERC4 ERC8a | ECETOC TRA | | Fresh water | | 0.027 mg/L | 0.0281 |
| | | | Marine water | | 0.0027 mg/L | 0.00342 |
| | | | Soil | | 0.0002 mg/kg dw | 0.000317 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|---------------------------|----------|
| PROC15 | ECETOC TRA, EUSES | Inhalation | | 10 ppm | 0.020219 |
| | | | | 19.2083 mg/m ³ | 0.020219 |
| | | Skin contact | | 0.3429 mg/kg/day | 0.002212 |
| PROC15 | ECETOC TRA, EUSES | Inhalation | | 10 ppm | 0.020219 |
| | | | | 19.2083 mg/m ³ | 0.020219 |
| | | Skin contact | | 0.3429 mg/kg/day | 0.002212 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |
| Sectors of end-use | SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |
| Process categories | PROC15: Use as laboratory reagent |
| Environmental Release Categories | ERC2, ERC4, ERC8a: Formulation of preparations, Industrial use of processing aids in processes and products, not becoming part of articles, Wide dispersive indoor use of processing aids in open systems |

2.1 Contributing scenario controlling environmental exposure:

ERC2, ERC4, ERC8a: Formulation of preparations, Industrial use of processing aids in processes and products, not becoming part of articles, Wide dispersive indoor use of processing aids in open systems

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | : Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|--------------|
| Annual amount | 5,000,000 kg |
|---------------|--------------|

Frequency and duration of use

| | |
|---------------------|---------------|
| Continuous exposure | 300 days/year |
|---------------------|---------------|

Environment factors not influenced by risk management

| | |
|------------------------------|---|
| Other data/Other information | Receiving surface water flow is 18000 m3/d. |
|------------------------------|---|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--|
| Percentage removed from waste eater | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |
| Remarks | : Ensure all waste water is collected and treated via a WWTP. |

2.2 Contributing scenario controlling worker exposure:

PROC15: Use as laboratory reagent

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | : Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Physical Form (at time of use) | : Liquid substance |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Vapour pressure 57.3 hPa
Process Temperature 20 °C

Amount used

Remarks Not applicable.

Frequency and duration of use

Frequency of use > 4 workdays/week
Frequency of use 240 days/year
Exposure duration 1 - 4 h

Human factors not influenced by risk management

Dermal exposure : Palm of one hand (240 cm²)

Other operational conditions affecting workers exposure

Outdoor/Indoor : Indoor
Other Operational Conditions : Assumes a good basic standard of occupational hygiene is affecting worker exposure implemented.

Contributing Scenario

Laboratory activities

Risk Management Measures

: No specific measures identified. Use suitable eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC2 ERC4 ERC8a | ECETOC TRA | | Fresh water | | 0.027 mg/L | 0.0281 |
| | | | Marine water | | 0.0027 mg/L | 0.00342 |
| | | | Soil | | 0.0002 mg/kg dw | 0.000317 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|---------------------------|----------|
| PROC15 | ECETOC TRA, EUSES | Inhalation | | 10 ppm | 0.020219 |
| | | | | 19.2083 mg/m ³ | 0.020219 |
| | | Skin contact | | 0.3429 mg/kg/day | 0.002212 |
| PROC15 | ECETOC TRA, EUSES | Inhalation | | 10 ppm | 0.020219 |
| | | | | 19.2083 mg/m ³ | 0.020219 |
| | | Skin contact | | 0.3429 mg/kg/day | 0.002212 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Sectors of end-use | SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Process categories | PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems |
| Environmental Release Categories | ERC7, ERC9a, ERC9b: Industrial use of substances in closed systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems |

2.1 Contributing scenario controlling environmental exposure:

ERC7, ERC9a, ERC9b: Industrial use of substances in closed systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 10,000,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|---|
| Continuous exposure | The likelihood that workers or the general public or the environment are exposed to the substance under normal or reasonably foreseeable conditions of use is negligible. |
|---------------------|---|

Technical conditions and measures / Organizational measures

| | |
|---------|------------------------------------|
| Remarks | : No specific measures identified. |
|---------|------------------------------------|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--|
| Percentage removed from waste eater | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |

Conditions and measures related to external treatment of waste for disposal

| | |
|------------------|--|
| Disposal methods | : Dispose of as hazardous waste in compliance with local and national regulations. |
|------------------|--|

2.2 Contributing scenario controlling worker exposure:

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Liquid substance
Vapour pressure : 57.3 hPa
Process Temperature : 20 °C

Amount used

Remarks : Not applicable.

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm²)

Other operational conditions affecting workers exposure

Outdoor/Indoor : Indoor, Outdoor
Other Operational Conditions affecting worker exposure : Assumes a good basic standard of occupational hygiene is implemented.

Contributing Scenario

Risk Management Measures

: Handle substance within a closed system., Store substance within a closed system. Use suitable eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|------------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC7 ERC9a ERC9b | ECETOC TRA | | Fresh water | | 0.0107 mg/L | 0.0111 |
| | | | Marine water | | 0.001 mg/L | 0.00127 |
| | | | Soil | | 0.0002 mg/kg dwt | 0.000317 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|---------------------------|----------|
| PROC2Q | ECETOC TRA, EUSES | Inhalation | | 20 ppm | 0.040439 |
| | | | | 38.4167 mg/m ³ | 0.040439 |
| | | Skin contact | | 1.7143 mg/kg/day | 0.01106 |

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

| | |
|----------------------------------|--|
| Main User Groups | SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |
| Sectors of end-use | SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |
| Process categories | PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems |
| Environmental Release Categories | ERC7, ERC9a, ERC9b: Industrial use of substances in closed systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems |

2.1 Contributing scenario controlling environmental exposure:

ERC7, ERC9a, ERC9b: Industrial use of substances in closed systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

Product characteristics

| | |
|---|--|
| Concentration of the Substance in Mixture/Article | Covers the percentage of the substance in the product up to 100 % (unless stated differently). |
| Viscosity, dynamic | 1.2 mPas at 20 °C |

Amount used

| | |
|---------------|---------------|
| Annual amount | 10,000,000 kg |
|---------------|---------------|

Frequency and duration of use

| | |
|---------------------|---|
| Continuous exposure | The likelihood that workers or the general public or the environment are exposed to the substance under normal or reasonably foreseeable conditions of use is negligible. |
|---------------------|---|

Technical conditions and measures / Organizational measures

| | |
|---------|------------------------------------|
| Remarks | : No specific measures identified. |
|---------|------------------------------------|

Conditions and measures related to municipal sewage treatment plant

| | |
|-------------------------------------|--|
| Percentage removed from waste eater | : 90 % |
| Sludge Treatment | : Can be landfilled or incinerated, when in compliance with local regulations. |

Conditions and measures related to external treatment of waste for disposal

| | |
|------------------|--|
| Disposal methods | : Dispose of as hazardous waste in compliance with local and national regulations. |
|------------------|--|

2.2 Contributing scenario controlling worker exposure:

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Liquid substance
Vapour pressure : 57.3 hPa
Process Temperature : 20 °C

Amount used

Remarks : Not applicable.

Human factors not influenced by risk management

Dermal exposure : Palms of both hands (480 cm²)

Other operational conditions affecting workers exposure

Outdoor/Indoor : Indoor, Outdoor
Other Operational Conditions affecting worker exposure : Assumes a good basic standard of occupational hygiene is implemented.

Contributing Scenario

Risk Management Measures

: Handle substance within a closed system., Store substance within a closed system. Use suitable eye protection.

3. Exposure estimation and reference to its source

Environment

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Compartment | Value | Level of Exposure | RCR |
|------------------------|----------------------------|---------------------|--------------|-------|-------------------|----------|
| ERC7 ERC9a ERC9b | ECETOC TRA | | Fresh water | | 0.0107 mg/L | 0.0111 |
| | | | Marine water | | 0.001 mg/L | 0.00127 |
| | | | Soil | | 0.0002 mg/kg dwt | 0.000317 |

Health

| Contributing Scenario | Exposure Assessment Method | Specific conditions | Value | Level of Exposure | RCR |
|-----------------------|----------------------------|---------------------|-------|---------------------------|----------|
| PROC2Q | ECETOC TRA, EUSES | Inhalation | | 20 ppm | 0.040439 |
| | | | | 38.4167 mg/m ³ | 0.040439 |
| | | Skin contact | | 1.7143 mg/kg/day | 0.01106 |