



SAFETY DATA SHEET 31028 GOLD ICING PAINT II

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

1.1. Product identifier

Product name 31028 GOLD ICING PAINT II

Product number 58781

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

Identified uses Colourant

1.3. Details of the supplier of the safety data sheet

Supplier Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
BD3 7AY
+44 1274 267300
+44 1274 267306
SDS.EMEA@univarsolutions.com

1.4. Emergency telephone number

Emergency telephone SGS - +32 (0)3 575 55 55 (24h)

Sds No. 58781

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 3 - H226

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Warning

Hazard statements H226 Flammable liquid and vapour.

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Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

Vapours may form explosive mixtures with air. This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

MONOPROPYLENE GLYCOL			30-60%
CAS number: 57-55-6	EC number: 200-338-0	REACH registration number: 01-2119456809-23-XXXX	
Classification Not Classified			
ETHANOL			10-30%
CAS number: 64-17-5	EC number: 200-578-6	REACH registration number: 01-2119457610-43-XXXX	
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319			
SHELLAC			5-10%
CAS number: 9000-59-3	EC number: 232-549-9		
Classification Not Classified			
MICA			1-5%
CAS number: 12001-26-2			
Classification Not Classified			
TITANIUM DIOXIDE			<1%
CAS number: 13463-67-7	EC number: 236-675-5	REACH registration number: 01-2119489379-17-XXXX	
Classification Not Classified			

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IRON (III) OXIDE	<1%
CAS number: 1309-37-1	EC number: 215-168-2
Classification	
Not Classified	

The full text for all hazard statements is displayed in Section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Do not induce vomiting unless under the direction of medical personnel. Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.
Skin contact	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

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

Ingestion	Nausea, vomiting. Central nervous system depression.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation.

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

Notes for the doctor	Treat symptomatically. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Flammable liquid and vapour. Vapours may form explosive mixtures with air. When heated and in case of fire, toxic vapours/gases may be formed.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of the following substances: Carbon.

5.3. Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Keep unnecessary and unprotected personnel away from the spillage. Take precautionary measures against static discharges.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Provide adequate ventilation. Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. No smoking, sparks, flames or other sources of ignition near spillage.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Keep away from heat, sparks and open flame. Avoid the formation of mists. Vapours may form explosive mixtures with air.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a well-ventilated place. Keep away from heat, sparks and open flame. Keep away from oxidising materials, heat and flames. Protect from sunlight.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

MONOPROPYLENE GLYCOL

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate

Long-term exposure limit (8-hour TWA): WEL 150 ppm 474 mg/m³ total vapour and particulates

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

MICA

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Long-term exposure limit (8-hour TWA): WEL 0.8 mg/m³ respirable dust

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

TITANIUM DIOXIDE

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

IRON (III) OXIDE

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³ fume

Short-term exposure limit (15-minute): WEL 10 mg/m³ fume

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Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

WEL = Workplace Exposure Limit.

Ingredient comments	Observe any occupational exposure limits for the product or ingredients.
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MONOPROPYLENE GLYCOL (CAS: 57-55-6)

DNEL	General population - Inhalation; Long term systemic effects: 50 mg/m³ General population - Inhalation; Long term local effects: 10 mg/m³ Workers - Inhalation; Long term systemic effects: 168 mg/m³ Workers - Inhalation; Long term local effects: 10 mg/m³ General population - Dermal; Long term systemic effects: 213 mg/m³ General population - Oral; Long term systemic effects: 85 mg/m³
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PNEC	- Fresh water; 260 mg/l - marine water; 26 mg/l - STP; 20000 mg/l - Sediment (Freshwater); 572 mg/kg - Sediment (Marinewater); 57.2 mg/kg - Soil; 50 mg/kg - Intermittent release; 183 mg/l
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ETHANOL (CAS: 64-17-5)

Ingredient comments	WEL = Workplace Exposure Limits
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DNEL	Workers - Inhalation; Long term systemic effects: 950 mg/m³ Workers - Inhalation; Short term local effects: 1900 mg/m³ Workers - Dermal; Long term systemic effects: 343 mg/kg/day General population - Inhalation; Long term systemic effects: 114 mg/m³ General population - Inhalation; Short term local effects: 950 mg/m³ General population - Dermal; Long term systemic effects: 206 mg/kg/day General population - Oral; Long term systemic effects: 87 mg/kg/day
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PNEC	- Fresh water; 0.96 mg/l - marine water; 0.79 mg/l - Intermittent release; 2.75 mg/l - STP; 580 mg/l - Sediment (Freshwater); 3.6 mg/kg - Sediment (Marinewater); 2.9 mg/kg - Soil; 0.63 mg/kg
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SHELLAC (CAS: 9000-59-3)

Ingredient comments	No exposure limits known for ingredient(s).
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TITANIUM DIOXIDE (CAS: 13463-67-7)

Ingredient comments	WEL = Workplace Exposure Limits
DNEL	Workers - Inhalation; Long term local effects: 10 mg/m ³ Consumer - Oral; Long term systemic effects: 700 mg/kg/day
PNEC	- Fresh water; 0.184 mg/l - marine water; 0.0184 mg/l - Sediment (Freshwater); 1000 mg/kg - Sediment (Marinewater); 100 mg/kg - Soil; 100 mg/kg - STP; 100 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear fire/flammable resistant/retardant clothing. Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Eye wash facilities and emergency shower must be available when handling this product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Respirator with ABEK filter. EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	No information available.
Odour	Alcoholic.

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Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Pour Point	No information available.
Freezing Point	No information available.
Initial boiling point and range	No information available.
Flash point	> 23°C
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	No information available.
Bulk density	No information available.
Solubility(ies)	Soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	No information available.
Explosive under the influence of a flame	No information available.
Oxidising properties	No information available.

9.2. Other information

Other information	No information available.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

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10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Solvent vapours may form explosive mixtures with air.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharges.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of the following substances: Carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Skin corrosion/irritation

Animal data No information available.

Serious eye damage/irritation

Serious eye damage/irritation Moderately irritating. Rabbit

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

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Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	Nausea, vomiting. Central nervous system depression.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation.

Toxicological information on ingredients.

MONOPROPYLENE GLYCOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 22,000.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 22000 mg/kg, Oral, Rat LD₅₀ 19700 mg/kg, Oral, Guinea pig

ATE oral (mg/kg) 22,000.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 41 mg/l, Inhalation, Rat

Skin corrosion/irritation

Animal data Not irritating. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Not irritating. Rabbit OECD 405

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising. Guinea pig OECD 406

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties. Ames test Negative. OECD 473

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

31028 GOLD ICING PAINT II**Aspiration hazard**

Aspiration hazard	No information available.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	May cause temporary eye irritation.

ETHANOL**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 10,470.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 15,800.0

Species Rat

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 20.0

Species Rat

ATE inhalation (vapours mg/l) 20.0

Skin corrosion/irritation

Animal data Not irritating. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Irritating. Rabbit OECD 405

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Skin sensitisation

Skin sensitisation Not sensitising. Mouse OECD 429

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

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Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Vapours in high concentrations are narcotic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting.

Ingestion Ingestion of large amounts may cause unconsciousness. May cause nausea, headache, dizziness and intoxication.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact Causes serious eye irritation.

SHELLAC

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

Notes (oral LD₅₀) LD₅₀ > 5000 mg/kg, Oral, Rat

Skin corrosion/irritation

Skin corrosion/irritation No information available.

Serious eye damage/irritation

Serious eye damage/irritation No information available.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

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STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Dust in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Powder may irritate skin.

Eye contact Particles in the eyes may cause irritation and smarting.

TITANIUM DIOXIDE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 10,000.0

Species Rat

Notes (oral LD₅₀) LD₅₀ >5000 mg/kg, Oral, Rat OECD 425

ATE oral (mg/kg) 10,000.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >10000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LD₅₀ 3.43-5.09 mg/l, Inhalation, Rat OECD 403

Skin corrosion/irritation

Animal data Not irritating. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Not irritating. Rabbit OECD 405

Respiratory sensitisation

Respiratory sensitisation Not sensitising. Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Not sensitising. Local Lymph Node Assay (LLNA) OECD 429

Germ cell mutagenicity

Genotoxicity - in vitro Ames test Negative. OECD 471

Carcinogenicity

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

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Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Dust may irritate the respiratory system. Coughing, chest tightness, feeling of chest pressure.

Ingestion May cause discomfort if swallowed.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact May cause temporary eye irritation.

IRON (III) OXIDE

Skin corrosion/irritation

Skin corrosion/irritation No information available.

Serious eye damage/irritation

Serious eye damage/irritation No information available.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Dust in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

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Skin contact	Dust may cause slight irritation.
Eye contact	Solid particles trapped behind the eyelid may cause abrasive damage.

SECTION 12: Ecological information

Ecotoxicity	The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.
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Ecological information on ingredients.

MONOPROPYLENE GLYCOL

Ecotoxicity	The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.
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ETHANOL

Ecotoxicity	The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.
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SHELLAC

Ecotoxicity	The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.
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TITANIUM DIOXIDE

Ecotoxicity	The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.
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IRON (III) OXIDE

Ecotoxicity	The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.
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12.1. Toxicity

Toxicity	Not considered toxic to fish.
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Ecological information on ingredients.

MONOPROPYLENE GLYCOL

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 40613 mg/l, Oncorhynchus mykiss (Rainbow trout) LC ₅₀ , 96 hour: 55770 mg/l, Pimephales promelas (Fat-head Minnow)
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Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: > 4000 mg/l, Daphnia magna
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Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 19000 mg/l, Scenedesmus subspicatus EC ₅₀ , 96 hour: 19100 mg/l, Skeletonema costatum NOEC, 96 hour: 15000 mg/l, Scenedesmus subspicatus NOEC, 14 day: < 5300 mg/l, Skeletonema costatum
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Acute toxicity - microorganisms

NOEC, 18 hour: > 20000 mg/l,
Pseudomonas putida

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates

NOEC, 7 days: 13020 mg/l, Daphnia magna
NOEC, 7 day: 29000 mg/l, Freshwater invertebrates
Ceriodaphnia sp.

ETHANOL

Toxicity

Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe)
LC₅₀, 96 hour: 14200 mg/l, Pimephales promelas (Fat-head Minnow)
LC₅₀, 96 hour: 13000 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hour: 12000 - 16000 mg/l, Oryzias latipes (Red killifish)

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: 12340 mg/l, Daphnia magna

Acute toxicity - aquatic plants

EC₅₀, 48 hours: > 100 mg/l, Selenastrum capricornutum
EC₅₀, 72 hour: 275 mg/l,
(Chlorella vulgaris)

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates

NOEC, 9 day: 9.6 mg/l, Daphnia magna

SHELLAC

Toxicity

Not considered toxic to fish.

TITANIUM DIOXIDE

Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 96 hours: >10000 mg/l, Cyprinodon variegatus (Sheepshead minnow)

Acute toxicity - aquatic plants

NOEC, 480 hours: 100000 mg/l, Algae

IRON (III) OXIDE

Toxicity

Not considered toxic to fish.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

MONOPROPYLENE GLYCOL

Persistence and degradability

The substance is readily biodegradable.

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Biodegradation - Degradation >81%: 28 days
OECD 301F
- Degradation 96%: 64 days

Biological oxygen demand BOD5: 1170 mg O₂/l

Chemical oxygen demand 4700 mg O₂/l

ETHANOL

Persistence and degradability The product is readily biodegradable. The product is degraded completely by photochemical oxidation.

Biodegradation - Degradation 84%: 20 day
- Half-life : 1 - <10 days

SHELLAC

Persistence and degradability The product is biodegradable.

TITANIUM DIOXIDE

Persistence and degradability The product contains inorganic substances which are not biodegradable.

IRON (III) OXIDE

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.**MONOPROPYLENE GLYCOL**

Bioaccumulative potential The product is not bioaccumulating. BCF: < 0.09,

Partition coefficient log Pow: -1.07

ETHANOL

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient log Pow: - 0.31

SHELLAC

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient No information available.

TITANIUM DIOXIDE

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Bioaccumulative potential The product is not bioaccumulating. BCF: 19-352, Oncorhynchus mykiss (Rainbow trout)

Partition coefficient No information available.

IRON (III) OXIDE

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility Soluble in water.

Ecological information on ingredients.**MONOPROPYLENE GLYCOL**

Mobility The product is soluble in water.

Adsorption/desorption coefficient - Koc: 2.9 @ 20°C - Log Koc: 0.46 @ 20°C

Henry's law constant 0.00566 atm m³/mol @ 12°C

ETHANOL

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces. The product is water-soluble and may spread in water systems.

SHELLAC

Mobility The product is insoluble in water.

TITANIUM DIOXIDE

Mobility The product is insoluble in water.

IRON (III) OXIDE

Mobility No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.**MONOPROPYLENE GLYCOL**

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

ETHANOL

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

31028 GOLD ICING PAINT II**SHELLAC**

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

TITANIUM DIOXIDE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

IRON (III) OXIDE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects No information available.

Ecological information on ingredients.**MONOPROPYLENE GLYCOL**

Other adverse effects No information required.

ETHANOL

Other adverse effects The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential.

SHELLAC

Other adverse effects Not determined.

TITANIUM DIOXIDE

Other adverse effects Not determined.

IRON (III) OXIDE

Other adverse effects No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

General information Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

UN No. (ADR/RID) 1170

UN No. (IMDG) 1170

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UN No. (ICAO) 1170

UN No. (ADN) 1170

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

Proper shipping name (IMDG) ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

Proper shipping name (ICAO) ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

Proper shipping name (ADN) ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID classification code F1

ADR/RID label 3

IMDG class 3

ICAO class/division 3

ADN class 3

Transport labels

**14.4. Packing group**

ADR/RID packing group III

IMDG packing group III

ICAO packing group III

ADN packing group III

14.5. Environmental hazardsEnvironmentally hazardous substance/marine pollutant
No.**14.6. Special precautions for user**

EmS F-E, S-D

ADR transport category 3

Emergency Action Code •2Y

Hazard Identification Number (ADR/RID) 30

Tunnel restriction code (D/E)

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

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78
and the IBC Code

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SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
This product may impact SEVESO storage regulations.

Restrictions (Annex XVII Regulation 1907/2006)

CAUTION - Chemical may be subject to REACH RESTRICTIONS - see Annex XVII. This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 3

Seveso Directive - Control of major accident hazards P5c

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Classification procedures according to Regulation (EC) 1272/2008

Flam. Liq. 3 - H226: Calculation method.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

30/10/2020

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Version number	2.000
Supersedes date	06/09/2019
SDS number	58781
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H319 Causes serious eye irritation.
Signature	Lisa Bland

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



Exposure scenario

Industrial use of Ethanol as fuel source

Identification

Product name	Ethanol
REACH registration number	01-2119457610-43-XXXX
CAS number	64-17-5
EC number	200-578-6
EU index number	603-002-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial use of Ethanol as fuel source
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC7 Use of functional fluid at industrial site
<u>Worker</u>	
Process category	PROC16 Use of fuels

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Regional use tonnage: 30000 tonnes/year
Annual amount used in the EU: 300000 tonnes

Frequency and duration of use

Continuous.
Emission days: 300 days/year

Industrial use of Ethanol as fuel source

Environmental factors not influenced by risk management measures

Dilution Receiving water dilution (fresh or marine): 18000 m³/day

Risk management measures

Good practice Carefully handle the substance to minimise releases.

Technical measures When not in use, keep containers tightly closed. Avoid discharge into drains and the aquatic environment.

STP type Municipal STP.

STP details Assumed domestic sewage treatment plant flow: 2000 m³/day
Removal efficiency (total): 90%

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Sludge is disposed of or recovered.

Disposal method Contain and dispose of waste according to local regulations. Incineration, disposal or recycling at specific offsite provider.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Vapour pressure 5.73 kPa @ 20°C

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Human factors not influenced by risk management

Potentially exposed body parts Palm of one hand. Covers skin contact area up to 240 cm².

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

No specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method ECETOC TRA v2.0 Environment

Environmental exposure STP: Exposure 0.053 mg/l, PNEC 580 mg/l, RCR 0.0000914
Fresh water: Exposure 0.0152 mg/l, PNEC 0.96 mg/l, RCR 0.000158
Soil: Exposure 0.0006 mg/kg, PNEC 0.63 mg/kg, RCR 0.000952
Marine water: Exposure 0.0016 mg/l, PNEC 0.79 mg/l, RCR 0.00203

Industrial use of Ethanol as fuel source

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker

Exposure Worker - inhalation: Exposure 9.6 mg/m³, DNEL 950 mg/m³, RCR 0.0101
Worker - dermal: Exposure 0.3 mg/kg/day, DNEL 343 mg/kg/day, RCR 0.000875
Worker - all relevant routes: Exposure 1.7 mg/kg/day, DNEL 343 mg/kg/day, RCR 0.00496
Worst case assumption



Exposure scenario

Professional use of Ethanol as fuel source

Identification

Product name	Ethanol
REACH registration number	01-2119457610-43-XXXX
CAS number	64-17-5
EC number	200-578-6
EU index number	603-002-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional use of Ethanol as fuel source
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
<u>Worker</u>	
Process category	PROC16 Use of fuels

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Regional use tonnage: 380000 tonnes/year
Annual amount used in the EU: 3800000 tonnes

Frequency and duration of use

Continuous.
Emission days: 365 days/year

Professional use of Ethanol as fuel source

Environmental factors not influenced by risk management measures

Dilution Receiving water dilution (fresh or marine): 18000 m³/day

Risk management measures

Good practice Carefully handle the substance to minimise releases.

Technical measures When not in use, keep containers tightly closed. Avoid discharge into drains and the aquatic environment.

STP type Municipal STP.

STP details Assumed domestic sewage treatment plant flow: 2000 m³/day
Removal efficiency (total): 90%

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Sludge is disposed of or recovered.

Disposal method Contain and dispose of waste according to local regulations. Incineration, disposal or recycling at specific offsite provider.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Vapour pressure 5.73 kPa @ 20°C

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Human factors not influenced by risk management

Potentially exposed body parts Palm of one hand. Covers skin contact area up to 240 cm².

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

No specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method ECETOC TRA v2.0 Environment

Environmental exposure STP: Exposure 0.065 mg/l, PNEC 580 mg/l, RCR 0.000112
Fresh water: Exposure 0.0240 mg/l, PNEC 0.96 mg/l, RCR 0.025
Soil: Exposure 0.0273 mg/kg, PNEC 0.63 mg/kg, RCR 0.0433
Marine water: Exposure 0.0016 mg/l, PNEC 0.79 mg/l, RCR 0.00203

Professional use of Ethanol as fuel source

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker

Exposure Worker - inhalation: Exposure 9.6 mg/m³, DNEL 950 mg/m³, RCR 0.0101
Worker - dermal: Exposure 0.3 mg/kg/day, DNEL 343 mg/kg/day, RCR 0.000875
Worker - all relevant routes: Exposure 1.7 mg/kg/day, DNEL 343 mg/kg/day, RCR 0.00496
Worst case assumption



Exposure scenario

Consumer use of Ethanol as automotive fuel

Identification

Product name	Ethanol
REACH registration number	01-2119457610-43-XXXX
CAS number	64-17-5
EC number	200-578-6
EU index number	603-002-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Consumer use of Ethanol as automotive fuel
Process scope	Covers consumer uses of automotive fuels only.
Product category	PC13 Fuels.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
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2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Amounts used

Annual amount for wide dispersive uses: 3800000 tonnes

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
Other factors	Covers use at ambient temperatures.

Risk management measures

Consumer use of Ethanol as automotive fuel

Good practice	Carefully pour from containers.
Technical measures	Do not discharge into drains or watercourses or onto the ground.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	This substance is consumed during use and no waste of the substance is generated.
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2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Amount per use: 100 litre

Frequency and duration of use

Covers frequency up to 1 day/week, , .
Application duration: <5 minutes

Other given operational conditions affecting Non-industrial exposure

Setting	Outdoor.
Temperature	Covers use at ambient temperatures.

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method	ECETOC TRA v2.0 Environment
Environmental exposure	STP: Exposure 0.065 mg/l, PNEC 580 mg/l, RCR 0.000112 Fresh water: Exposure 0.0240 mg/l, PNEC 0.96 mg/l, RCR 0.025 Soil: Exposure 0.0273 mg/kg, PNEC 0.63 mg/kg, RCR 0.0433 Marine water: Exposure 0.0034 mg/l, PNEC 0.79 mg/l, RCR 0.00430

3. Exposure estimation (Health 1)

Assessment method	ConsExpo v4.1
Exposure	Consumer - dermal: Exposure 35.00 mg/kg/day, DNEL 206 mg/kg/day, RCR 0.170 Consumer - inhalation: Exposure 1.54 mg/m³, DNEL 144 mg/m³, RCR 0.0107 Worst case assumption



Exposure scenario

Consumer use of Ethanol as domestic fuel

Identification

Product name	Ethanol
REACH registration number	01-2119457610-43-XXXX
CAS number	64-17-5
EC number	200-578-6
EU index number	603-002-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Consumer use of Ethanol as domestic fuel
Process scope	Covers consumer uses in liquid fuels.
Product category	PC13 Fuels.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
--------------------------------	---

2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Product characteristics

Physical state	Liquid
----------------	--------

Amounts used

Annual amount for wide dispersive uses: 10000 tonnes

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
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Consumer use of Ethanol as domestic fuel

Other factors Covers use at ambient temperatures.

Risk management measures

Good practice Carefully pour from containers.

Technical measures Do not discharge into drains or watercourses or onto the ground.

Conditions and measures related to external treatment of waste for disposal

Waste treatment This substance is consumed during use and no waste of the substance is generated.

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Amounts used

Amount per use: 1 litre

Frequency and duration of use

Covers frequency up to 1 day/week, , .

Application duration: <5 minutes

Human factors not influenced by risk management

Potentially exposed body parts Palm of one hand. Covers skin contact area up to 210 cm².

Other given operational conditions affecting Non-industrial exposure

Setting Indoor/outdoor use.

Temperature Covers use at ambient temperatures.

Other given operational conditions affecting Non-industrial exposure

Consumer information Avoid splashing. If risk of splashing, wear safety goggles or face shield.

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method ECETOC TRA v2.0 Environment

Environmental exposure STP: Exposure 0.340 mg/l, PNEC 580 mg/l, RCR 0.000690
Fresh water: Exposure 0.0447 mg/l, PNEC 0.96 mg/l, RCR 0.0466
Soil: Exposure 0.0003 mg/kg, PNEC 0.63 mg/kg, RCR 0.000476
Marine water: Exposure 0.0044 mg/l, PNEC 0.79 mg/l, RCR 0.00557

3. Exposure estimation (Health 1)

Assessment method ConsExpo v4.1

Exposure Consumer - dermal: Exposure 70.00 mg/kg/day, DNEL 206 mg/kg/day, RCR 0.340
Consumer - inhalation: Exposure 0.81 mg/m³, DNEL 144 mg/m³, RCR 0.000563
Worst case assumption

Product Application Policy

To whom it may concern

Non-Supported Applications of Propylene Glycols (PGs)

For reasons of health and safety, regulatory compliance, and in accordance with internal policies **Univar Solutions**, will NOT supply Propylene Glycols (PGs) in a number of specific applications relating to pharmaceuticals, medicines, tobacco and tobacco products, marijuana products, food, feed, and dietary supplements. In order to maintain a high level of awareness amongst the customers, sales agents and distributors (including re-sellers and re-packagers) of **Univar Solutions**, we are writing to remind you of the non-supported applications for the Propylene Glycols (PGs). The use of such products is subject to the user's assessment of suitability, and compliance for its particular supplier-supported use. **Univar Solutions** will not support the applications listed in Annex 1 of this document.

Background

Based on a number of concerns and policies, including regulations to restrict product use, inappropriate exposure or contact and internal policies on specific application, **Univar Solutions** will not support Propylene Glycols (PGs) in the applications specified in Annex 1. We will not knowingly sample or sell these products for use in these non-supported applications, and will exit sales if necessary to support this position; however, we will make every effort to transition customers to appropriate products where possible.

General Non-Supported Applications

Product Scope:

All PG Products

The following identifies the applications that are generally, not supported by **Univar Solutions** for any Propylene Glycol (PG) product:

- Generation of artificial smoke/theatrical fogs/mists/artificial snow
- For use in the production of tobacco, the manufacture of tobacco products, the manufacture of electronic cigarettes or the manufacture of marijuana products
- Use as an active in pesticides¹
- Use as heat transfer fluids without inhibitors, including as an ingredient in fluids for warming or cooling foods or beverages or for heating an enclosed space where personnel exposure is possible²
- Manufacture of munitions or chemical weapons
- Ingredient in cat food

Notes

¹ **Univar Solutions** has not registered any PG product under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for use as an active ingredient in pesticide formulas.

² Contact the **Univar Solutions** for properly inhibited PG-based fluids for heat transfer applications.

Univar Solutions does not provide samples of or knowingly sell any PG product for use in any General Non-Supported Application, unless otherwise agreed to in writing.

Technical or Industrial Grade Non-Supported Applications

Product Scope:

All Technical and Industrial PG grades, including, but not limited to:

- PG Industrial Grade (PGI)
- PG Technical Grade (PG TG)
- Dipropylene Glycol Regular Grade (DPG)
- Tripropylene Glycol Regular Grade (TPG)

- Tripropylene Glycol Acrylate Grade (TPG Ac)
- PG-Highers

The following identifies the applications that are NOT supported (“Technical or Industrial Grade Non-Supported Applications”) by **Univar Solutions** for any technical or industrial grade PG product:

- Any sensitive applications, including, but not limited to, pharmaceutical, direct and indirect food contact, cosmetics, personal care, animal feed, and children’s toys.
- All applications listed previously as General Non-Supported Applications

Univar Solutions does not provide samples of or knowingly sell any PG product for use in any Technical or Industrial Grade Non-Supported Application, unless otherwise agreed to in writing.

Specialty Grade Supported Applications

The following section identifies certain sensitive applications that are supported (“Specialty Grade Supported Applications”) by **Univar Solutions** for specialty grade products^{3,4}

Product Scope:

- Propylene Glycol USP/EP
- Propylene Glycol USP/EP (PG USP/EP)

is supported by **Univar Solutions** for the following applications:

- Pharmaceutical excipients⁵,
- direct and indirect food contact,
- beverage,
- cosmetics,
- personal care applications and children’s toys,
- animal feed (except cat food)⁶

Product Scope:

- Dipropylene Glycol LO+ Grade (DPG LO+)

is supported by **Univar Solutions** for the following applications:

- Indirect food contact,
- Cosmetics/personal care and
- Children’s toys

Product Scope:

- Propylene Glycol Animal Feed (PG AF)

is supported by **Univar Solutions** for the following applications

- Animal feed (except cat food)⁶

Notes

³ Re-packaging any specialty grade PG product for re-sale requires prior written approval by **Univar Solutions**.

⁴ Specialty grade PG product names may vary by region.

⁵ **Univar Solutions** does not test any PG USP/EP product for suitability in human parenteral applications (i.e., applications intended for humans where the drug formulation is administered not through the gastrointestinal tract, but is typically administered as an injection or infusion) and, therefore, does not support sales into these applications, unless otherwise agreed to in writing. **Univar Solutions** does not apply Active Pharmaceutical Ingredient (“API”) Good Manufacturing Practice (GMP) and, therefore, does not support the use of any PG USP/EP product as an API, unless otherwise agreed to in writing.

⁶ Where PG AG is not available, PG USP/EP is the PG product supported for animal feed (except cat food).

In the event that a customer is using a PG product that is contrary to the information provided above, **Univar Solutions** reserves the right to exit product sales to that customer.

Univar Solutions strongly encourage their customers to review both their manufacturing processes and their applications of the aforementioned PG products from the standpoint of human health and environmental quality to ensure that such products are used only in applications for which they are intended or tested. To enter into new applications beyond the traditional standard use applications, contact your **Univar Solutions** representative to review the specific application with our supplier. As use conditions and applicable laws may differ from one location to another and may change with time, when **Univar Solutions** supports an application, **Univar Solutions** does not warrant and is not responsible for the use in such application.

Please note **Univar Solutions** warrants that the products supplied meet the agreed specification but does not offer warranties as to fitness for purpose. You, as a user, must rely on your own testing in order to ascertain fitness for your intended purpose. Should you have any questions or require further information, please contact your **Univar Solutions** representative.

Whilst this policy is distributed with the SDS, it is to be considered as a separate document.

Yours sincerely,
Univar Solutions
Product Stewardship