

SAFETY DATA SHEET

According to regulation (EC) No. 453/2010

FRASER ANTI-STATIC CLEANING FLUID

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

1.1 PRODUCT IDENTIFIER

Product Name: Fraser Anti-Static Cleaning Fluid
Product Description: Solvent Mixture

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

Intended Use: Solvent Cleaner
Uses Advised Against: We have no information on any restrictions for this product

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: Fraser Anti-Static Techniques
Address: Scotts Business Park, Bampton, Devon, United Kingdom, EX16 9DN
Phone: +44 (0) 1398 331 114
Email: sales@fraser-antistatic.co.uk

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Contact: +44 (0) 1398 331 114

SECTION 2 HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008

Aspiration toxicant: Category 1.

Hazardous to the aquatic environment, chronic category 4.

H304: May be fatal if swallowed and enters airways.

H413: May cause long lasting harmful effects to aquatic life.

Classification according to EU Directive 67/548/EEC / 1999/45 EC

Xn; R65 | R66 |

Harmful.

R65: Harmful: may cause lung damage if swallowed.

R66: Repeated exposure may cause skin dryness or cracking.

2.2 LABEL ELEMENTS

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

Pictograms: Signal Word: Danger



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Hazard Statements:

- H304: May be fatal if swallowed and enters airways.
H413: May cause long lasting harmful effects to aquatic life.
EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary Statements:

- P273: Avoid release to the environment.
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P331: Do NOT induce vomiting.
P405: Store locked up.
P501: Dispose of contents and container in accordance with local regulations.

Contains: Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

2.3 OTHER HAZARDS

Physical / Chemical Hazards:

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited. Combustible.

Health Hazards:

Repeated exposure may cause skin dryness or cracking. May be irritating to the eyes, nose, throat, and lung.

Environmental Hazards:

Material does not meet the criteria for PBT or vPvB in accordance with REACH Annex XIII.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

3.2 MIXTURES

Ingredients: Solvents

Reportable hazardous substance(s) complying with the classification criteria and/or with an exposure limit (OEL) according Regulation (EC) 1272/2008:

EG-No:	CAS-No.	Substance Name	Mass - %	Classification GHS/CLP
252-104-2	34590-94-8	2-Methoxy methylethoxy propanol	< 10	Not classified
	8008-57-9	CITRUS AURANTIUM DULCIS	< 10	 Flam. Liq. 3 H226  Skin Irrit. 2 H315
292-460-6	90622-58-5	Alkanes, C11-C15-iso-	25 - 50	 Asp. Tox. 1 H304, Aquatic Chronic 4 H314; EUH066

For full text of H-phrases see section 16

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Reportable hazardous substance(s) complying with the classification criteria and/or with an exposure limit (OEL) according directive 1999/45/EEC:

EG-No:	CAS-No.	Substance Name	Mass - %	Hazard Symbol	R-Phrases
252-104-2	34590-94-8	2-Methoxy methylethoxy propanol	< 10		Not classified
	8008-57-9	CITRUS AURANTIUM DULCIS	< 10		R 10-38-65
292-460-6	90622-58-5	Alkanes, C11-C15-iso-	25 - 50		R 65-66

For full text of R-phrases see section 16

SECTION 4 FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

- General Advice:** If there is a risk of loss of consciousness, place and transport affected person in the recovery position. Nothing to be administered if unconscious or fitting. Promptly remove soiled clothing and wash thoroughly before reuse. First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Inhalation:** Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.
- Ingestion:** Small quantities: Rinse out mouth and then drink plenty of water. Larger quantities: Risk of aspiration! Seek immediate medical attention. Do not induce vomiting.
- Eye Contact:** Flush eyes with the eyelids open thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
- Skin Contact:** Wash off immediately with plenty of water and soap. For dermatitis protection, rub greasy ointment into the skin. If irritation continues consult a physician. Remove contaminated clothing. Launder contaminated clothing before reuse.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

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4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

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

Special Exposure Hazards: Void

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

5.3 ADVICE FOR FIRE FIGHTERS

Fire Fighting Instructions:

Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

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

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material.

Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces. Recover by pumping or with suitable absorbent.

Water Spill

Stop leak if you can do so without risk. Eliminate sources of ignition. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10 deg C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. 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 Sections 8 and 13.

SECTION 7 HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Loading / Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Static Accumulator:

This material is a static accumulator. A liquid is typically considered a non-conductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semi-conductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is non-conductive or semi-conductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well ventilated area. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be earthed and bonded to prevent accumulation of static charge.

Storage Temperature: [Ambient]

Suitable Materials and Coatings (Chemical Compatibility):

Inorganic Zinc Coatings; Amine Epoxy; Polyamide Epoxy; Epoxy Phenolic; Neoprene; Carbon Steel; Stainless Steel

Unsuitable Materials and Coatings:

Vinyl Coatings; Natural Rubber; Butyl Rubber; Ethylene-propylene-diene monomer (EPDM); Polystyrene

Storage class (VCI): 10

7.3 SPECIFIC END USES

No industrial or sector specific guidance available.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit / Standard			Note	Country / Source
C9-C15 Aliphates	vapour	8 hour average value	600 mg/m ³			Germany, TRGS 900
Alkanes, C11-C15-iso-	vapour	Short term value (15 min average value)	1200 mg/m ³		Category II	Germany, TRGS 900
Alkane, C11-C15-iso-	vapour	8 hour average value	300 mg/m ³			People's Republic of China
Hydrocarbons, < 1% aromatics, < 5% nhexane, < 25% cyclo- / isohexanes	vapour	8 hour average value		200 ml/m ³		Austria, GKV
2-Methoxymethylethoxy-propanol	Inhalable aerosol and vapour	8 hour average value	300 mg/m ³	50 ppm		Germany, TRGS 900
2-Methoxymethylethoxy-propanol	Inhalable aerosol and vapour	Short term value (15 min average value)	310 mg/m ³	50 ppm	Category I SKIN	Germany, TRGS 900
2-Methoxymethylethoxy-propanol	vapour	Indicative Occupational Exposure Limit 8 hour average value	308 mg/m ³	50 ppm	SKIN	European Union
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	307 mg/m ³	50 ppm	SKIN	Austria, GKV
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	614 mg/m ³	100 ppm	SKIN	Austria, GKV
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	303 mg/m ³	50 ppm		Denmark
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	600 mg/m ³	100 ppm		Denmark
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	240 mg/m ³			Poland
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	280 mg/m ³			Poland
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	300 mg/m ³	50 ppm		Sweden
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	450 mg/m ³	75 ppm		Sweden

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Substance Name	Form	Limit / Standard	Note	Country / Source
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	300 mg/m ³	The Netherlands
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	300 mg/m ³ 50 ppm	Switzerland
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	300 mg/m ³ 50 ppm	Switzerland
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	600 mg/m ³	People's Republic of China
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	900 mg/m ³	People's Republic of China
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	308 mg/m ³	Hungary
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	308 mg/m ³	Hungary
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	308 mg/m ³ 50 ppm	SKIN Australia
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	606 mg/m ³ 100 ppm	SKIN Canada – Quebec; New Zealand; Singapore
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	909 mg/m ³ 150 ppm	SKIN Canada – Quebec; New Zealand; Singapore
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	100 ppm	SKIN United States of America (ACGIH); Canada - Ontario
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	150 ppm	SKIN United States of America (ACGIH); Canada - Ontario
2-Methoxymethylethoxy-propanol	vapour	8 hour average value	600 mg/m ³ 100 ppm	SKIN United States of America (NIOSH, OSHA); South Korea
2-Methoxymethylethoxy-propanol	vapour	Short term value (15 min average value)	900 mg/m ³ 150 ppm	SKIN United States of America (NIOSH, OSHA); South Korea

The lists that were valid during the compilation were used as basis.

A “skin” notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapours or by direct skin contact.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

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

Workers

Substance Name	Acute - systemic effects		Acute - local effects	
	Dermal	Inhalation	Dermal	Inhalation
Alkanes, C11-C15-iso-	NA	NA	NA	NA
2-Methoxy-methylethoxy-propanol	NA	NA	NA	NA

Substance Name	Long term - systemic effects		Long term - local effects	
	Dermal	Inhalation	Dermal	Inhalation
Alkanes, C11-C15-iso-	NA	NA	NA	NA
2-Methoxy-methylethoxy-propanol	65 mg/kg bodyweight	310 mg/m ³	NA	NA

Consumers

Substance Name	Acute - systemic effects			Acute - local effects		
	Dermal	Inhalation	Oral	Dermal	Inhalation	Oral
Alkanes, C11-C15-iso-	NA	NA	NA	NA	NA	NA
2-Methoxy-methylethoxy-propanol	NA	NA	NA	NA	NA	NA

Substance Name	Long term - systemic effects			Long term - local effects		
	Dermal	Inhalation	Oral	Dermal	Inhalation	Oral
Alkanes, C11-C15-iso-	NA	NA	NA	NA	NA	NA
2-Methoxy-methylethoxy-propanol	15 mg/kg bodyweight	37,2 mg/m ³	1,67 mg/kg bodyweight	NA	NA	NA

Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

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Predicted No Effect Concentration (PNEC)

Substance Name	Water (fresh water)	Water (marine water)	Water (intermittent releases)	Sewage treatment plant	Fresh water sediment	Marine sediment	Soil
Alkanes, C11-C15-iso-	NA	NA	NA	NA	NA	NA	NA
2-Methoxymethylethoxy-propanol	19 mg/l	1,9 mg/l	190 mg/l	4168 mg/l	52,3 mg/kg d.w.	5,2 mg/kg d.w.	4,59 mg/kg d.w.

For hydrocarbon UVCBs, no single PNEC value is identified for the overall substance or used in risk assessment calculations. Therefore, no PNEC values are disclosed in the above table.

8.2 EXPOSURE CONTROLS

Engineering Controls

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded.

Personal Protection

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection:

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half-face filter respirator Type A filter material.

Hand Protection:

Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: Chemical resistant gloves are recommended. Nitrile, Viton.

CEN standards EN 420 and EN 374 provide general requirements and lists of glove types.

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye Protection:

If contact is likely, safety glasses with side shields are recommended.

Skin & Body Protection:

Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Environmental Controls

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical State (20°C):	Liquid
Colour:	Colourless, clear
Odour:	Characteristic
Odour Threshold:	No data available
pH (20°C):	Not applicable
Melting Point:	No data available
Freezing Point:	No data available
Initial boiling point / and boiling range, °C:	173-193 [ASTM D86]
Flash point, °C:	> 61 [ASTM D-93]
Evaporation Rate (Diethyl ether = 1):	78 [In-house method]
Flammability (Solid, Gas):	Not applicable to liquids
Upper/Lower Flammable Limits (Approximate volume % in air):	Lower: 0,6 Upper: 14 [Extrapolated]
Vapour pressure (20 °C), mbar:	0,8
Vapour Density (Air = 1):	> 1 at 101 kPa [In-house method]
Relative Density (at 20 °C):	0.79 [With respect to water] [Calculated]
Solubility in water (20 °C):	75 g/l
Partition coefficient (n-Octanol/Water Partition Coefficient):	No data available
Autoignition Temperature:	> 200°C [Extrapolated]
Decomposition Temperature:	No data available
Dynamic viscosity (20 °C):	2,5 mPa s
Explosive Properties:	None
Oxidizing Properties:	None

9.2 OTHER INFORMATION

None

SECTION 10 STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2 CHEMICAL STABILITY

Material is stable under normal conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous polymerization will not occur.

10.4 CONDITIONS TO AVOID

Open flames and high energy ignition sources. Do not distill to dryness. Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

10.5 INCOMPATIBLE MATERIALS

Strong oxidisers. Strong acids. Strong bases.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

SECTION 11 EXPOSURE CONTROLS / PERSONAL PROTECTION

The product as such has not been tested. The information given is derived from the properties of the individual components.

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Acute Toxicity:

Alkanes, C11-C15-iso-:

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: (Rat) 8 hour(s) LC ₅₀ > 5000 mg/m ³ (Vapour). Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403 Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.

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Ingestion	
Acute Toxicity (Rat): LD50 > 5000 mg/kg. Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 401.
Skin	
Acute Toxicity (Rabbit): LD50 > 5000 mg/kg. Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for structurally similar materials. 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 structurally similar materials. Test(s) equivalent or similar to OECD Guideline 404.
Eye	
Serious Eye Damage/Irritation: Data available. Test scores or other study results do not meet criteria for classification.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405.
Sensitisation	
Respiratory Sensitisation: No end point data for material.	Not expected to be a respiratory sensitiser.
Skin Sensitisation: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a skin sensitiser. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 406.
Aspiration: Data available.	May be fatal if swallowed and enters airways. Based on physicochemical properties of the material.

2-Methoxy-methylethoxy-propanol:

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No deaths occurred at this concentration: LC ₅₀ , 7 h, Vapor, rat 3.35 mg/l.	Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Symptoms of excessive exposure may be anaesthetic or narcotic effects; dizziness and drowsiness may be observed.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity: LD ₅₀ , rat > 5.000 mg/kg.	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
Skin	
Acute Toxicity: LD ₅₀ , Rabbit 9.510 mg/kg.	Prolonged skin contact with very large amounts may cause dizziness or drowsiness.
Skin Corrosion/Irritation: Data available. Test scores or other study results do not meet criteria for classification.	Prolonged exposure not likely to cause significant skin irritation.

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Eye	
Serious Eye Damage/Irritation: Data available. Test scores or other study results do not meet criteria for classification.	May cause slight temporary eye irritation. Corneal injury is unlikely.
Sensitisation	
Respiratory Sensitization: No end point data for material.	No relevant data found.
Skin Sensitization: Data available. Test scores or other study results do not meet criteria for classification.	Did not cause allergic skin reactions when tested in humans.
Aspiration	Based on physical properties, not likely to be an aspiration hazard.

Citrus Aurantium Dulcis

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No data available.	
Irritation: No data available.	
Ingestion	
Acute Toxicity: LD ₅₀ , rat, > 5.000 mg/kg.	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
Skin	
Acute Toxicity: LD ₅₀ , rabbit > 5.000 mg/kg.	Minimally Toxic.
Skin Corrosion/Irritation: Data available. Test scores or other study results meet criteria for classification.	Rabbit: Moderate skin irritation after 24 h.
Eye	
Serious Eye Damage/Irritation: No data available.	Irritant effect possible.
Sensitisation	
Respiratory Sensitisation: No data available.	
Skin Sensitisation: No data available.	
Aspiration: No data available.	May be fatal if swallowed and enters airways. Based on physicochemical properties of the material.

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Chronic Toxicity and Carcinogenicity

Alkanes, C11-C15-iso-

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 structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 473 474 476 478 479.
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 structurally similar materials. Test(s) equivalent or similar to OECD Guideline 453.
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 structurally similar materials. Test(s) equivalent or similar to OECD Guideline 414 421 422.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
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 structurally similar materials. Test(s) equivalent or similar to OECD Guideline 408 413 422.
Other information.	Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

2-Methoxy-methylethoxy-propanol

Germ Cell Mutagenicity: Data available. Test scores or other study results do not meet criteria for classification.	In vitro genetic toxicity studies were negative.
Carcinogenicity: Data available. Test scores or other study results do not meet criteria for classification.	For similar material(s): Did not cause cancer in laboratory animals.
Reproductive Toxicity: Data available. Test scores or other study results do not meet criteria for classification.	For similar material(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
Developmental Toxicity: Data available. Test scores or other study results do not meet criteria for classification.	Did not cause birth defects or any other foetal effects in laboratory animals.
Repeated Dose Toxicity: Data available. Test scores or other study results do not meet criteria for classification.	Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

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Citrus Aurantium Dulcis

Germ Cell Mutagenicity: No data available.	
Carcinogenicity: Data available. Test scores or other study results do not meet criteria for classification.	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive Toxicity: No data available.	
Developmental Toxicity: No data available.	
Repeated Dose Toxicity: Data for oral uptake available. Test scores or other study results do not meet criteria for classification.	LOAEL, mouse: 1000 mg/kg bodyweight/day.
Other information.	Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

12.1 TOXICITY

Alkanes, C11-C15-iso-:

Test	Duration	Organism Type	Test Results
Water- - acute toxicity	72 hours	Pseudokirchneriella subcapitata	NOEC: 1000 mg/l: data for similar materials.
Water- - acute toxicity	72 hours	Pseudokirchneriella subcapitata	EC ₀ : 1000 mg/l: data for similar materials.
Water- - chronic toxicity	21 days	Daphnia magna	NOEC: >=1 mg/l: Data for the material.
Water- - acute toxicity	96 hours	Oncorhynchus mykiss	LC ₀ : 1000 mg/l: data for similar materials.
Water- - acute toxicity	48 hours	Daphnia magna	EC ₀ : 1000 mg/l: data for similar materials.

2-Methoxy-methylethoxy-propanol

Test	Duration	Organism Type	Test Results
Water- - acute toxicity	96 hours	Poecilia reticulata	LC ₅₀ : > 1000 mg/l
Water- - chronic toxicity	22 days	Daphnia magna	NOEC: > 0,5 mg/l
Water- - chronic toxicity	22 days	Daphnia magna	LOEC: > 0,5 mg/l
Water- - acute toxicity	96 hours	Crangon crangon	LC ₅₀ : > 1000 mg/l
Water- - acute toxicity	48 hours	Daphnia magna	LC ₅₀ : 1.919 mg/l
Water- - acute toxicity	96 hours	Pseudokirchneriella subcapitata	ErC ₅₀ : > 969 mg/l

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Citrus Aurantium Dulcis

Test	Duration	Organism Type	Test Results
Water- - acute toxicity	96 hours	Pimephales promelas	LC ₅₀ : 0,7 mg/l
Water- - acute toxicity	48 hours	Daphnia magna	EC ₅₀ : 0,67 mg/l
Water- - acute toxicity	96 hours	Pseudokirchneriella subcapitata	NOEC: 4 mg/l
Water- - chronic toxicity	21 days	Daphnia magna	NOEC: 0,15 mg/l
Water- - acute toxicity	72 hours	Desmodesmus subspicatus	ErC ₅₀ : 150 mg/l

Remaining Components

Test	Duration	Organism Type	Test Results
Water- - acute toxicity	72 hours	Pseudokirchneriella subcapitata	LC ₅₀ : > 1000 mg/l
Water- - chronic toxicity	22 days	Daphnia magna	NOEC: 10 mg/l
Water- - chronic toxicity	21 days	Daphnia magna	LOEC: 32 mg/l
Water- - acute toxicity	96 hours	Poecilia reticulata	LC ₅₀ : > 1000 mg/l
Water- - chronic toxicity	14 hours	Oncorhynchus mykiss	NOEC: > 300 mg/l
Water- - acute toxicity	48 hours	Daphnia magna	LC ₅₀ : > 1000 mg/l

Product

Ecotoxicity	Calculated Values
Acute fish toxicity	8,2 mg/l
Acute aquatic toxicity to invertebrates	673,7 mg/l
Toxicity to aquatic plants	7,8 mg/l

Classification according regulation (EC) No. 1272/2008, 4.1.3.5.: Not acute toxic, not chronic toxic for water organisms.

Based on the calculated toxicity values and log Kow >4 the product was assigned a safety net classification as: Aquatic Chronic Category 4, H413.

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12.2 PERSISTENCE AND DEGRADABILITY

Biodegradation:

Substance Name	Biodegradation	Exposure Time	Method	Evaluation
Alkanes, C11-C15-iso-	31.3 %	28 days	OECD Test 301B	Moderately biodegradable
2-Methoxy-methylethoxy-propanol	75 %	28 days	OECD Test 301F	Rapidly biodegradable
Citrus Aurantium Dulcis	72 - 83.4 %	28 days	OECD Test 301B	Rapidly biodegradable
Remaining Components	25 %	28 days	OECD Test 302B	Moderately biodegradable

Hydrolysis

Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation

Material -- Expected to degrade rapidly in air.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Not determined

Partition coefficient, n-octanol/water (log Kow): > 4 [Measured]

12.4 MOBILITY IN SOIL

Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

12.5 PERSISTENCE, BIOACCUMULATION AND TOXICITY FOR SUBSTANCE(S)

This product is not, or does not contain, a substance that is a PBT or a vPvB.

12.6 OTHER ADVERSE EFFECTS

No adverse effects are expected.

This product is not, or does not contain, a substance that is in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

General information:

The product is not completely miscible with water. Unsolved product must be removed before wastewater treatment.

Do not allow product to reach ground water, water bodies or sewage system.

AOX indication: The product is free from halogenated organic compounds

Regulation (EC) No. 648/2004: This product does not contain surfactants.

Directive 2006/11/EC: The product is free from heavy metal compounds.

SECTION 13 DISPOSAL CONSIDERATIONS

Local, state and national regulations governing the disposal of waste materials should be checked.

13.1 WASTE TREATMENT METHODS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

This product may be recycled. Must not be disposed of together with household garbage. Do not allow product to reach sewage system without pretreatment.

REGULATORY DISPOSAL INFORMATION

European Waste Code

Allocation of the waste code numbers according EC Directive 91/692/EEC must be realized under considerations of existing sector specifics and processes. The mentioned waste codes are recommendations based on the product application as suggested by the manufacturer. Special applications and special disposal conditions at the applicer's place may however require another waste code.

- 140603 WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (EXCEPT 07 AND 08): waste organic solvents, refrigerants and foam/aerosol propellants: other solvents and solvent mixtures.
or
70604 WASTES FROM ORGANIC CHEMICAL PROCESSES: wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics: other organic solvents, washing liquids and mother liquors.

Disposal / Waste (packages)

Remove remaining waste products adhering to the container walls.

European Waste Code

- 150104 (metallic packaging), or
150102 (plastic packaging), or
150110 (packaging containing residues of or contaminated by dangerous substances)

SECTION 14 TRANSPORT INFORMATION

ADR/RID

14.1 UN NUMBER

Not applicable.

14.2 UN PROPER SHIPPING NAME

Proper Shipping Name: NOT REGULATED.

14.3 TRANSPORT HAZARD CLASS(ES)

Not applicable.

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14.4 PACKING GROUP

Not applicable.

14.5 ENVIRONMENTAL HAZARDS

Not considered environmentally hazardous based on available data.

14.6 SPECIAL PRECAUTIONS FOR USER

Special Provisions: no data available.

Hazard Identification No: no data available.

ADNR / ADN

14.1 UN NUMBER

ID9003

14.2 UN PROPER SHIPPING NAME

Proper Shipping Name: Substances with $60C < f.p. \leq 100 C$

Technical Name: Isoundecanes, Dipropylene glycol methyl ether isomeres.

14.3 TRANSPORT HAZARD CLASS(ES)

Hazard Class: 9

14.4 PACKING GROUP

Not applicable.

14.5 ENVIRONMENTAL HAZARDS

Not considered environmentally hazardous based on available data.

14.6 SPECIAL PRECAUTIONS FOR USER

No data available.

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IMDG

14.1 UN NUMBER

Not applicable.

14.2 UN PROPER SHIPPING NAME

Proper Shipping Name: NOT REGULATED.

14.3 TRANSPORT HAZARD CLASS(ES)

Not applicable.

14.4 PACKING GROUP

Not applicable.

14.5 ENVIRONMENTAL HAZARDS

Not considered environmentally hazardous based on available data.

14.6 SPECIAL PRECAUTIONS FOR USER

EMS Number: Not applicable.

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Substance Name:

NOXIOUS LIQUID, N.F.,(7) N.O.S., (contains iso-and cycloalkanes (C12+), poly(2-8)alkylene glycol monoalkyl(c1-c6)ether)

Ship type required: 3

Pollution category: Y

ICAO/IATA

14.1 UN NUMBER

Not applicable.

14.2 UN PROPER SHIPPING NAME

Proper Shipping Name: NOT REGULATED.

14.3 TRANSPORT HAZARD CLASS(ES)

Not applicable.

14.4 PACKING GROUP

Not applicable.

14.5 ENVIRONMENTAL HAZARDS

Not considered environmentally hazardous based on available data.

14.6 SPECIAL PRECAUTIONS FOR USER

No data available.

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SECTION 15 REGULATORY INFORMATION

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

All substances in this product are on the EINECS inventory.

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

Applicable EU Directives and Regulations

1907/2006 [... on the Registration, Evaluation, Authorisation and Restriction of Chemicals ... and amendments thereto].

98/24/EC [... on the protection of workers from the risk related to chemical agents at work ...]. Refer to Directive for details of requirements.

1272/2008 [on classification, labelling and packaging of substances and mixtures.. and amendments thereto].

Refer to the relevant EU/national regulation for details of any actions or restrictions required by the above Regulation(s)/Directive(s).

National Directives and Regulations: Germany:

Water hazard class:	1, slightly hazardous for water (VwVws)
Accident Ordinance:	not subject to German Accident Ordinance
Technical instructions on air quality (TA-Luft):	5.2.5, Organic substances general, 100 %.
Amount of Volatile organic compounds (VOC)s:	weight percent: 100

15.2 CHEMICAL SAFETY ASSESSMENT

REACH Information: A Chemical Safety Assessment has not been carried out.

SECTION 16 OTHER INFORMATION

Full text of R-Phrases under section 3:

R 10	Flammable.
R 38	Irritating to skin.
R 65	Harmful: may cause lung damage if swallowed.
R 66	Repeated exposure may cause skin dryness or cracking.

Full text of H-Codes under section 3:

Flam. Liq. 3, H226	Flammable liquid and vapour.
Skin Irrit. 2, H315	Causes skin irritation.
Asp. Tox. 1, H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 4, H314	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

Acronym	Full Text
NA	Not applicable
NB	Not determined
VOC	Volatile Organic Compounds
ADR	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG	International Maritime Code for Dangerous Goods
IATA	International Air Transport Association
IATA-DGR	Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
CLP	Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)
CAS	Chemical Abstracts Service (division of the American Chemical Society)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	Europäisches Verzeichnis der angemeldeten chemischen Stoffe
ASTM	ASTM International, former: American Society for Testing and Materials (ASTM)
TLV	Threshold Limit Value (American Conference of Governmental Industrial Hygienists)
TSCA	Toxic Substances Control Act (U.S.-Inventory)
UVCB	Substances of Unknown or Variable composition, Complex reaction products or Biological materials
LC	Lethal Concentration
LD	Lethal Dose
LL	Lethal Loading
EC	Effective Concentration
EL	Effective Loading
NOEC	No Observable Effect Concentration
NOELR	No Observable Effect Loading Rate

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product and shall not establish a legally valid contractual relationship. Local, state and national regulations, laws, and regulations in force are to be obeyed by the recipient on his own responsibility.