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

1.1. Product identifier

Product form : Mixture

Trade name : Parafuge Inject F

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

1.2.1. Relevant identified uses

Main use category : Professional use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

DL CHEMICALS
Roterijstraat 201-203
B-8793 Waregem - Belgium
T + 32 56 62 70 51 - F + 32 56 60 95 68
info@dl-chem.com - www.dl-chem.com

1.4. Emergency telephone number

Emergency number : + 32 70 245 245

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3 H226

Aspiration hazard, Category 1 H304

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS02 GHS08

CLP Signal word : Danger

Hazardous ingredients : Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic; Hydrocarbons, C11-13, iso-alkanes, < 2% aromatic

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P241 - Use explosion-proof equipment.
P280 - Wear protective gloves, eye protection.
P301+P310 - IF SWALLOWED: Immediately call a doctor, a POISON CENTER.
P331 - Do NOT induce vomiting.

EUH-statements : EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic	(EC-No.) 918-167-1 (REACH-no) 01-2119472146-39	25 - 50	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 4, H413
Hydrocarbons, C11-13, iso-alkanes, < 2% aromatic	(EC-No.) 920-901-0 (REACH-no) 01-2119456810-40	25 - 50	Asp. Tox. 1, H304
tetraethyl silicate, ethyl silicate substance with a Community workplace exposure limit	(CAS-No.) 78-10-4 (EC-No.) 201-083-8 (EC Index-No.) 014-005-00-0 (REACH-no) 01-2119496195-28	< 1	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 STOT SE 3, H335
Butanol substance with a Community workplace exposure limit	(CAS-No.) 71-36-3 (EC-No.) 200-751-6 (EC Index-No.) 603-004-00-6 (REACH-no) 01-2119484630-38	< 0,1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Move to fresh air.

First-aid measures after skin contact : Wash immediately with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Seek medical advice (show the label where possible).

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

Symptoms/effects after inhalation : Overexposure to vapours may result in cough.

Symptoms/effects after skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use. Prolonged or repeated contact may cause skin to become dry or cracked.

Symptoms/effects after eye contact : May cause slight irritation.

Symptoms/effects after ingestion : Abdominal pain, nausea. Swallowing a small quantity of this material will result in serious health hazard. Do not use for products which come into contact with the food stuffs.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. AFFF foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid.

Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide. Toxic fumes.

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire. Evacuate unnecessary personnel. Do not breathe fumes from fires or vapours from decomposition.

Firefighting instructions : Cool down the containers exposed to heat with a water spray.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : [In case of inadequate ventilation] wear respiratory protection. Equip cleanup crew with proper protection.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Use suitable disposal containers. Clean up any spills as soon as possible, using an absorbent material to collect it.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid all unnecessary exposure.

Hygiene measures : Ensure prompt removal from eyes, skin and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in tightly closed, properly ventilated containers away from heat, sparks, open flame.

Maximum storage period : 12 months

Storage temperature : 5 - 30 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Butanol (71-36-3)		
EU	Local name	n-Butyl alcohol
EU	Notes	SCOEL Recommendations (Ongoing)
tetraethyl silicate, ethyl silicate (78-10-4)		
EU	Local name	Tetraethyl orthosilicate
EU	IOELV TWA (mg/m³)	44 mg/m³
EU	IOELV TWA (ppm)	5 ppm
United Kingdom	WEL TWA (mg/m³)	87 mg/m³
United Kingdom	WEL TWA (ppm)	10 ppm
United Kingdom	WEL STEL (mg/m³)	260 mg/m³
United Kingdom	WEL STEL (ppm)	30 ppm

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Hand protection:

Time of penetration is to be checked with the glove producer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber, Viton® II		> 0,1		EN 374, EN 420

Eye protection:

Even though no eye contact is expected under reasonable normal conditions of use, appropriate eye protection should be worn when handling this material

Type	Use	Characteristics	Standard
Safety glasses	Droplet	With side shields	

Skin and body protection:

No special clothing/skin protection equipment is recommended under normal conditions of use

Type	Standard
Normal overalls	

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

Device	Filter type	Condition	Standard
Disposable half mask	Type A - High-boiling (>65 °C) organic compounds	If conc. in air > exposure limit	EN 136, EN 140, EN 405, EN 143, EN 149

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid
Colour	: Colourless
Odour	: characteristic
Boiling point	: 150 - 190 °C
Flash point	: 42 - 56 °C
Density	: 0,78 g/cm³
Solubility	: Water: Miscible
Viscosity, dynamic	: 10,6 mPa.s

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

Heat sources.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 4951 mg/m³
Hydrocarbons, C11-13, iso-alkanes, < 2% aromatic	
LD50 oral rat	> 15000 mg/kg
LD50 dermal rabbit	>= 3160 mg/kg
LC50 inhalation rat (mg/l)	> 4951 mg/m³
Butanol (71-36-3)	
LD50 oral rat	790 mg/kg
LD50 dermal rat	3400 mg/kg
LC50 inhalation rat (mg/l)	24,3 mg/l/4h
tetraethyl silicate, ethyl silicate (78-10-4)	
LD50 oral rat	> 2500 mg/kg (OECD 423 method)
LC50 inhalation rat (Dust/Mist - mg/l/4h)	10 mg/l/4h (OECD 403 method)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Butanol (71-36-3)	
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day
tetraethyl silicate, ethyl silicate (78-10-4)	
LOAEC (inhalation, rat,dust/mist/fume, 90 days)	28d 0,43 mg/l/6h/day (OECD 412 method)
NOAEL (subacute, oral, animal/male, 28 days)	10 mg/kg bodyweight (OECD 422 method)

Aspiration hazard : May be fatal if swallowed and enters airways.

Parafuge Inject F	
Viscosity, kinematic	13,58 mm²/s

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic	
LC50 fish 1	> 1000 mg/l (OECD 203 method)
EC50 Daphnia 1	> 1000 mg/l (OECD 202 method)
EC50 72h algae (1)	> 1000 mg/l
ErC50 (algae)	> 1000 mg/l (OECD 201 method)
NOEC chronic fish	28d 209 mg/l Quantitative structure-activity relationship (QSAR)
Hydrocarbons, C11-13, iso-alkanes, < 2% aromatic	
LC50 fish 1	> 1000 mg/l
EC50 Daphnia 1	> 1000 mg/l
EC50 72h algae (1)	> 1000 mg/l
Butanol (71-36-3)	
LC50 fish 1	1376 mg/l
EC50 Daphnia 1	1328 mg/l

EC50 Daphnia 2	18 mg/l
ErC50 (algae)	225 mg/l
NOEC chronic crustacea	4,1 mg/l
NOEC chronic algae	129 mg/l
tetraethyl silicate, ethyl silicate (78-10-4)	
LC50 fish 1	> 245 mg/l Brachydanio rerio (zebra-fish)
EC50 Daphnia 1	> 75 mg/l (OECD 202 method)
EC50 72h algae (1)	> 100 mg/l
ErC50 (other aquatic plants)	> 100 mg/l (OECD 201 method)
NOEC chronic fish	>= 245 mg/l (OECD 203 method)
NOEC chronic crustacea	>= 75 mg/l (OECD 202 method)
NOEC chronic algae	>= 100 mg/l (OECD 201 method)

12.2. Persistence and degradability

Butanol (71-36-3)	
Persistence and degradability	Easily biodegradable (concerning to the criteria of the OECD).
Biodegradation	> 92 % 20 d
tetraethyl silicate, ethyl silicate (78-10-4)	
Persistence and degradability	Readily biodegradable.
Biodegradation	28d 98 %

12.3. Bioaccumulative potential

Butanol (71-36-3)	
Bioconcentration factor (BCF REACH)	3,16
Bioaccumulative potential	not bioaccumulative.
tetraethyl silicate, ethyl silicate (78-10-4)	
Bioconcentration factor (BCF REACH)	3,16
Log Pow	3,18 at 40 °C
Bioaccumulative potential	not bioaccumulable.

12.4. Mobility in soil

Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic	
Surface tension	23,7 mN/m at 25 °C
Hydrocarbons, C11-13, iso-alkanes, < 2% aromatic	
Surface tension	24,1 mN/m at 25 °C
tetraethyl silicate, ethyl silicate (78-10-4)	
Ecology - soil	Low mobility (soil).

12.5. Results of PBT and vPvB assessment

Component	
tetraethyl silicate, ethyl silicate (78-10-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Dispose of this material and its container at hazardous or special waste collection point.

SECTION 14: Transport information

In accordance with ADR

ADR
14.1. UN number
3295
14.2. UN proper shipping name
HYDROCARBONS, LIQUID, N.O.S.
UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, III, (D/E)
14.3. Transport hazard class(es)
3

14.4. Packing group
III
14.5. Environmental hazards
Dangerous for the environment : No
No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: F1
Limited quantities (ADR)	: 5l
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	: 
Tunnel restriction code (ADR)	: D/E
EAC code	: 3YE

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:	
3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Parafuge Inject F - Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic - Hydrocarbons, C11-13, iso-alkanes, < 2% aromatic - Polyether - Butanol - tetraethyl silicate, ethyl silicate - titanium tetrabutanolate - ethanol, ethyl alcohol
3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	Parafuge Inject F - Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic - Butanol - tetraethyl silicate, ethyl silicate - titanium tetrabutanolate - ethanol, ethyl alcohol
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Parafuge Inject F - Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic - Hydrocarbons, C11-13, iso-alkanes, < 2% aromatic - Butanol - tetraethyl silicate, ethyl silicate - titanium tetrabutanolate
3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	Butanol - tetraethyl silicate, ethyl silicate - titanium tetrabutanolate - ethanol, ethyl alcohol

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out
Hydrocarbons, C11-C12, iso-alkanes, < 2% aromatic tetraethyl silicate, ethyl silicate

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 4	Hazardous to the aquatic environment — Chronic Hazard, Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H226	Flammable liquid and vapour.
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.

H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H413	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

MSDS Reach Annex II DL-Chem

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