



**PRODUCT: ETHANOL IDA GRADES (Industrial Denatured Alcohol)**

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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 Colourless free from suspended matter	Clear Colourless free from suspended matter	Clear colourless free from suspended matter	Clear colourless free from suspended matter	BP Method
Colour	Hazen					
Miscibility With Water		20 max	20 max	20 max	20 max	B P Method BS6392/9
Residue On Evaporation		Complete	Complete	Complete	Complete	ISO 1388/2 BS 4524 ISO 759
	% mass	0.010 max	0.010 max	0.010 max	0.010 max	
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 <sup>-3</sup>			
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 <sup>3</sup> /kg mole	0.1669			
Volume Resistivity	25°C	ohm.m	7.0 x 10 <sup>3</sup>			
Thermal Conductivity	20°C	mW/m.°C	167.26			
Dielectric constant	°C		25.7			
Refractive index	20°C	n <sup>20</sup> <sub>D</sub>	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						



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**NOTES**

**Exclusion of Liability**

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**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.



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**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](mailto: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



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**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 (CO<sub>2</sub>) 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



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**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 <sup>3</sup>	12 2011	EH40 WEL
Methanol	67-56-1	TWA	200 ppm 260 mg/m <sup>3</sup>	12 2009	ECTLV
		TWA	200 ppm 266 mg/m <sup>3</sup>	12 2011	EH40 WEL
		STEL	250 ppm 333 mg/m <sup>3</sup>	12 2011	EH40 WEL
		TWA	200 ppm 260 mg/m <sup>3</sup>	12 2009	ECTLV
		TWA	200 ppm 266 mg/m <sup>3</sup>	12 2011	EH40 WEL
		STEL	250 ppm 333 mg/m <sup>3</sup>	12 2011	EH40 WEL

**DNEL**

**ethanol; ethyl alcohol**

End Use: Workers Exposure routes: Inhalation. Potential health effects: Acute effects, Local effects. Value: 1900 mg/m<sup>3</sup>

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/m<sup>3</sup>

End Use: Consumers. Exposure routes: Inhalation. Potential health effects: Acute effects, Local effects. Value: 950 mg/m<sup>3</sup>

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/m<sup>3</sup>

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/m<sup>3</sup> 200 ppm

End Use: Workers Exposure routes: Inhalation Potential health effects: Acute effects, Local effects Value:260 mg/m<sup>3</sup> 200



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<p>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/m<sup>3</sup> 200 ppm          End Use: Workers. Exposure routes: Inhalation. Potential health effects: Chronic effects, Local effects          Value: 260 mg/m<sup>3</sup> 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/m<sup>3</sup>          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/m<sup>3</sup>          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/m<sup>3</sup>          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/m<sup>3</sup></p>
<p><b>Predicted No Effect Concentrations (PNEC):</b>  <b>ethanol; ethyl alcohol</b>          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  <b>methanol</b>          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</p>
<p><b>8.2 Exposure controls</b></p>
<p><b>Appropriate engineering controls</b>          Provide sufficient air exchange and/or exhaust in work rooms</p>
<p><b>Respiratory protection</b>          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</p>
<p><b>Hand protection</b>          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).  <b>Gloves suitable for permanent contact:</b> Material: butyl-rubber. Break through time: &gt;= 480 min. Material thickness: 0.5 mm. Material: Fluorkautschuk. Break through time: &gt;= 480 min. Material thickness: 0.4 mm  <b>Gloves suitable for splash protection:</b> Material: Polychloroprene. Break through time: &gt;= 120 min. Material thickness: 0.5 mm  <b>Unsuitable gloves:</b> Material: Natural rubber/natural latex, Nitrile rubber/nitrile latex</p>
<p><b>Eye protection</b>          Tightly fitting safety goggles</p>
<p><b>Hygiene measures</b>          Take off all contaminated clothing immediately</p>
<p><b>Protective measures</b>          Do not breathe vapours or spray mist</p>
<p><b>Environmental protection</b>          General advice: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Do not allow material to contaminate ground water system</p>



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<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>	
<b>9.1 Information on basic physical and chemical properties</b>	
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 <sup>3</sup>
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
<b>9.2 Other information</b>	
Refractive Index	1.361, ISO 5661
<b>10. STABILITY AND REACTIVITY</b>	
<b>10.1 Reactivity</b> Vapours may form explosive mixtures with air	
<b>10.2 Chemical stability</b> Stable under normal conditions	
<b>10.3 Possibility of hazardous reactions</b> Hazardous reactions: Vapours may form explosive mixture with air	
<b>10.4 Conditions to avoid</b> Heat, flame and sparks. Extremes of temperature and direct sunlight	
<b>10.5 Incompatible materials</b> Materials To Avoid: Alkali metals. Acetic anhydride	
<b>10.6 Hazardous decomposition products</b> None known	
<b>11. TOXICOLOGICAL INFORMATION</b>	
<b>11.1 Information on toxicological effects</b> <b>Component: ethanol; ethyl alcohol</b> 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.	
<b>Skin corrosion/irritation</b> rabbit, Result: not irritating, OECD Test Guideline 404, GLP: yes, (literature value)	
<b>Serious eye damage/irritation</b> rabbit, Result: irritating, OECD Test Guideline 405, (literature value)	
<b>Respiratory or skin sensitisation</b> Maximisation Test, guinea pig, Result: not sensitizing, OECD Test Guideline 406, GLP: yes, (literature value)	
<b>Germ cell mutagenicity</b> Genotoxicity in vitro: Ames test, Salmonella typhimurium, with and without, Result: not mutagenic, OECD Test Guideline 471, GLP: no, (literature value)	



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**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





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Additional ecological information: No data available	
<b>methanol</b>	
Additional ecological information: In the range of water solubility not toxic under test conditions	
<b>13. DISPOSAL CONSIDERATIONS</b>	
<b>13.1 Waste treatment methods</b>	
<b>Product:</b> Can be incinerated, when in compliance with local regulations	
<b>Contaminated packaging:</b> Contaminated packaging should be emptied optimally and after being suitably cleaned returned for re-use	
<b>14. TRANSPORT INFORMATION</b>	
<b>14.1 UN No.</b> ADR/RID/IMDG/IATA	1170
<b>14.2 Proper Shipping Name</b> ADR/RID/IMDG  IATA	ETHANOL SOLUTION, ETHYL ALCOHOL, ETHANOL, ETHYL ALCOHOL SOLUTION  ETHANOL
<b>14.3 Transport Hazard Class</b> ADR/RID/IMDG/IATA	3
<b>14.4 Packing Group</b> ADR Packing Group Classification Code Hazard Identification No. Labels Tunnel Restriction Code RID Classification Classification Code Hazard Identification No. Labels IMDG Packing Group Labels EmS Number IATA Packing Instruction (cargo aircraft) Packing Group Labels	  II F1 33 3 (D/E)  II F1 33 3  II 3 F-E, S-D  364 II 3
<b>14.5 Environmental hazards</b> ADR/RID/IMDG/IATA Environmentally Hazardous	No
<b>14.6 Special precautions for users</b>	No data
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> Ship type: - Pollution category: Z	
<b>15. REGULATORY INFORMATION</b>	
<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	
<b>Candidate List of Substances of Very High Concern for Authorisation</b> This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).	
<b>Major Accident Hazard List</b> 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	
<b>Other Regulations</b> Take note of Dir 94/33/EC on the protection of young people at work.	
<b>15.2 Chemical safety assessment</b> A Chemical Safety Assessment has been carried out for this substance	



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**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

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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	<b>SU 3, SU8, SU9:</b> 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	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities
Environmental Release Categories	: <b>ERC1, ERC4, ERC6a:</b> 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 cm<sup>2</sup>)  
Remarks : PROC1, PROC2  
Dermal exposure : Both hands (960 cm<sup>2</sup>)  
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	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	<b>SU 3, SU8, SU9:</b> 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	<b>PROC8a:</b> Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC9:</b> Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Environmental Release Categories	: <b>ERC2:</b> 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
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**Frequency and duration of use**

Continuous exposure	300 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	: Receiving surface water flow is 18000 m3/d.
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**Conditions and measures related to municipal sewage treatment plant**

Percentage removed from waste eater	: 90 %
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**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.
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**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 cm<sup>2</sup>)

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

Continuous exposure	: 300 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	: Receiving surface water flow is 18000 m3/d.
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**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<sup>2</sup>)  
 Remarks PROC3  
 Dermal exposure Both hands (960 cm<sup>2</sup>)  
 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

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Soil 0.0117 0.0186  
mg/kg\_dwt

**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	<b>PROCIO:</b> Roller application or brushing <b>PROC13:</b> Treatment of articles by dipping and pouring
Environmental Release Categories	<b>ERC4:</b> 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
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**Frequency and duration of use**

Continuous exposure	300 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	Receiving surface water flow is 18000 m3/d.
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**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.
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**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)
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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 cm<sup>2</sup>)  
 Remarks    PROC13  
 Dermal exposure                                        Both hands (960 cm<sup>2</sup>)  
 Remarks    PROCIO

**Other operational conditions affecting workers exposure**

Outdoor / Indoor                                        Indoor  
 Ventilation rate per hour                            15  
 Outdoor / Indoor                                        Outdoor  
 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
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/m <sup>3</sup>	0.101097
		Skin contact		27.4286 mg/kg/day	0.176959
PROC13	ECETOC TRA, EUSES	Inhalation		50 ppm	0.101097
				96.0417 mg/m <sup>3</sup>	0.101097

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

		Skin contact		13.7143 mg/kg/day	0.088479
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**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	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	<b>PROC7:</b> Industrial spraying
Environmental Release Categories	<b>ERC4:</b> 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
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**Frequency and duration of use**

Continuous exposure	: 300 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	: Receiving surface water flow is 18000 m <sup>3</sup> /d.
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**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.
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**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 %.
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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 cm<sup>2</sup>)

**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 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/m <sup>3</sup>	0.505483
		Skin contact		42.8571 mg/kg/day	0.276497
PROC7	ECETOC TRA, EUSES	Inhalation		125 ppm	0.025274
				24.0104 mg/m <sup>3</sup>	0.025274
		Skin contact		2.1429	0.013825



ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Main User Groups	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	<b>PROCIO:</b> Roller application or brushing <b>PROC13:</b> Treatment of articles by dipping and pouring <b>PROC14:</b> Production of preparations or articles by tableting, compression, extrusion, pelletisation <b>PROC19:</b> Hand-mixing with intimate contact and only PPE available
Environmental Release Categories	<b>ERC8a, ERC8d:</b> 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
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**Frequency and duration of use**

Continuous exposure	: 365 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	: Receiving surface water flow is 18000 m3/d.
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**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.
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**2.2 Contributing scenario controlling worker exposure:**

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

**PROCIO, PROC13, PROC14, PROC19: 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 cm<sup>2</sup>)  
 Remarks      PROC13, PROC14  
 Dermal exposure      Both hands (960 cm<sup>2</sup>)  
 Remarks      PROCIO  
 Dermal exposure      Two hands and forearms (1980 cm<sup>2</sup>)  
 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	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	<b>PROC11:</b> Non industrial spraying
Environmental Release Categories	<b>ERC8a, ERC8d:</b> 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
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**Frequency and duration of use**

Continuous exposure	:	365 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	:	Receiving surface water flow is 18000 m3/d.
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**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.
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**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 cm<sup>2</sup>)

**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 <sup>3</sup>	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	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Sectors of end-use	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Chemical product category	<b>PC13:</b> Fuels
Environmental Release Categories	<b>ERC8a, ERC8d:</b> 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
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**Frequency and duration of use**

Continuous exposure	365 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	Receiving surface water flow is 18000 m3/d.
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**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
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**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	: <b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Sectors of end-use	: <b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Chemical product category	<b>PC1:</b> Adhesives, sealants <b>PC3:</b> Air care products <b>PC8:</b> Biocidal products (e.g. Disinfectants, pest control) <b>PC12:</b> Fertilizers <b>PC14:</b> Metal surface treatment products, including galvanic and electroplating products <b>PC15:</b> Non-metal-surface treatment products <b>PC18:</b> Ink and toners <b>PC23:</b> Leather tanning, dye, finishing, impregnation and care products <b>PC24:</b> Lubricants, greases, release products <b>PC27:</b> Plant protection products <b>PC28:</b> Perfumes, fragrances <b>PC30:</b> Photo-chemicals <b>PC31:</b> Polishes and wax blends <b>PC34:</b> Textile dyes, finishing and impregnating products; including bleaches and other processing aids <b>PC39:</b> Cosmetics, personal care products
Environmental Release Categories	: <b>ERC8a, ERC8d:</b> 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
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**Frequency and duration of use**

Continuous exposure	365 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	: Receiving surface water flow is 18000 m3/d.
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**Conditions and measures related to municipal sewage treatment plant**

Percentage removed from waste	: 90 %
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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	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Sectors of end-use	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Chemical product category	<b>PC16:</b> Heat transfer fluids <b>PC17:</b> Hydraulic fluids
Environmental Release Categories	<b>ERC9a, ERC9b:</b> 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
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**Frequency and duration of use**

Continuous exposure	365 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	Receiving surface water flow is 18000 m3/d.
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**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.
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**Frequency and duration of use**

Frequency of use	1 - 5 days/year
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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 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	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Sectors of end-use	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Chemical product category	<b>PC4:</b> Anti-Freeze and de-icing products
Environmental Release Categories	<b>ERC8d:</b> 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
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#### **Frequency and duration of use**

Continuous exposure	365 days/year
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#### **Environment factors not influenced by risk management**

Other data/Other information	: Receiving surface water flow is 18000 m3/d.
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#### **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.
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## 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 cm<sup>2</sup>

**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	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	<b>PROC15:</b> Use as laboratory reagent
Environmental Release Categories	<b>ERC2, ERC4, ERC8a:</b> 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
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**Frequency and duration of use**

Continuous exposure	300 days/year
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**Environment factors not influenced by risk management**

Other data/Other information	: Receiving surface water flow is 18000 m3/d.
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**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 cm<sup>2</sup>)

**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 dwt	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 <sup>3</sup>	0.020219
		Skin contact		0.3429 mg/kg/day	0.002212
PROC15	ECETOC TRA, EUSES	Inhalation		10 ppm	0.020219
				19.2083 mg/m <sup>3</sup>	0.020219
		Skin contact		0.3429 mg/kg/day	0.002212

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Main User Groups	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	<b>PROC15:</b> Use as laboratory reagent
Environmental Release Categories	<b>ERC2, ERC4, ERC8a:</b> 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
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**Frequency and duration of use**

Continuous exposure	300 days/year
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**Environment factors not influenced by risk management**

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

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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 cm<sup>2</sup>)

**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 dwt	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 <sup>3</sup>	0.020219
		Skin contact		0.3429 mg/kg/day	0.002212
PROC15	ECETOC TRA, EUSES	Inhalation		10 ppm	0.020219
				19.2083 mg/m <sup>3</sup>	0.020219
		Skin contact		0.3429 mg/kg/day	0.002212

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Main User Groups	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	<b>PROC20:</b> Heat and pressure transfer fluids in dispersive, professional use but closed systems
Environmental Release Categories	<b>ERC7, ERC9a, ERC9b:</b> 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
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**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.
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**Technical conditions and measures / Organizational measures**

Remarks	: No specific measures identified.
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**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.
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**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 cm<sup>2</sup>)

**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 <sup>3</sup>	0.040439
		Skin contact		1.7143 mg/kg/day	0.01106

ANNEX TO SAFETY DATA SHEET: ETHANOL BLEND - 1DA

Main User Groups	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	<b>PROC20:</b> Heat and pressure transfer fluids in dispersive, professional use but closed systems
Environmental Release Categories	<b>ERC7, ERC9a, ERC9b:</b> 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
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**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.
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**Technical conditions and measures / Organizational measures**

Remarks	: No specific measures identified.
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**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.
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**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 cm<sup>2</sup>)

**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 <sup>3</sup>	0.040439
		Skin contact		1.7143 mg/kg/day	0.01106