SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 05/09/2024 **Revision Number** 1

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

1.1. Product identifier

Product Name GRFAB50 Fabsil Gold 200ml Aerosol

Safety data sheet number 06089

Unique Formula Identifier (UFI) 3YN1-QKXN-D50X-V012

Pure substance/mixture Mixture

Contains HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics; butane

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

Recommended use Exterior surface coating

Uses advised against

1.3. Details of the supplier of the safety data sheet

Manufacturer
Grangers International Ltd
Enterprise Way
Duckmanton
Derbyshire
S44 5FD
United Kingdom

EU Authorised Representative:
Authorised Rep Compliance Ltd
Ground Floor, 71 Lower Baggot Street
Dublin
DO2 P593
Ireland
For further information, please contact

E-mail address info@grangersinternational.co.uk

1.4. Emergency telephone number

Emergency Telephone TEL: +44 (0) 1773 521521IRELAND TEL: 00353 15133758

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

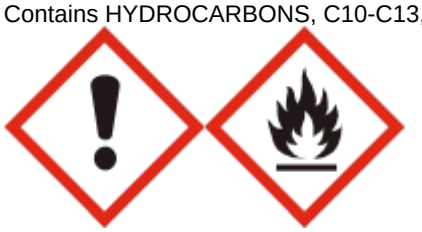
Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosols	Category 1 - (H222, H229)
Serious eye damage/eye irritation	Category 2 H319

Specific target organ toxicity (single exposure)	Category 3 H336

2.2. Label elements

Contains HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics; butane



Signal word
Danger

Hazard statements
H222 - Extremely flammable aerosol. H229 - Pressurized container: May burst if heated.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.

Precautionary Statements - EU (§28, 1272/2008)
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 - Do not spray on an open flame or other ignition source.
P251 - Do not pierce or burn, even after use.
P260 - Do not breathe vapors/spray.
P271 - Use only outdoors or in a well-ventilated area.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 - Dispose of contents/containers in accordance with local regulations.
P280 - Wear protective gloves and protective clothing.

2.3. Other hazards

No information available.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
HYDROCARBONS, C10-C13,	50 - <100%		918-481-9	Asp. Tox. 1 (H304)

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
n-alkanes, isoalkanes, cyclics, <2% aromatics -				
butane 106-97-8	25 - <50%		(601-004-00-0) 203-448-7	Flam. Gas 1A (H220)
Zirconium butanolate 1071-76-7	0.25 - <0.5%		213-995-3	Flam. Liq. 3 (H226) Skin Irrit. 2 (H315) STOT SE 3 (H335) Eye Dam. 1 (H318)
butan-1-ol 71-36-3	0.025 - <0.25%		(603-004-00-6) 200-751-6	Flam. Liq. 3 (H226) STOT SE 3 (H335) (H336) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
butane 106-97-8	No data available	No data available	No data available	No data available	276808.3276
Zirconium butanolate 1071-76-7	No data available	4200	No data available	No data available	No data available
butan-1-ol 71-36-3	700	3402	No data available	24.2519	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention. Immediate medical attention is required.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical attention.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Ingestion Do NOT induce vomiting. Get medical attention.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear

personal protective clothing (see section 8). Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required.

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

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness.

Effects of Exposure See Section 11 for additional Toxicological Information.

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

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Extremely flammable.

Hazardous combustion products Carbon dioxide (CO2). Carbon monoxide.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. Avoid breathing dust/fume/gas/mist/vapors/spray.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches

and waterways. Flood with water to complete polymerization and scrape off floor.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Avoid breathing vapors or mists. Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Protect from sunlight. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Store locked up. Keep out of the reach of children. Store away from other materials.

Storage class (TRGS 510) Storage class 2B.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
butane 106-97-8	-	TWA: 800 ppm TWA: 1900 mg/m³ STEL 1600 ppm STEL 3800 mg/m³	TWA: 1000 ppm STEL: 980 ppm STEL: 2370 mg/m³	TWA: 1900 mg/m³	TWA: 600 ppm TWA: 1450 mg/m³ TWA: 10 ppm TWA: 22 mg/m³ STEL: 750 ppm STEL: 1810 mg/m³
Zirconium butanolate 1071-76-7	-	TWA: 5 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	-	TWA: 5 mg/m³ STEL: 10 mg/m³
butan-1-ol	-	TWA: 50 ppm	TWA: 20 ppm	STEL: 150 mg/m³	STEL: 50 ppm

71-36-3		TWA: 150 mg/m³ STEL 200 ppm STEL 600 mg/m³	TWA: 62 mg/m³ D*	TWA: 100 mg/m³	STEL: 154 mg/m³ *
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
butane 106-97-8	-	-	TWA: 500 ppm TWA: 1200 mg/m³ STEL: 1000 ppm STEL: 2400 mg/m³	TWA: 800 ppm TWA: 1500 mg/m³ STEL: 500 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³ STEL: 1000 ppm STEL: 2400 mg/m³
Zirconium butanolate 1071-76-7	-	-	TWA: 5 mg/m³ STEL: 10 mg/m³	-	TWA: 1 mg/m³
butan-1-ol 71-36-3	-	TWA: 300 mg/m³ Ceiling: 600 mg/m³ D*	Ceiling: 50 ppm Ceiling: 150 mg/m³ H*	TWA: 15 ppm TWA: 45 mg/m³ STEL: 30 ppm STEL: 90 mg/m³ A*	TWA: 50 ppm TWA: 150 mg/m³ STEL: 75 ppm STEL: 230 mg/m³ iho*
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
butane 106-97-8	TWA: 800 ppm TWA: 1900 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ Peak: 4000 ppm Peak: 9600 mg/m³	TWA: 1000 ppm TWA: 2350 mg/m³	TWA: 2350 mg/m³ STEL: 9400 mg/m³
Zirconium butanolate 1071-76-7	-	-	-	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³ STEL: 20 mg/m³
butan-1-ol 71-36-3	STEL: 50 ppm STEL: 150 mg/m³	TWA: 100 ppm TWA: 310 mg/m³	TWA: 100 ppm TWA: 310 mg/m³ Peak: 100 ppm Peak: 310 mg/m³	TWA: 100 ppm TWA: 300 mg/m³ STEL: 100 ppm STEL: 300 mg/m³ *	TWA: 45 mg/m³ STEL: 90 mg/m³ b*
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
butane 106-97-8	TWA: 1000 ppm STEL: 3000 ppm	-	STEL: 1000 ppm STEL: 2377 mg/m³	TWA: 300 mg/m³ STEL: 300 mg/m³	-
Zirconium butanolate 1071-76-7	TWA: 5 mg/m³ STEL: 10 mg/m³	-	TWA: 5 mg/m³ STEL: 10 mg/m³	-	-
butan-1-ol 71-36-3	TWA: 20 ppm STEL: 60 ppm Sk*	-	TWA: 20 ppm TWA: 61 mg/m³	TWA: 10 mg/m³	Ceiling: 30 ppm Ceiling: 90 mg/m³ TWA: 15 ppm TWA: 45 mg/m³ O*
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
butane 106-97-8	-	-	-	TWA: 250 ppm TWA: 600 mg/m³ STEL: 312.5 ppm STEL: 750 mg/m³	STEL: 3000 mg/m³ TWA: 1900 mg/m³
Zirconium butanolate 1071-76-7	-	-	-	TWA: 5 mg/m³ STEL: 10 mg/m³	STEL: 10 mg/m³ TWA: 5 mg/m³
butan-1-ol 71-36-3	-	-	-	Ceiling: 25 ppm Ceiling: 75 mg/m³ H*	STEL: 150 mg/m³ TWA: 50 mg/m³ skóra*
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
butane 106-97-8	TWA: 1000 ppm STEL: 1000 ppm	TWA: 700 mg/m³ STEL: 1000 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ STEL: 5000 ppm STEL: 12000 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ STEL: 4000 ppm STEL: 9600 mg/m³	TWA: 1000 ppm
Zirconium butanolate 1071-76-7	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 1 mg/m³	TWA: 1 mg/m³ STEL: 1 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³
butan-1-ol 71-36-3	TWA: 20 ppm	TWA: 33 ppm TWA: 100 mg/m³ STEL: 66 ppm STEL: 200 mg/m³	TWA: 100 ppm TWA: 310 mg/m³ Ceiling: 310 mg/m³	TWA: 100 ppm TWA: 310 mg/m³ STEL: 100 ppm STEL: 310 mg/m³	TWA: 20 ppm TWA: 61 mg/m³ STEL: 50 ppm STEL: 154 mg/m³

Chemical name	Sweden	Switzerland	United Kingdom

butane 106-97-8	NGV: 350 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³ STEL: 3200 ppm STEL: 7600 mg/m³	TWA: 600 ppm TWA: 1450 mg/m³ STEL: 750 ppm STEL: 1810 mg/m³
Zirconium butanolate 1071-76-7	-	TWA: 5 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³
butan-1-ol 71-36-3	Bindande KGV: 30 ppm Bindande KGV: 90 mg/m³ NGV: 15 ppm NGV: 45 mg/m³ H*	TWA: 100 ppm TWA: 310 mg/m³ STEL: 100 ppm STEL: 310 mg/m³	STEL: 50 ppm STEL: 154 mg/m³ Sk*

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
butan-1-ol 71-36-3	-	-	-	10 mg/g Creatinine (urine - 1-Butanol (after hydrolysis) end of shift) 2 mg/g Creatinine (urine - 1-Butanol (after hydrolysis) before beginning of next shift) 2 mg/g Creatinine - BAT (at the beginning of the next shift) urine 10 mg/g Creatinine - BAT (end of exposure or end of shift) urine	10 mg/g Creatinine (urine - 1-Butanol (after hydrolysis) end of shift) 2 mg/g Creatinine (urine - 1-Butanol (after hydrolysis) before beginning of next shift)

Chemical name	Latvia	Luxembourg	Romania	Slovakia
butan-1-ol 71-36-3	-	-	-	2 mg/g creatinine (urine - n-Butyl alcohol after all work shifts) 10 mg/g creatinine (urine - n-Butyl alcohol end of exposure or work shift)

Chemical name	Slovenia	Spain	Switzerland	United Kingdom
butan-1-ol 71-36-3	2 mg/g Creatinine - urine (1-Butanol (after hydrolysis)) - before the work shift 10 mg/g Creatinine - urine (1-Butanol (after hydrolysis)) - at the end of the work shift	-	10 mg/g creatinine (urine - n-Butanol end of shift) 2 mg/g creatinine (urine - n-Butanol before subsequent shift or 16 hour)	-

Derived No Effect Level (DNEL) - Workers No information available

Chemical name	Oral	Dermal	Inhalation
Zirconium butanolate 1071-76-7	-	-	56.6 mg/m³ [4] [6]
butan-1-ol 71-36-3	-	-	310 mg/m³ [5] [6]

Derived No Effect Level (DNEL) - General Public No information available.

Chemical name	Oral	Dermal	Inhalation
butan-1-ol 71-36-3	1.5625 mg/kg bw/day [4] [6]	-	55.357 mg/m^3 [4] [6] 155 mg/m^3 [5] [6]

Predicted No Effect Concentration (PNEC) No information available.

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Zirconium butanolate 1071-76-7	0.129 mg/L	1.29 mg/L	0.0129 mg/L	0.129 mg/L	-
butan-1-ol 71-36-3	0.082 mg/L	2.25 mg/L	0.0082 mg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
Zirconium butanolate 1071-76-7	0.011 mg/kg sediment dw	0.001 mg/kg sediment dw	6.5 mg/L	-	-
butan-1-ol 71-36-3	0.324 mg/kg sediment dw	0.0324 mg/kg sediment dw	2476 mg/L	0.0166 mg/kg soil dw	-

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Hand protection Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. Wear suitable gloves. Nitrile rubber.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Wear protective nitrile rubber gloves	>0.3mm	

Skin and body protection Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Aerosol
Appearance	Aerosol
Color	Colourless
Odor	Solvent.
Odor threshold	

Property	**Values**		**Remarks • Method**
Melting point / freezing point	No data available		None known
Initial boiling point and boiling range	No data available		None known
Flammability	No data available		None known
Flammability Limit in Air			None known
Upper flammability or explosive limits	No data available		
Lower flammability or explosive limits	No data available		
Flash point	ca - 80°C (isobutane-propane-butane)		None known
Autoignition temperature	365 °C		ca 365°C (isobutane-propane-butane)
Decomposition temperature			None known
pH	No data available		None known
pH (as aqueous solution)	No data available		None known
Kinematic viscosity	No data available		None known
Dynamic viscosity	No data available		None known
Water solubility	No data available	Insoluble in water	None known
Solubility(ies)	No data available		None known
Partition coefficient	No data available		None known
Vapor pressure	No data available		None known
Relative density	No data available		None known
Bulk density	No data available		
Liquid Density	No data available		
Relative vapor density	No data available		None known
Particle characteristics			
Particle Size			
Particle Size Distribution			

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation May cause drowsiness or dizziness.

Eye contact Specific test data for the substance or mixture is not available. May cause irritation.

Skin contact Repeated exposure may cause skin dryness or cracking.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness.

Acute toxicity

Numerical measures of toxicity
No information available

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 99,999.00 mg/kg
ATEmix (dermal) 99,999.00 mg/kg
ATEmix (inhalation-gas) 280,822.00 ppm
ATEmix (inhalation-vapor) 99,999.0000 mg/l
ATEmix (inhalation-dust/mist) 99,999.00 mg/l

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
butane	-	-	= 658 g/m^3 (Rat) 4 h
Zirconium butanolate	-	> 4200 mg/kg (Rabbit)	= 6531 ppm (Rat) 4 h
butan-1-ol	= 700 mg/kg (Rat)	= 3402 mg/kg (Rabbit)	> 8000 ppm (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Chemical name	European Union
butane	Muta. 1B

Carcinogenicity No information available.

Chemical name	European Union
butane	Carc. 1A

Reproductive toxicity No information available.

STOT - single exposure No information available.

H371 - May cause damage to the following organs: Central nervous system.

STOT - repeated exposure No information available.

Aspiration hazard May be harmful if swallowed and enters airways.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
butan-1-ol	EC50: >500mg/L (96h, Desmodesmus subspicatus) EC50: >500mg/L (72h,	LC50: 1730 - 1910mg/L (96h, Pimephales promelas) LC50: =1740mg/L (96h,	-	EC50: =1983mg/L (48h, Daphnia magna) EC50: 1897 - 2072mg/L (48h, Daphnia magna)

	Desmodesmus subspicatus)	Pimephales promelas) LC50: 100000 - 500000µg/L (96h, Lepomis macrochirus) LC50: =1910000µg/L (96h, Pimephales promelas)		

12.2. Persistence and degradability

Persistence and degradability

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
butane	2.31
Zirconium butanolate	0.88
butan-1-ol	1

12.4. Mobility in soil

Mobility in soil

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

Chemical name	PBT and vPvB assessment
butane	The substance is not PBT / vPvB
Zirconium butanolate	The substance is not PBT / vPvB
butan-1-ol	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN1950

14.2 UN proper shipping name	Aerosols, flammable
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not regulated
Description	UN1950, Aerosols, flammable, 2.1
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	A145, A167, A802
ERG Code	10L

IMDG

14.1 UN number or ID number	UN1950
14.2 UN proper shipping name	Aerosols
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not regulated
Description	UN1950, Aerosols, 2.1
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	63,190, 277, 327, 344, 381, 959
EmS-No.	F-D, S-U

14.7 Maritime transport in bulk according to IMO instruments

RID

14.1 UN number or ID number	UN1950
14.2 UN proper shipping name	Aerosols
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not regulated
Description	UN1950, Aerosols, 2.1, (D)
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	190, 327, 344, 625
Classification code	5F

ADR

14.1 UN number or ID number	UN1950
14.2 UN proper shipping name	Aerosols
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not regulated
Description	UN1950, Aerosols, 2.1, (D)
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	327, 625, 344, 190
Classification code	5F
Tunnel restriction code	(D)

SECTION 15: Regulatory information

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

Chemical name	French RG number
butan-1-ol - 71-36-3	RG 84

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents

at work.

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
butane - 106-97-8	28. 29. 75.	-
butan-1-ol - 71-36-3	75.	-

Persistent Organic Pollutants
Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H220 - Extremely flammable gas
H222 - Extremely flammable aerosol

H226 - Flammable liquid and vapor
H229 - Pressurized container: May burst if heated
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness

Legend
SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitizers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method
Flammable aerosol	On basis of test data

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By Technical Department

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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
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End of Safety Data Sheet