

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Autogem Hard Surface Cleaner

Version 1.0

Print Date 15/06/2020

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

1.1. Product identifier

Product name : Autogem Hard Surface Cleaner
Product number : HY132

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

Use of the Substance/Mixture : Disinfectant

Uses advised against : At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company : Autogem Invicta Ltd
Autogem House
Abbey Road
London
NW10 7GJ
Telephone : +44 (0) 208 838 0910
E-mail address : sales@autogem.co.uk

1.4. Emergency telephone number

Emergency contact number +44 (0) 1604 701111 (9am to 5pm Monday to Friday excluding bank holidays). Quote the product name. Outside of these hours please contact your doctor or local hospital accident and emergency department or the NHS enquiry service (dial 111) quoting product name and present this MSDS.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	Hazard category	Target Organs	Hazard statements
Flammable liquids	Category 2	---	H225
Eye irritation	Category 2	---	H319

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

Most important adverse effects

- Human Health : See section 11 for toxicological information.
- Physical and chemical hazards : See section 9/10 for physicochemical information.
- Potential environmental : See section 12 for environmental information. effects

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard symbols :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statements

Prevention : P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves/ eye protection/ face protection.

Response : P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

	Classification (REGULATION (EC) No 1272/2008)

Hazardous components	Amount [%]	Hazard class / Hazard category	Hazard statements
ethanol			
Index-No. : 603-002-00-5	>= 70 - <= 85	Flam. Liq.2	H225
CAS-No. : 64-17-5		Eye Irrit.2	H319
EC-No. : 200-578-6			
EU REACH- : 01-2119457610-43-xxxx			
Reg. No.			
propan-2-ol			
Index-No. : 603-117-00-0	>= 3 - <= 5	Flam. Liq.2	H225
CAS-No. : 67-63-0		Eye Irrit.2	H319
EC-No. : 200-661-7		STOT SE3	H336
EU REACH- : 01-2119457558-25-xxxx			
Reg. No.			

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

Non-hazardous component

Chemical name	Identification Number	Amount [%]
Water	CAS-No. : 7732-18-5 EC-No. : 231-791-2	= 10 - <= 20

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice :	Take off all contaminated clothing immediately. Remove from exposure, lie down.
If inhaled :	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.
In case of skin contact :	Wash off immediately with plenty of water. If skin irritation persists, call a physician.
In case of eye contact :	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
If swallowed :	Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms : See Section 11 for more detailed information on health effects and symptoms.

Effects : Health injuries are not known or expected under normal use.

See Section 11 for more detailed information on health effects and symptoms.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media : High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : The vapour may be invisible, heavier than air and spread along ground. Vapours may form explosive mixtures with air. Flash back possible over considerable distance.
Hazardous combustion products : Carbon monoxide, Carbon dioxide (CO₂), Under certain fire conditions, traces of other toxic products cannot be excluded.

5.3. Advice for firefighters

Special protective advice for firefighters : In the event of fire, wear self-contained breathing equipment apparatus. Wear personal protective equipment.
Further advice : Cool closed containers exposed to fire with water spray. Heating will cause a pressure rise - with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Keep away from heat and sources of ignition. Use personal protective equipment. Provide adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

6.3. Methods and materials for containment and cleaning up

Methods and materials 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

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment. See Section 13 for waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Keep container tightly closed. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage : Store in original container. Keep in an area equipped with areas and containers solvent resistant flooring. Keep away from heat and sources of ignition.

Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking. The vapour may be invisible, heavier than air and spread along ground. Vapours may form explosive mixtures with air. Take measures to prevent the build-up of electrostatic charge. Use only in an area containing explosion proof equipment.

Further information on : Keep tightly closed in a dry and cool place. Keep away from storage conditions direct sunlight. Keep in a well-ventilated place.

Advice on common : Incompatible with oxidizing agents. Do not store together with storage oxidizing and self-igniting products. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Component: ethanol **CAS-No.** 64-17-5

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

DNEL		
Workers, Long-term - systemic effects, Inhalation	:	950 mg/m ³
DNEL		
Workers, Acute - local effects, Inhalation	:	1900 mg/m ³
DNEL		
Workers, Long-term - systemic effects, Skin contact	:	343 mg/kg bw/day
DNEL		
Consumers, Long-term - systemic effects, Inhalation	:	114 mg/m ³
DNEL		
Consumers, Acute - local effects, Inhalation	:	950 mg/m ³
DNEL		
Consumers, Long-term - systemic effects, Skin contact	:	206 mg/kg bw/day
DNEL		
Consumers, Long-term - systemic effects, Ingestion	:	87 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Fresh water	:	0.96 mg/l
Marine water	:	0.79 mg/l
Intermittent releases	:	2.75 mg/l
Sewage treatment plant (STP)	:	580 mg/l
Fresh water sediment	:	3.6 mg/kg d.w.
Marine sediment	:	2.9 mg/kg d.w.
Soil	:	0.63 mg/kg d.w.
Secondary poisoning	:	0.72 mg/kg food

Other Occupational Exposure Limit Values

UK. EH40 Workplace Exposure Limits (WELs), Time Weighted Average (TWA): 1,000 ppm, 1,920 mg/m³

ELV (IE), Short Term Exposure Limit (STEL):
1,000 ppm

Component: propan-2-ol **CAS-No. 67-63-0**

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

DNEL
Workers, Long-term - systemic effects, Skin contact : 888 mg/kg bw/day

DNEL
Workers, Long-term - systemic effects, Inhalation : 500 mg/m³

DNEL
Consumers, Long-term - systemic effects, Skin contact : 319 mg/kg bw/day

DNEL
Consumers, Long-term - systemic effects, Inhalation : 89 mg/m³

DNEL
Consumers, Long-term - systemic effects, Ingestion : 26 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Fresh water : 140.9 mg/l

Marine water : 140.9 mg/l

Intermittent releases : 140.9 mg/l

Sewage treatment plant (STP) : 2251 mg/l

Sediment : 552 mg/kg d.w.

Soil : 28 mg/kg

Secondary poisoning : 160 mg/kg food

Other Occupational Exposure Limit Values

UK. EH40 Workplace Exposure Limits (WELs), Short Term Exposure Limit (STEL): 500 ppm, 1,250 mg/m³

UK. EH40 Workplace Exposure Limits (WELs), Time Weighted Average (TWA): 400 ppm, 999 mg/m³

ELV (IE), Skin designation:
Can be absorbed through the skin.

ELV (IE), Time Weighted Average (TWA):
200 ppm

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation.

Use only in an area equipped with an impervious floor.

Since the mixture includes an organic solvent, electrical equipment must be explosion-proof and free from ignition sources such as static electricity and sparks.

Take measures to prevent the build up of electrostatic charge.

Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Personal protective equipment

Respiratory protection

Advice : In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection complying with EN 141.

Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely.

Filter Type : Organic gas and low boiling vapour type

Hand protection

Advice : Protective gloves complying with EN 374.
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.
Protective gloves should be replaced at first signs of wear.

Material : butyl-rubber

Break through time : 480 min

Permeation rate : 0.5 min

Protective index : Class 6

Material : Fluorinated rubber

Break through time : 480 min

Permeation rate : 0.4 min

Protective index : Class 6

Eye protection

Advice : Tightly fitting safety goggles
Face-shield
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection

Advice : Wear appropriate chemical resistant clothing and boots.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

	Form	: Liquid
9.1.	Colour	: colourless
	Odour	: alcohol-like
	Odour Threshold	: ca. 84 ppm
	pH	: no data available
	Freezing point/range	: ca. -88 °C
	Boiling point/boiling range	: ca. 82 °C
	Flash point	: ca. 12 °C
	Evaporation rate	: no data available
	Flammability (solid, gas)	: no data available
	Upper explosion limit	: ca. 19 %(V) (estimated), based on the pure substance.
	Lower explosion limit	: ca. 2 %(V) (estimated), based on the pure substance.
	Vapour pressure	: no data available
	Relative vapour density	: ca. 1.5 based on the pure substance.
	Density	: ca. 0.8 g/cm ³ estimated
	Water solubility	: miscible
	Partition coefficient: n-octanol/water	: no data available
	Auto-ignition temperature	: ca. 363 °C based on the pure substance.
	Thermal decomposition	: no data available
	Viscosity, dynamic	: no data available
	Explosivity	: Formation of explosive air/vapour mixtures is possible.
	Oxidizing properties	no data available

9.2. Other information

No further information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Advice : No decomposition if stored and applied as directed.

10.2. Chemical stability

Advice : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Conditions to avoid : Keep away from heat and sources of ignition. Heat, flames and sparks.

10.5. Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition : Under fire conditions: Carbon oxides products,
: Carbon oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Data for the product

Acute toxicity

Oral

Please find this information in the listing of the component/components below in this section.

Inhalation

no data available

Dermal

no data available

Irritation

Skin

no data available

Eyes

no data available

Dermal

no data available

Irritation

Skin

no data available

Eyes

no data available

Sensitisation

no data available

CMR effects

CMR Properties

Carcinogenicity : no data available
Mutagenicity : no data available
Reproductive toxicity : no data available

Specific Target Organ Toxicity

Single exposure

no data available

Repeated exposure

no data available

Other toxic properties

Repeated dose toxicity

no data available

Aspiration hazard

no data available

Component:

ethanol

CAS-No. 64-17-5

Acute toxicity

Oral

LD50 : 10470 mg/kg (Rat, male and female) (OECD Test Guideline 401)

Inhalation

LC50 : 51 mg/l (Rat; 4 h; vapour) (OECD Test Guideline 403)

Dermal

LD50 : > 2000 mg/kg (Rabbit) (OECD Test Guideline 402)

Irritation

Skin

Result : No skin irritation (Rabbit) (OECD Test Guideline 404)

Eyes

Result : Causes serious eye irritation. (Rabbit) (OECD Test Guideline 405)

Sensitisation

Result : not sensitizing (Guinea pig) (Maximisation Test)
not sensitizing (Mouse) (OECD Test Guideline 429)
not sensitizing (Inhalation; Rat)

CMR effects

Carcinogenicity

NOAEL : > 4,000 mg/kg bw/day
(Mouse, female)(Target Organs: Liver)(Oral; 105 weeks;
Frequency of treatment: 5 days/week)

NOAEL : > 4,250 mg/kg bw/day
(Mouse, male)(Target Organs: Liver)(Oral; 105 weeks; Frequency
of treatment: 5 days/week)(OPPTS 870.4200)

NOAEL : > 3,000 mg/kg bw/day
(Rat)(OECD Test Guideline 451)

CMR Properties

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Mutagenicity : In vitro tests did not show mutagenic effects
 In vivo tests did not show mutagenic effects
 Teratogenicity : It is not considered teratogenic.
 Reproductive toxicity : It is not considered toxic for reproduction.

Genotoxicity in vitro

Result : negative (Ames test; Salmonella typhimurium) (OECD Test Guideline 471)
 negative (Mouse Lymphoma Cells) (OECD Test Guideline 476)
 Positive as well as negative results were obtained. (Bacterial Reverse Mutation Test; Escherichia coli) (No guideline followed)

Genotoxicity in vivo

Result : Positive as well as negative results were obtained. (Dominant lethal assay; Mouse, male) (Oral; 5 days) (OECD Test Guideline 478)
 negative (Chromosome aberration test in vivo; Hamster, male and female) (Oral;) (OECD Test Guideline 475)
 negative (In vivo micronucleus test; Mouse) (OECD Test Guideline 475)

Teratogenicity

LOAEL Develop. : 8,200 mg/kg bw/day
 (Rat, Sprague-Dawley)(6 Weeks)(No guideline followed)Reduced skeletal ossification.
 NOAEL Develop. : 5,200 mg/kg bw/day
 (Rat, Sprague-Dawley)(6 Weeks)(No guideline followed)
 NOAEL Maternal : >= 20,000 ppm
 NOAEL Teratog. : 16,000 ppm
 (Rat, Sprague-Dawley)(Inhalation; 10,000, 16,000, 20,000 ppm; 7 hours/day)(OECD Test Guideline 414)Reduced maternal food consumption

Reproductive toxicity

NOAEL Parent : 21.5 mg/kg bw/day
 (Mouse, male and female)(OECD Test Guideline 416)No negative effects.
 NOAEL F1 : 13.8 mg/kg bw/day
 (Mouse, male and female)(OECD Test Guideline 416)Reduction in sperm motility.

Specific Target Organ Toxicity

Single exposure

Remarks : The substance or mixture is not classified as specific target organ toxicant, single exposure.

Repeated exposure

Remarks : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Other toxic properties

Repeated dose toxicity

NOAEL : 1730 mg/kg bw/day
(Rat, female)(Oral; 90-day) (OECD Test Guideline 408)Target
Organs: Liver

NOAEL : > 20 mg/l
(Rat, male)(Inhalation; 21 days) (OECD Test Guideline 403)

Aspiration hazard

No aspiration toxicity classification,

Further information

Other relevant toxicity : Exposure to ethanol vapors may result in irritation of the eyes and information nose, drowsiness and headache. Other symptoms may include stupor, nausea, mental excitement or depression, vomiting, flushing and coma. It can cause irritation of the respiratory tract, intra ocular tension, ataxia, sleepiness, narcosis, impaired perception and incoordination. It can also cause lowered inhibitions, dizziness, shallow respiration, unconsciousness and death.

Chronic symptoms of ingestion and/or vapor exposure may include weight loss, cirrhosis of the liver, gastroenteritis, anorexia, diarrhea, polyneuritis with pain, motor and sensory loss in the extremities, optic atrophy and loss or impairment of other abilities, excitement, acute and chronic gastritis, malabsorption syndrome, acute and chronic pancreatitis, anaemia due to acute or chronic blood myopathy, alcoholic cardiomyopathy, lactic acidosis, hypomagnesemia, hypouricemia, hyperlipidemia, pulmonary aspiration and respiratory infections. Chronic exposure may also result in serious neurological and mental disorders (e.g. brain damage, memory loss, sleep disturbances, and psychoses). Other symptoms include mucous membrane irritation, central nervous system depression, giddiness, jaundice, pain in upper abdomen on the right side and staggering gait. It may cause liver, kidney and

heart damage. The pupils are sometimes widely dilated and unreactive to light. The liquid can defat the skin, producing a dermatitis characterized by drying and fissuring. It rarely causes temporary blindness. Ingestion of this compound can enhance the effects of coumarin, anticoagulants, antihistamines, hypnotics, sedatives, tranquilizers, insulin, monoamine oxidase inhibitors, and antidepressants. Can cause reproductive and teratogenic effects

Experience with human exposure : Repeated and prolonged exposure to solvents may cause brain and nervous system damage.

Component: **propan-2-ol** **CAS-No. 67-63-0**

Acute toxicity

Oral

LD50 : 5840 mg/kg (Rat) (OECD Test Guideline 401)

Inhalation

LC50 : > 25 mg/l (Rat; 6 h; vapour) (OECD Test Guideline 403)

Dermal

LD50 : 13900 mg/kg (Rabbit) (OECD Test Guideline 402)

Irritation

Skin

Result : No skin irritation (OECD Test Guideline 404) Degreases the skin which may cause dry and rough. Prolonged or repeated skin contact may result in dermatitis.

Eyes

Result : Eye irritation (OECD Test Guideline 405) Splashes in eyes may cause strong pain. Vapour acts irritant.

Sensitisation

Result : not sensitizing (Buehler Test; Dermal; Guinea pig) (OECD Test Guideline 406)

CMR effects

Carcinogenicity

NOEL : 5,000 ppm

(negative, Mouse, male and female)(Inhalation; 0, 500, 2500, 5000 ppm; 78 weeks; Frequency of treatment: 5 days/week)(OECD Test Guideline 451)

CMR Properties

Carcinogenicity : Based on available data, the classification criteria are not met.
Mutagenicity : In vitro tests did not show mutagenic effects
In vivo tests did not show mutagenic effects
Teratogenicity : No effects on or via lactation
Reproductive toxicity : Based on available data, the classification criteria are not met.

Genotoxicity in vitro

Result : negative (Bacterial Reverse Mutation Test; Salmonella typhimurium; with and without metabolic activation) (OECD Test Guideline 471)
negative (In vitro gene mutation study in mammalian cells; CHO (Chinese Hamster Ovary) cells; with and without metabolic activation) (OECD Test Guideline 476)

Genotoxicity in vivo

Result : negative (In vivo micronucleus test; Mouse, male and female) (intraperitoneal;) (OECD Test Guideline 474)

Teratogenicity

NOAEL : 400 mg/kg bw/day
Maternal NOAEL : 400 mg/kg bw/day
Develop. : (Rat, Sprague-Dawley) (Oral)(OECD Test Guideline 414)No adverse effects

Reproductive toxicity

NOAEL : 853 mg/kg bw/day
Parent : (One-Generation Reproduction Toxicity Study; Rat, wistar, male and female)(Oral)(OECD Test Guideline 415)No negative effects.
NOAEL : 500 mg/kg bw/day
Parent : (Two-generation reproductive toxicity; Rat, Sprague-Dawley, male and female)(Oral)(OECD Test Guideline 416)No negative effects.

Specific Target Organ Toxicity

Single exposure

Inhalation : Target Organs: Central nervous system. May cause drowsiness or dizziness.

Repeated exposure

Remarks : Oral and inhalation repeated exposure studies demonstrated target organ effects in male rats (kidney) and male and female mice (thyroid) by mechanisms of action that are not relevant to humans

Other toxic properties

Aspiration hazard

Aspiration hazard if swallowed - can enter lungs and cause damage.
Aspiration may cause pulmonary oedema and pneumonitis.
Based on available data, the classification criteria are not met.,

SECTION 12: Ecological information

12.1. Toxicity

Component:	ethanol	CAS-No. 64-17-5
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Acute toxicity

Fish

LC50 : 15300 mg/l (Pimephales promelas (fathead minnow); 96 h) (flowthrough test; US-EPA)
LC50 : 11200 mg/l (Salmo gairdneri; 24 h) (flow-through test; US-EPA)
LC50 : 13000 mg/l (Oncorhynchus mykiss; 96 h) (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

EC50 : 858 mg/l (Artemia salina; 24 h) (OECD Test Guideline 202)Marine water
EC50 : 12340 mg/l (Daphnia magna (Water flea); 48 h) (ASTM E 72980)Fresh water
LC50 : 5012 mg/l (Ceriodaphnia dubia (water flea); 48 h) (static test; ASTM E 729-80)Fresh water

algae

EC50 : 275 mg/l (Chlorella vulgaris (Fresh water algae); 72 h) (static test; End point: Growth rate; OECD Test Guideline 201)Fresh water

EC10 : 11.5 mg/l (Chlorella vulgaris (Fresh water algae); 72 h) (static test; OECD Test Guideline 201)

Bacteria

EC50 : 5800 mg/l (Paramecium caudatum; 4 h) (static test; No guideline followed)

Chronic toxicity

Fish

NOEC : 245 mg/l (30 d) (QSAR)

Aquatic invertebrates

NOEC 9.6 mg/l (Ceriodaphnia dubia (water flea); 10 d) (semi-static test; End point: Reproduction; No guideline followed)
NOEC 79 mg/l (Palaemonetes pugio; 12 d) (static test)

Component: propan-2-ol CAS-No. 67-63-0

Acute toxicity

Fish

LC50 : 9640 mg/l (Pimephales promelas; 96 h) (flow-through test; OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

LC50 : 9714 mg/l (Daphnia magna; 24 h) (static test; OECD Test Guideline 202)

algae

EC50 : > 100 mg/l (Scenedesmus subspicatus; 72 h)
LOEC 1000 mg/l (algae; 8 d)

Bacteria

EC50 : > 100 mg/l (Bacteria) no harming action

12.2. Persistence and degradability

Component:	ethanol	CAS-No. 64-17-5
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Persistence and degradability

Persistence

Result : (Related to: Water) non-significant hydrolysis

Biodegradability

Result : 97 % (aerobic; activated sludge; Related to: CO₂ formation (% of the theoretical value).; Exposure Time: 28 d)(OECD Test Guideline 301B)Readily biodegradable.

Component:	propan-2-ol	CAS-No. 67-63-0
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Persistence and degradability

Persistence

Result : Transformation due to hydrolysis not expected to be significant.
Transformation due to photolysis not expected to be significant.

Biodegradability

Result : 53 % (aerobic; domestic sewage; Related to: O₂ consumption; Exposure Time: 5 d)(Directive 67/548/EEC, Annex V, C.5)Readily biodegradable.

12.3. Bioaccumulative potential

Component:	ethanol	CAS-No. 64-17-5
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Bioaccumulation

Result : log Kow -0.35 (24 °C; pH 7.4) (OECD Test Guideline 107)
: BCF: 0.66 Does not bioaccumulate.

Component:	propan-2-ol	CAS-No. 67-63-0
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Bioaccumulation

Result : log Kow 0.05
: Bioaccumulation is not expected.

12.4. Mobility in soil

Component:	ethanol	CAS-No. 64-17-5
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Mobility

Water : The product is water soluble.
 Air : The product evaporates readily.
 Soil : Not expected to adsorb on soil.

Component:	propan-2-ol	CAS-No. 67-63-0
Mobility		

Water : The product is water soluble.
 Soil : Mobile in soils

12.5. Results of PBT and vPvB assessment

Data for the product		
Results of PBT and vPvB assessment		

Result : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Component:	ethanol	CAS-No. 64-17-5
Results of PBT and vPvB assessment		

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

Component:	propan-2-ol	CAS-No. 67-63-0
Results of PBT and vPvB assessment		

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

12.6. Other adverse effects

Data for the product		
Additional ecological information		

Result : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

Component:	ethanol	CAS-No. 64-17-5
Biochemical Oxygen Demand (BOD)		

Result : 100 mg/g

Chemical Oxygen Demand (COD)		
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Result : 1900 mg/g

Additional ecological information

Result : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

Component: propan-2-ol CAS-No. 67-63-0

Additional ecological information

Result : no data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

Contaminated packaging : Empty containers or liners may retain some products residues. Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations. Do not burn, or use a cutting torch on, the empty drum. Risk of explosion.

European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: Transport information

14.1. UN number

1170

14.2. UN proper shipping name

ADR : ETHANOL SOLUTION
RID : ETHANOL SOLUTION
IMDG : ETHANOL SOLUTION

14.3. Transport hazard class(es)

ADR-Class : 3
(Labels; Classification Code; Hazard identification No; Tunnel restriction code) : 3; F1; 33; (D/E)
RID-Class : 3

(Labels; Classification Code; Hazard identification No) 3; F1; 33
IMDG-Class : 3
(Labels; EmS) 3; F-E, S-D

14.4. Packaging group

ADR : II
RID : II
IMDG : II

14.5. Environmental hazards

Environmentally hazardous according to ADR : no
Environmentally hazardous according to RID : no
Marine Pollutant according to IMDG-Code : no

14.6. Special precautions for user

Not applicable.

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

IMDG : Not applicable.

SECTION 15: Regulatory information

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

Component:	ethanol	CAS-No. 64-17-5
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EU. Regulation EU No. 649/2012 concerning the export and import of dangerous chemicals : The substance/mixture does not fall under this legislation.

EU. REACH, Annex XVII, : Point Nos.: 40; Listed
Marketing and Use
Restrictions (Regulation
1907/2006/EC)

EU. Regulation No 1451/2007 [Biocides], Annex I, OJ (L 325) : EC Number: 200-578-6; Listed

EU. Directive 2012/18/EU (SEVESO Annex I) : Lower-tier requirements: 5,000 tonnes; Part 1: Categories of dangerous substances; P5c: Flammable liquids, Categories 2 III) or 3 not covered by P5a and P5b. The information given is valid if the product is stored below the boiling point and at a pressure of 1013 hPa.
Upper-tier requirements: 50,000 tonnes; Part 1: Categories of dangerous substances; P5c: Flammable liquids, Categories 2 or 3 not covered by P5a and P5b. The information given is valid if the product is stored below the boiling point and at a pressure of 1013 hPa.

WGK (DE) : WGK 1: slightly water endangering: 96; Classification source is Annex 2.

Component:	propan-2-ol	CAS-No. 67-63-0
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EU. Regulation EU No. 649/2012 concerning the export and import of dangerous chemicals : The substance/mixture does not fall under this legislation.

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC) : Point Nos.: 40; Listed

EU. Regulation No 1451/2007 [Biocides], Annex I, OJ (L 325) : EC Number: , 200-661-7; Listed

EU. Directive 2012/18/EU (SEVESO III) Annex I : Lower-tier requirements: 5,000 tonnes; Part 1: Categories of dangerous substances; P5c: Flammable liquids, Categories 2 or 3 not covered by P5a and P5b. The information given is valid if the product is stored below the boiling point and at a pressure of 1013 hPa.
Upper-tier requirements: 50,000 tonnes; Part 1: Categories of dangerous substances; P5c: Flammable liquids, Categories 2 or 3 not covered by P5a and P5b. The information given is valid if the product is stored below the boiling point and at a pressure of 1013 hPa.

WGK (DE) : WGK 1: slightly water endangering: 135; Classification source is Annex 2.

15.2. Chemical safety assessment

no data available

SECTION 16: Other information

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

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Abbreviations and Acronyms

BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
PBT	persistent, bioaccumulative and toxic
PNEC	predicted no-effect concentration
STOT	specific target organ toxicity
SVHC	substance of very high concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
vPvB	very persistent and very bioaccumulative

Further information

Key literature references : Supplier information and data from the "Database of registered and sources for data : substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Methods used for : The classification for human health, physical and chemical product classification : hazards and environmental hazards were derived from a combination of calculation methods and if available test data.

Hints for trainings : The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.

Other information : The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.
The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

|| Indicates updated section.