	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
	GRAFEN PROFESSIONAL LIQUID GREASE SPRAY	Version 2.0
		Page 1 of 10

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

1.1 Product identifier

Grafen Professional Liquid Grease Spray

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

Relevant identified uses: Spray is used for reducing friction between the metals and / or metal with plastic surfaces.

Uses advised against: No further relevant information available.

1.3 Details of the supplier of the safety data sheet:

Supplier: Madejski Sp. J.
Street address: ul. Makuszyńskiego 28
Country/Postcode: Poland, 31-752 Kraków
Telephone number: +48 (12) 643 67 67

E-mail: info@madejski.com.pl

1.4 Emergency telephone number: 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Mixture:

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

Classification of the mixture	Regulation (EC) No 1272/2008 (CLP)
Hazard	
Physical and chemical properties	Flam. Aerosol 2 H223, H229
Human	Asp. Tox.1 H304 Skin Irrit.2 H315 STOT SE.3 H336 Carc.2 H351 Repr.2 H361 STOT RE.2 H373
Environment	Aquatic Chronic2 H411

2.2 Label elements


Contains Hydrocarbons C6, n-alkanes, iso-alkanes, cyclics, n-hexane rich, dichloromethane.

Supplemental information on the label:

Not applicable

Hazard pictograms:



	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
	GRAFEN PROFESSIONAL LIQUID GREASE SPRAY	Version 2.0
		Page 2 of 10

Signal word:
DANGER

Hazard statements:

- H223** Flammable aerosol.
- H229** Pressurised container: May burst if heated.
- H304** May be fatal if swallowed and enters airways
- H315** Causes skin irritation.
- H336** May cause drowsiness or dizziness.
- H351** Suspected of causing cancer.
- H361** Suspected of damaging fertility or the unborn child.
- H373** May cause damage to organs through prolonged or repeated exposure
- H411** Toxic to aquatic life with long lasting effects.

Precautionary statements:

- 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.
- P251** Do not pierce or burn, even after use.
- P261** Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264** Wash hands thoroughly after handling.
- P271** Use only outdoors or in a well-ventilated area.
- P280** Wear protective gloves/protective clothing/eye protection/face protection.
- P302 + P352** IF ON SKIN: Wash with plenty of water with soap.
- P362 +364** Take off contaminated clothing and wash it before reuse.
- P405** Store locked up.
- P410+P412** Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
- P501** Dispose of contents/container to in accordance with local/ regional/national/international regulation.

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.


SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures: Contains carbon dioxide.

Name	Identifiers	[% weight]	Classification according to Regulation (EC) No 1278/2008 (CLP).
Hydrocarbons C6, n-alkanes, iso-alkanes, cyclics, n-hexane rich (100%)*	Index No: --- EC No: 925-292-5 CAS No: --- REACH Registration No: 01-2119474209-33- 0002	50-60	Flam. Liq.2 H225 Asp. Tox.1 H304 Skin Irrit.2 H315 STOT SE.3 H336 Repr.2 H361 STOT RE.2 H373 Aquatic Chronic2 H411
Dichloromethane	Index No: 602-004-00-3 EC No.: 200-838-9 CAS No: 75-09-2 REACH Registration No: 01-2119480427-33- 0000	8-15	Carc.2 H351

*Hydrocarbons, C6, n-alkanes, isoalkanes, cyclics, n-hexane rich (100%) is a UVCB substance and includes:

	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
GRAFEN PROFESSIONAL LIQUID GREASE SPRAY		Version 2.0
		Page 3 of 10

Name	Identifiers	[% weight]	Classification according to Regulation (EC) No 1278/2008 (CLP).
n-hexane	Index No.: 601-037-00-0 EC No.: 203-777-6 CAS No.: 110-54-3 REACH Registration No.: -	<55	Flam. Liq.2 H225 Asp. Tox.1 H304 Skin Irrit.2 H315 STOT SE.3 H336 Repr.2 H361f STOT RE.2 H373 Aquatic Chronic2 H411

Substance UVCB- substance of unknown variable composition, complex reaction products.
 The Full Text for all H-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Following eye contact: Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

Following inhalation: Move the exposed person to fresh air at once. Provide fresh air, warmth and rest, preferably in a comfortable upright sitting position. Get medical attention if any discomfort continues.

Following skin contact: Immediately remove contaminated clothing. Wash the skin with soap and water. Contaminated clothing should be washed before re-use. Get medical attention promptly if symptoms occur after washing.

Following ingestion: Do not induce vomiting. Immediately rinse mouth. Never give anything by mouth to an unconscious person. Seek medical advice. Provide ventilation.

4.2 Most important symptoms and effects, both acute and delayed

Respiratory system:

Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

Skin:

Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.

Eye:

Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

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

If any symptoms persist seek medical advice and show the msds or label.

Notes for the doctor: Treat symptomatically.

SECTION 5: Firefighting measures


5.1 Extinguishing media

Suitable extinguishing media: foam, carbon dioxide, dry powder, water spray

Unsuitable extinguishing media: do not use water in a jet

5.2 Special hazards arising from the substance or mixture

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases.

	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
	GRAFEN PROFESSIONAL LIQUID GREASE SPRAY	Version 2.0
		Page 4 of 10

5.3 Advice for firefighters

Special Fire Fighting Procedures: Wear full protective clothing and self-contained breathing apparatus.

Protective equipment for fire-fighters: Keep containers cool by spraying with water. If possible remove containers from the danger zone. Prevent from spreading or entering drains, ditches or rivers. Dispose of released and contained material in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Removed from the danger area all persons not involved in the emergency. If necessary, order the evacuation. Avoid contact with skin, eyes. Avoid inhalation of vapours / aerosols. Provide ventilation.

For emergency responders:

Wear protective clothing as described in Section 8.

6.2 Environmental precautions

Do not discharge into drains, water courses or into the ground. Local authorities should be advised if any exposure to the environment occurs.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (eg. sawdust, sand). Collect in a waste container. Dispose of waste according to the applicable local and national regulation.

6.4 Reference to other sections

See Section 8 for information on personal protective equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures:

Use only in a well-ventilated area. Avoid breathing vapour or aerosol. Avoid contact with eyes, skin. When handling, use appropriate personal protective equipment (see Section 8). Keep away from heat, sparks, flame and all other sources of ignition. Do not smoke! When using do not eat or drink.

Advice on general occupational hygiene:

Ensure good ventilation / exhaustion at the workplace. When using do not eat, drink or smoke. Wash hand before and after work with product. Contaminated clothing should be washed before re-use. Avoid spillage.

7.2 Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place (in temperature below 50°C). Keep away from heat, sparks, sunlight, open flame and smoking. Do not store together with oxidizing agents and combustible materials. Keep away from acids and bases.

7.3 Specific end use(s)


No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

International Limits Values:

Substance	CAS No:	Basis / Country	Short Time Value [mg/m ³]	Short Time Value [ppm-Calculated]	Time Weighted Average Exposure Limit	Time Weighted Average Exposure Limit

	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
GRAFEN PROFESSIONAL LIQUID GREASE SPRAY		Version 2.0
		Page 5 of 10

					[mg/m ³ -8 h]	[ppm-Calculated]
Dichloromethane	75-09-2	Germany European Union	360 -	100 -	180 -	50 -
n-hexane	110-54-3	Germany European Union	1440 80	400 50	72 -	20 -
Carbon dioxide	124-38-9	Germany European Union	18200 -	10000 -	9100 9000	5000 5000

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

n-hexane

Route of exposure	WORKERS		CONSUMERS	
	Acute effect local	Acute effects systemic	Acute effect local	Acute effects systemic
Oral	No data available	No data available	No data available	4 mg/kg bw/day
Inhalation	No data available	75 mg/m ³	No data available	16 mg/m ³
Dermal	No data available	11 mg/kg bw/day	No data available	5.3 mg/kg bw/day

Dichloromethane

Route of exposure	WORKERS		CONSUMERS	
	Acute effect local	Acute effects systemic	Acute effect local	Acute effects systemic
Oral	No data available	No data available	No data available	0.06 mg/kg bw/day
Inhalation	No hazard identified	353 mg/m ³	No hazard identified	88.3 mg/m ³
Dermal	No data available	12 mg/kg bw/day	No data available	5.82 mg/kg bw/day


Hydrocarbons C6, n-alkanes, iso-alkanes, cyclics, n-hexane rich

Route of exposure	WORKERS		CONSUMERS	
	Acute effect local	Acute effects systemic	Acute effect local	Acute effects systemic
Oral	No data available	No data available	No data available	6 mg/kg bw/day
Inhalation	No data available	93 mg/m ³	No data available	20 mg/m ³
Dermal	No data available	13 mg/kg bw/day	No data available	7 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Dichloromethane

Environmental protection target	PNEC
Freshwater	0.31 mg/L
Freshwater sediments	2.57 mg/kg sediment dw
Marine water	0.031 mg/L
Marine sediments	0.26 mg/kg sediment dw
Food chain	No data available
Microorganisms in sewage treatment	No data available
Soil (agricultural)	0.33 mg/kg soil dw
Air	No data available

	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
	GRAFEN PROFESSIONAL LIQUID GREASE SPRAY	Version 2.0
		Page 6 of 10

Hydrocarbons, C6, n-alkanes, iso-alkanes, cyclics, n-hexane rich
No data available

n-hexane
No data available

8.2 Exposure controls

Appropriate engineering controls

Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Individual protection measures, such as personal protective equipment

Eye/face protection

Avoid contact with eyes. Wear approved chemical safety goggles where eye exposure is reasonably probable.

Skin protection:

Hand protection: Wear protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Other: Wear protective clothing. Contaminated clothing should be washed before re-use.

Respiratory protection: Respiratory protection must be used if air contamination exceeds acceptable level. It is recommended to use respiratory equipment with filter.


Environmental exposure controls

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour. Do not discharge into drains, water courses or into the ground. Local authorities should be advised if any exposure to the environment occurs.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Aerosol
Odour	No data available
Odour threshold	No data available
pH	No data available
Melting point / freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Solubility(ies)	No data available
Partition coefficient: n-octanol / water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available

	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
	GRAFEN PROFESSIONAL LIQUID GREASE SPRAY	Version 2.0
		Page 7 of 10

Viscosity No data available

Explosive properties No data available

Oxidising properties No data available

9.2 Other information:

No data available

SECTION 10: Stability and Reactivity

10.1 Reactivity

Not reactive under normal conditions of storage and use. May explode if heated or overheated.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reacts with oxidizing agents, acids and bases.

10.4 Conditions to avoid

Avoid release to the environment. Avoid heat, flames and other sources of ignition. Containers may explode at temperatures above 50°C.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Hydrocarbons C6, n-alkanes, iso-alkanes, cyclics, n-hexane rich

LD50 (rat, oral) > 25 mL/kg bw

LC50 (rat, inhalation) 73 860 ppm

LD50 (rabbit, dermal) > 5 mL/kg bw

n- hexane

LD50 (rat, oral) 43.5 mL/kg bw

LC50 (rat, inhalation) > 31.86 mg/L air

LD50 (rabbit, dermal) > 2 000 mg/kg bw

Dichloromethane

LD50 (rat, oral) > 2 000 mg/kg bw

LC50 (inhalation) No data available

LD50 (rat, dermal) > 2 000 mg/kg bw

Skin corrosion/irritation

The mixture was classified as an irritant to the skin.

Serious eye damage/irritation

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

Respiratory or skin sensitisation


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

Germ cell mutagenicity

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

Carcinogenicity

The mixture was classified as an carcinogenicity - suspected of causing cancer.

	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
	GRAFEN PROFESSIONAL LIQUID GREASE SPRAY	Version 2.0
		Page 8 of 10

Reproductive toxicity

The mixture was classified as a reproductive toxicity - Suspected of damaging fertility or the unborn child.

STOT-single exposure

The mixture was classified as it may cause drowsiness or dizziness.

STOT-repeated exposure

The mixture was classified as a STOT repeated exposure - May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

The mixture was classified as an aspiration hazard - May be fatal if swallowed and enters airways.

Additional information

No further relevant information available.

SECTION 12: Ecological information

12.1 Toxicity

No data available for the mixture.

Hydrocarbons C6, n-alkanes, iso-alkanes, cyclics, n-hexane rich

Fish (<i>Oncorhynchus mykiss</i>)	LL50	> 13.3 mg/L	exposure time: 96h
Aquatic invertebrates (<i>Daphnia magna</i>)	LC50	45 mmol/m ³	exposure time: 48h
Algae and bacteria (<i>Chlorella pyrenoidosa</i>)	EC50	2.66 % v/v	exposure time: 10d

n-hexane

Fish (<i>Oncorhynchus mykiss</i>)	LL50	13.37 mg/L	exposure time: 96h
Aquatic invertebrates (<i>Daphnia magna</i>)	LC50	31.9 mg/L	exposure time: 48h
Algae and bacteria (<i>Pseudokirchneriella subcapitata</i>)	EC50	9.947 mg/L	exposure time: 72h

Dichloromethane

Fish (<i>Fundulus heteroclitus</i>)	LC50	97 mg/L	exposure time: 48h
Aquatic invertebrates (<i>Daphnia magna</i>)	LC50	220 mg/L	exposure time: 48h
Algae and bacteria	No data available		

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.


Proposed waste code

07 01 04* other organic solvents, washing liquids and mother liquors

16 05 04* gases in pressure containers (including halons) containing dangerous substances

SECTION 14: Transport Information

	ADR/RID	IMDG	IATA
--	---------	------	------

	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
	GRAFEN PROFESSIONAL LIQUID GREASE SPRAY	Version 2.0
		Page 9 of 10

14.1. UN number	UN1950	UN1950	UN1950
14.2. UN proper shipping name	Aerosol, flame	Aerosol, flame	Aerosol, flame
14.3. Transport hazard class(es)	2.1	2.1	2.1
14.4. Packing group	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards	YES	YES	YES
14.6. Special precautions for user	Not applicable	Not applicable	Not applicable
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable	Not applicable	Not applicable

SECTION 15: Regulatory information

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

Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH),

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

2014/955/EU: Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council Text with EEA relevance

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

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

Classification procedure: calculation method

Flam. Aerosol 2 H223, H229

Asp. Tox.1 H304

Skin Irrit.2 H315

STOT SE.3 H336

Carc.2 H351

Rep.2 H361

STOT RE.2 H373

Aquatic Chronic2 H411

Relevant H-statements (number and full text)


H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H351 Suspected of causing cancer.

	MATERIAL SAFETY DATA SHEET According to article 31 and Annex II of the EU REACH Regulation	Revision: 22.12.2016
		Update date: 07.02.2017
	GRAFEN PROFESSIONAL LIQUID GREASE SPRAY	Version 2.0
		Page 10 of 10

- H361 Suspected of damaging fertility or the unborn child.
 H361f Suspected of damaging fertility.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H411 Toxic to aquatic life with long lasting effects.

Additional Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, Information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

It is the responsibility of persons in receipt of this Product Safety Data Sheet to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces a formulation containing the product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from the Product Safety Data Sheet to their own Product Safety Data Sheet.

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS. As stated above, this Safety Data Sheet has been prepared in compliance with applicable European law. If you purchase this material outside Europe, where compliance laws may differ, you should receive from your local supplier a SDS applicable to the country in which the product is sold and intended to be used. Please note that the appearance and content of the SDS may vary –even for the same product between different countries, reflecting the different compliance requirements.