SAFETY DATA SHEET

Based upon Regulation (EC) No. 1907/2006, as amended by Regulation (EC) No. 453/2010

Firegel Yellow

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

As of the revision date above, this (M)SDS meets the regulations in the United Kingdom & Ireland.

1.1. PRODUCT IDENTIFIER

Product Name: **Firegel (Yellow)**
Product Description: Ethanol solution denaturized according to German denaturation; MEK 96 (GERM DENAT)

Product type REACH: Mixture
Registration Number: Not applicable (mixture)

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Intended Use: Consumer use of domestic fuel products containing ethanol

Identified Uses:
Consumer use of domestic fuel products containing ethanol- Consumer SU 21 PROC8a ERC8d

Uses advised against: This product is not recommended for any industrial, professional or consumer use other than the Identified Uses above.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier: **Sel Chemie B.V.**
Broekstraat 23
NL-7122 MN Aalten Holland
Tel: +31 543 471956
Fax: +31 543 476600
E-mail : info@selchemie.com
Internet : www.selchemie.com

Contact MSDS: MSDS@selchemie.com
During business hours, 8:00-12:00 - 13:00-17:00:
+31 543 47 19 56

1.4. EMERGENCY TELEPHONE NUMBER

Members of the general public should contact
in England en Wales NHS Direct **tel. +44(0)845 46 47**
in Scotland NHS 24 **tel.+44(0)8454 24 24 24**
or alternatively seek advice from their GP or Pharmacist.
All these can consult NPIS (National Poisons Information Service) services.

SECTION 2 HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008
Flam. Liq. 2; H225 Highly flammable liquid and vapour
Eye Irrit. 2; H319 Causes serious eye irritation

Classification according to EU Directive 67/548/EEC / 1999/45 EC
R11: Highly flammable
R67: Vapours may cause drowsiness and dizziness

2.2. LABEL ELEMENTS

Label elements according to Regulation (EC) No 1272/2008

Contains: Ethanol, Propan-2-ol

Signal word: Danger

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

P-statements
P102 Keep out of reach of children
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing fume/vapours.
P280 Wear protective gloves and eye protection/face protection
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.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P501 Dispose of contents and container in accordance with local regulations.

2.3. OTHER HAZARDS

May be ignited by sparks
Gas/vapour spreads at floor level: ignition hazard
Produces effects on the nervous system
Slightly irritant to skin
Slightly irritant to respiratory organs

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1. SUBSTANCES Not Applicable. This material is not defined as a substance.

3.2. MIXTURES This product is regulated as a mixture.
Reportable hazardous substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

Name	CAS#	EC#	Concentration	Classification according to DSD/DPD	GHS/CLP classification
Ethanol	64-17-5	200-578-6	≥ 50%	F; R11	Flam. Liq. 2; H225 Eye Irrit. 2; H319
Propan-2-ol	67-63-0	200-661-7	10-20%	F; R11, Xi; R36, R67	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3 H336
Butanone	78-93-3	201-159-0	< 1%	F; R11 Xi; R36 R66 R67	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
3-methylbutan-2-one	563-80-4	209-264-3	< 0,1%	F,R11	Flam. Liq. 2; H225
5-methylbutan-3-one	541-85-5	208-793-7	< 0,1%	R10 Xi; R36/37	Flam. Liq. 3; H226 Eye Irrit. 2; H319 STOT SE 3; H335
Denatonium benzoate	3734-33-6	223-095-2	<0,01%	Xn; R22 Xi; R36/37/38	Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315

SECTION 4 FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

INHALATION

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

SKIN CONTACT
Rinse with water. Take victim to a doctor if irritation persists.

EYE CONTACT
Rinse immediately with plenty of water. Do not apply neutralizing agents.
Take victim to an ophthalmologist if irritation persists.

INGESTION
Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

4.2.1 Acute symptoms

After inhalation:
EXPOSURE TO HIGH CONCENTRATIONS: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties. Central nervous system depression. Symptoms similar to those listed under ingestion.

After skin contact:
Slight irritation.

After eye contact:
Redness of the eye tissue. Lacrimation. Irritation of the eye tissue.

After ingestion:
AFTER ABSORPTION OF HIGH QUANTITIES: Risk of aspiration pneumonia. Red skin. Body temperature rise. Damp/clammy skin. Excited/restless. Accelerated heart action. Central nervous system depression. Dizziness. Narcosis. Headache. Drunkenness. Nausea. Vomiting. Delusions. Disturbed motor response. Coordination disorders. Visual disturbances. Impaired concentration. Disturbed sensation of pain. Disturbances of heart rate. Disturbances of consciousness. Tremor. Cramps/uncontrolled muscular contractions. Dilated pupils.

4.2.2 Delayed symptoms

No effects known.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If applicable and available it will be listed below..

SECTION 5 FIRE FIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Unsuitable Extinguishing Media: Straight streams of water

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

5.3. ADVICE FOR FIRE FIGHTERS

Fire Fighting Instructions:
Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.

Special protective equipment for fire-fighters:
Gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

NOTIFICATION PROCEDURES
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES
Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

6.2. ENVIRONMENTAL PRECAUTIONS
Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP
Land Spill: Stop leak if you can do so without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

6.4. REFERENCES TO OTHER SECTIONS
See Section 8 and 13

SECTION 7 HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe normal hygiene standards. Keep container tightly closed. Remove contaminated clothing immediately. Do not discharge the waste into the drain.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

7.2.1 Safe storage requirements:
Keep out of direct sunlight. Store in a dry area. Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. Meet the legal requirements.

7.2.2 Keep away from:
Heat sources, ignition sources, oxidizing agents.

7.2.3 Suitable packaging material:
Suitable Materials and Coatings (Chemical Compatibility):
Stainless steel, aluminium, iron, copper, nickel, synthetic material, glass.

7.2.4 Non suitable packaging material:
Unsuitable Materials and Coatings: No data available

7.3. SPECIFIC END USES: Section 1 informs about identified end-uses.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

EXPOSURE LIMIT VALUES
Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Limit/Standard			Note	
D: Ethanol	TWA Exp.limit 8h	960 mg/m3	500 ppm		TRGS 900
Fr: Alcool éthylique	Short term Value	9500 mg/m3	5000 ppm		VL: Valeur non réglementaire indicative
Fr: Alcool éthylique	TWA Exp.limit 8h	1900 mg/m3	1000 ppm		VL: Valeur non réglementaire indicative
UK Ethanol	TWA Exp.limit 8h	1920 mg/m3	1000 ppm		Workplace exposure limit (EH 40/2005)
NL: Ethanol	Short term value	260 mg/m3	136 ppm		Public occupational exposure limit value
NL: Ethanol	TWA Exp.limit 8h	1900 mg/m3	992 ppm		Public occupational exposure limit value
B: Alcool éthylique	TWA Exp.limit 8h	1907 mg/m3	1000 ppm		

Substance Name	Limit/Standard			Note	Source
propan-2-ol	STEL	1250 mg/m3	500 ppm		UK EH40
propan-2-ol	TWA	999 mg/m3	400 ppm		UK EH40
propan-2-ol	STEL	400 ppm			ACGIH
propan-2-ol	TWA	200 ppm			ACGIH

UK EH40 Workplace Exposure Limits. Exposure limits for use with Control of Substances Hazardous to Health Regulations 2002 (as amended)

DERIVED NO EFFECT LEVEL (DNEL)/DERIVED MINIMAL EFFECT LEVEL (DMEL)

Ethanol:
Workers

Effect level (DNEL/DMEL)	Type	Value
DNEL	Acute local effects inhalation	1900 mg/m³
	Long-term systemic effects dermal	343 mg/kg bw/day
	Long-term systemic effects inhalation	950 mg/m³

General population

Effect level (DNEL/DMEL)	Type	Value
DNEL	Acute local effects inhalation	950 mg/m³
	Long-term systemic effects dermal	206 mg/kg bw/day
	Long-term systemic effects inhalation	114 mg/m³
	Long-term systemic effects oral	87 mg/kg bw/day

Propan-2-ol:
Workers

Effect level (DNEL/DMEL)	Type	Value
DNEL	Long-term systemic effects dermal	888 mg/kg bw/day
	Long-term systemic effects inhalation	500 mg/m³

General population

Effect level (DNEL/DMEL)	Type	Value
DNEL	Long-term systemic effects dermal	319 mg/kg bw/day
	Long-term systemic effects inhalation	89 mg/m³
	Long-term systemic effects oral	26 mg/kg bw/day

PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance Name	Aqua (fresh water)	Aqua (marine water)	Aqua (intermittent release)	Sewage treatment plant	Sediment	Soil	Oral (secondary poisoning)
Ethanol	0,96 mg/l	0,79 mg/l		580 mg/l	3,6 mg/kg dw	0,63 mg/kg	
propan-2-ol	140.9 mg/l	140.9 mg/l	140.9 mg/l	2251 mg/l	552 mg/kg dw	28 mg/kg	160 mg / kg (food)

8.2. EXPOSURE CONTROLS

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

ENGINEERING CONTROLS

Use spark-/explosion proof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

PERSONAL PROTECTION

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

Respiratory Protection:
Wear gas mask with filter type A if conc. in air > exposure limit.

Hand Protection:

Gloves.
- materials for protective clothing (excellent resistance)
  Butyl rubber, neoprene.
- materials for protective clothing (good resistance)
  Viton, tetrafluoroethylene.
- materials for protective clothing (less resistance)
  Nitrile rubber, polyethylene.
- materials for protective clothing (poor resistance)
  Natural rubber, PVA, PVC.

Eye Protection:
Protective goggles.

Skin and Body Protection:
Protective clothing.

ENVIRONMENTAL CONTROLS

See headings 6.2, 6.3 and 13

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications.

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Form:	Gel
Colour:	Yellow
Odour:	Typical alcohol
Odour Threshold:	No data available
pH:	No data available
Melting Point:	No data available
Freezing Point:	No data available

Initial Boiling Point / and Boiling Range: No data available

Flash Point [Method]: < 16°C
Evaporation Rate (n-butyl acetate = 1): No data available
Flammability (Solid, Gas): No data available
Upper/Lower Flammable Limits (Approximate volume % in air): No data available
Vapour Pressure: No data available
Vapour Density (Air = 1): No data available
Relative Density (at 15 °C): 0.851 - 0.865 g/ml
Solubility(ies): water Complete
Partition coefficient (n-Octanol/Water Partition Coefficient): No data available
Autoignition Temperature: No data available

Decomposition Temperature: No data available
Viscosity: No data available
Explosive Properties: No data available
Oxidizing Properties: No data available

9.2. OTHER INFORMATION

Molecular Weight: No data available
Hygroscopic: Yes
Coefficient of Thermal Expansion: No data available

SECTION 10 STABILITY AND REACTIVITY

10.1. REACTIVITY: May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. Substance has neutral reaction..

10.2. CHEMICAL STABILITY: Material is stable under normal conditions, hygroscopic.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS:
Reacts with many compounds e.g.: with (strong) oxidizers: (increased) risk of fire/explosion. Violent to explosive reaction with (some) acids.

10.4. CONDITIONS TO AVOID:
Use spark-/explosion proof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

10.5. INCOMPATIBLE MATERIALS: Oxidizing agents.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS: Upon combustion: CO and CO2 are formed.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

No (test)data on the mixture available

Ethanol:

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: (Rat) 4 hour(s) LC50 > 124,7 mg/l air	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 403
Ingestion	
Acute Toxicity (Rat): LD 50 10470 mg/kg bw	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 401
Skin	
Skin Corrosion/Irritation: Not irritating Rabbit ; 1,2,3,4,5,7 days	Not classified as irritating to the skin. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 404
Eye	
Serious Eye Damage/Irritation: Irritating Rabbit; 24,48,72 hours	Causes serious eye irritation, based on Annex VI – CLP Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 405
Sensitisation	
Skin Sensitization: Not sensitizing	Not expected to be a skin sensitizer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 429
Aspiration: Data available.	Low sub-chronic toxicity by the oral route.
Germ Cell Mutagenicity: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a germ cell mutagen. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 471 476 478
Carcinogenicity: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to cause cancer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 451
Reproductive Toxicity: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a reproductive toxicant. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 414 415 416
Specific Target Organ Toxicity (STOT)	
Oral:	Low sub-chronic toxicity by inhalation route.
Inhalation:	Low sub-chronic toxicity by the oral route
Dermal:	Low sub-chronic toxicity by the dermal route

Propan-2-ol:

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: (Rat) 6 hour(s) LC50 > 25000 mg/m3 (Vapour) Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data.	Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.
Ingestion	
Acute Toxicity (Rat): LD 50 5840 mg/kg Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 401
Skin	
Acute Toxicity (Rabbit): LD 50 13900 mg/kg Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available. Test scores or other study results do not meet criteria for classification.	May dry the skin leading to discomfort and dermatitis. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 404
Eye	
Serious Eye Damage/Irritation: Data available. Test scores or other study results meet criteria for classification.	Irritating and will injure eye tissue. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 405
Sensitisation	
Respiratory Sensitization: No end point data.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a skin sensitizer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 406
Aspiration: Data available.	May be harmful if swallowed and enters airways. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a germ cell mutagen. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 471 474 476
Carcinogenicity: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to cause cancer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 451
Reproductive Toxicity: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a reproductive toxicant. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 414 415 416
Lactation: No end point data.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data.	May cause drowsiness or dizziness.
Repeated Exposure: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to cause organ damage from prolonged or repeated exposure. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 413

Conclusion CMR

Not classified for carcinogenicity
Not classified for mutagenic or genotoxic toxicity
Not classified for reprotoxic or developmental toxicity

OTHER INFORMATION
Chronic effects from short and long-term exposure
Bio Ethanol:
ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Gastrointestinal complaints. Enlargement/affection of the liver. Change in the haemogramme/blood composition. Cardiac and blood circulation effects. High arterial pressure. Impairment of the nervous system. Behavioural disturbances.
Mental confusion. Disturbed tactile sensibility. Tremor. Affection of the bone marrow. Affection of the endocrine system. Weakening of the immune system.

Bio Ethanol:

SZW - List of carcinogenic Substances	Listed in SZW-list of carcinogenic substances
SZW - List of reprotoxic substances (fertility)	May have an effect on fertility
SZW - List of reprotoxic substances (development)	Hazardous to the foetus
SZW - List of reprotoxic substances (brest-feeding)	May cause harm to breastfed babies
TLV – Carcinogen	A3
IARC – classification	1 (Alcohol beverages)
MAK - Krebserzeugend Kategorie	5
MAK - Keimzellmutagen Kategorie	5

SECTION 12 ECOLOGICAL INFORMATION

Classification of the mixture is based on the relevant ingredients of the mixture

12.1. TOXICITY
Not harmful to fishes
Not harmful to invertebrates (Daphnia)
Not harmful to algae
Not harmful to bacteria
Classification concerning the environment: not applicable

12.2. PERSISTENCE AND DEGRADABILITY
Biodegradation:
Material -- Expected to be readily biodegradable in water.

12.3. BIOACCUMULATIVE POTENTIAL Not applicable.

12.4. MOBILITY IN SOIL
Low potential for adsorption in soil

12.5. PERSISTENCE, BIOACCUMULATION AND TOXICITY FOR SUBSTANCE(S)
Mixture does not meet the screening criteria for persistency nor bioaccumulation so is neither PBT nor vPvB.

12.6. OTHER ADVERSE EFFECTS
Bio Ethanol
Ozone-depleting potential (ODP)
Not classified as dangerous for the ozone layer (Regulation (EC) No. 1272/2008 and 1005/2009).

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

13.1. WASTE TREATMENT METHODS

13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, decision 2000/0532/EC).
07 01 04* (other organic solvents, washing liquids and mother liquors). Depending on branch of industry and production process, also other EURAL codes may be applicable. Hazardous waste according to Directive 2008/98/EC.

13.1.2 Disposal methods

Recycle by distillation. Incinerate under surveillance with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into surface water.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (ADR/RID)

14.1. UN Number: 1987
14.2. UN Proper Shipping Name (Technical Name): Alcohols n.o.s,(ethanol, isopropylalcohol)
14.3. Transport Hazard Class(es): 3
14.4. Packing Group: II
14.5. Environmental Hazards: None
14.6. Special Precautions for users:
Classification Code: F1
Label(s) / Mark(s): 3
Hazard ID Number: 33
Transport Document Name: UN1987, ALCOHOLS N.O.S.,(ETHANOL,ISOPROPYLACOHOL) 3, PG II
Limited Quantities: Combination packagings: not more than 3 liter per inner packaging for liquids.
A package shall not weigh more than 30 kg. (gross mass)

SEA (IMDG)

14.1. UN Number: 1987
14.2. UN Proper Shipping Name (Technical Name): ALCOHOLS N.O.S. (ethanol, isopropylalcohol)
14.3. Transport Hazard Class(es): 3
14.4. Packing Group: II
14.6. Special Precautions for users:
Label(s): 3
EMS Number: F-E, S-D
Transport Document Name: UN1987, ALCOHOLS N.O.S. (ETHANOL,ISOPROPYLACOHOL), 3, PG II, (13°C c.c.)
Limited Quantities: Combination packagings: not more than 3 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

SEA (MARPOL 73/78 Convention - Annex II):

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Substance Name: ALCOHOLS N.O.S (ETHANOL,ISOPROPYLACOHOL)
Ship type required: NA
Pollution category: Z

SECTION 15 REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

European legislation:
The identified uses are not covered by restrictions of Annex XVII of Regulation (EC) No 1907/2006

Volatile organic compounds (VOC): 100 %

Plant protection products - listed ingredient
Contains component(s) included in implementing Regulation (EU) No 540/2011

National legislation
- The Netherlands
  Waterbezwaarlijkheid 11
  Waste identification (the Netherlands) LWCA (the Netherlands): KGA category 03
- Germany
  WGK 1 Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

TA-Luft	ethanol	TA-Luft Klasse 5.2.5
TA-Luft	butanone	TA-Luft Klasse 5.2.5
TA-Luft	3-methylbutan-2-one	TA-Luft Klasse 5.2.5
TA-Luft	5-methylheptan-3-one	TA-Luft Klasse 5.2.5
TA-Luft	denatonium benzoate	TA-Luft Klasse 5.2.1

MAK (Germany)

Ethanol	Time-weighted average exposure limit 8 h	500 ppm 960 mg/m³

15.2. CHEMICAL SAFETY ASSESSMENT

REACH Information: No chemical safety assessment has been conducted.

SECTION 16 OTHER INFORMATION

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Labels:

Highly flammable

R-phrases
R11 Highly flammable
R67 Vapours may cause drowsiness and dizziness

S-phrases
S02 Keep out of the reach of children
S07 Keep container tightly closed
S16 Keep away from sources of ignition - No smoking
S23 Do not breathe fumes/vapour
S46 If swallowed, seek medical advice immediately and show this container or label

KEY TO THE RISK CODES CONTAINED IN SECTION 2 AND 3 OF THIS DOCUMENT (for information only):
R36: Irritating to eyes.
R36/37:Irritating to eyes and respiratory system.
R36/37/38: Irritating to eyes, respiratory system and skin.
R66; Repeated exposure may cause skin dryness or cracking.

KEY TO THE H-CODES CONTAINED IN SECTION 2 and 3 OF THIS DOCUMENT (for information only):
H225: Highly flammable liquid and vapor; Flammable Liquid, Cat 2
H226 Flammable liquid and vapour.
H302: Harmful if swallowed.
H315: Causes skin irritation.
H319: Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.

PBT-substances:	Persistent, bioaccumulative and toxic substances
DSD Dangerous:	Substance Directive
DPD Dangerous:	Preparation Directive
CLP (EU-GHS):	Classification, labelling and packaging (Globally Harmonised System in Europe)

Specific concentration limits CLP		
5-methylheptan-3-one	C ≥ 10 %	STOT SE 3; H335
Specific concentration limits DSD		
5-methylheptan-3-one	C ≥ 10 %	Xi; R36/37

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Revision Changes: Total revision of all sections.

ANNEX

Annex not required for this material.