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

1.1 Identification of the substance or preparation:

Commercial product name:	Marmosep G

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

Life cycle stages:	PW Widespread use by professional workers
Sector of Use:	Health services
Technical function:	Lubricating agent
Application of the substance / the mixture:	Coating

1.3 Details of the supplier of the safety data sheet

Company / Manufacturer:	SILADENT Dr. Böhme & Schöps GmbH
Street / mailbox:	Im Klei 26
Country code. / postal code / city:	D - 38644 Goslar
Phone:	0 53 21 / 37 79 – 0
Fax:	0 53 21 / 38 96 32
E-mail / Website:	info@siladent.de / www.siladent.de
Further information obtainable from:	SILADENT Dr. Böhme & Schöps GmbH

1.4 Emergency telephone number:

SILADENT Dr. Böhme & Schöps GmbH:	+49 (0) 53 21 / 37 79 - 0 (Mon-Fri. 8 a.m. – 4 p.m.)

SECTION 2: Hazards identification *

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2	H225	Highly flammable liquid and vapour.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
STOT SE 3	H336	May cause drowsiness or dizziness.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008: The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02 GHS07 GHS08 GHS09

Signal word: Danger.

Hazard-determining components of labelling:
heptane
propan-2-ol
methylcyclohexane
cyclohexane

Hazard statements:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

H304	May be fatal if swallowed and enters airways.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P261	Avoid breathing mist/vapours/spray.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321	Specific treatment (see on this label).
P331	Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.

2.3 Other hazards:
Results of PBT and vPvB assessment

PBT:	Not applicable.
vPvB:	Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterization: Mixture.
Description: Mixture of substances listed below with non-hazardous additions.

Dangerous components:

CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 RTECS: NT 8050000 Reg.nr.: 01-2119457558-25	**propan-2-ol**  Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336	25-50 %
CAS: 142-82-5 EINECS: 205-563-8 Index number: 601-008-00-2 RTECS: MI 7700000	**heptane**  Flam. Liq. 2, H225;  Asp. Tox. 1, H304;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Skin Irrit. 2, H315; STOT SE 3, H336	10-25 %
CAS: 108-87-2 EINECS: 203-624-3 Index number: 601-018-00-7 RTECS: GV 6125000	**methylcyclohexane**  Flam. Liq. 2, H225;  Asp. Tox. 1, H304;	2,5-10 %

	 Aquatic Chronic 2, H411;  Skin Irrit. 2, H315; STOT SE 3, H336	
CAS: 110-82-7 EINECS: 203-806-2 Index number: 601-017-00-1 RTECS: GU 6300000	**cyclohexane**  Flam. Liq. 2, H225;  Asp. Tox. 1, H304;  Aquatic Acute 1, H400; Aquatic Chronic 1, 4410;  Skin Irrit. 2, H315; STOT SE 3, H336	2,5-10 %

Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures *

4.1 Description of first aid measures

General information: Immediately remove any clothing soiled by the product. Take affected persons out into the fresh air.

After inhalation: In case of unconsciousness place patient stably in side position for transportation. Supply fresh air; consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse open eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures *

5.1 Extinguishing media

Suitable extinguishing agents: CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture Formation of toxic gases is possible during heating or in case of fire.

5.3 Protective equipment: Do not inhale explosion gases or combustion gases. Mouth respiratory protective device.

SECTION 6: Accidental release measures *

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:
Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, universal binders and sawdust).
Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

6.4 Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage *

7.1 Precautions for safe handling
Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Information about fire- and explosion protection:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles:
Store in a cool location.

Information about storing in one common storage facility:
Not required.

Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed receptacles.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection *

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
67-63-0 propan-2-ol	
WEL	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm
142-82-5 heptane	
WEL	Long-term value: 500 ppm
110-82-7 cyclohexane	
WEL	Short-term value: 1050 mg/m³, 300 ppm Long-term value: 350 mg/m³, 100 ppm

Additional information:
The lists valid during the making were used as basis.

8.2 Exposure controls

Appropriate engineering controls: No further data; see item 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures: Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Respiratory protection: Not necessary if room is well-ventilated.
Not required.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Hand protection:

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves: The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable: Chloroprene rubber, CR
Fluorocarbon rubber (Viton)
Rubber gloves

For the permanent contact gloves made of the following materials are suitable: Neoprene gloves

As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR.

Eye protection:

Tightly sealed goggles.

SECTION 9: Physical and chemical properties *

9.1 Information on basic physical and chemical properties

General Information:

Physical state: Fluid
Colour: Colourless
Odour: Characteristic

Odour threshold:	Not determined.
Boiling point or initial boiling point and boiling range:	78 °C
Flammability:	Not applicable.
Lower and upper explosion limit	
Lower:	1.1 Vol %
Upper:	12 Vol %
Flash point:	<0 °C
Ignition temperature:	215 °C
Decomposition temperature:	Not determined.
pH:	Not applicable.
Viscosity	
Kinematic viscosity:	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value):	Not determined.
Vapour pressure at 20 °C:	48 hPa
Density and/or relative density	
Density at 20 °C:	0.74 g/cm³
Relative density:	Not determined.
Vapour density:	Not determined.

9.2 Other information

Appearance:	
Form:	Fluid
Important information on protection of health and environment, and on safety	
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Solvent content:	
Organic solvents:	71.0 %
VOC (EC):	71 %
Change in condition	
Evaporation rate:	Not determined.
Information with regard to physical hazard classes	
Explosives:	Void
Flammable gases:	Void
Aerosols:	Void
Oxidising gases:	Void
Gases under pressure:	Void
Flammable liquids:	Highly flammable liquid and vapour.
Flammable solids:	Void
Self-reactive substances and mixtures:	Void
Pyrophoric liquids:	Void
Pyrophoric solids:	Void
Self-heating substances and mixtures:	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids:	Void
Oxidising solids:	Void
Organic peroxides:	Void
Corrosive to metals:	Void
Desensitised explosives:	Void

SECTION 10: Stability and reactivity *

10.1 Reactivity:	No further relevant information available.
10.2 Chemical stability **Thermal decomposition / conditions to be avoided:**	No decomposition if used according to specifications.
10.2 Possibility of hazardous reactions:	No dangerous reactions known.
10.3 Conditions to avoid:	No further relevant information available.
10.4 Incompatible materials:	No further relevant information available.
10.5 Hazardous decomposition products:	No dangerous decomposition products known.

SECTION 11: Toxicological information *

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

Acute toxicity:	Based on available data, the classification criteria are not met.
Skin corrosion/irritation:	Causes skin irritation.
Serious eye damage/irritation:	Causes serious eye irritation.
STOT-single exposure:	May cause drowsiness or dizziness.
Aspiration hazard:	May be fatal if swallowed and enters airways.

11.2 Information on other hazards **Endocrine disrupting properties:**	None of the ingredients is listed.

SECTION 12: Ecological information *

12.1 Toxicity **Aquatic toxicity:**	No further relevant information 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: **PBT:** **vPvB:**	 Not applicable. Not applicable.
12.6 Endocrine disrupting properties:	For information on endocrine disrupting properties see section 11.
12.7 Other adverse effects:	No further relevant information available.
Remark:	Very toxic for fish
Additional ecological information: **General notes:**	 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms

SECTION 13: Disposal considerations

13.1	**Product -** **Recommendation:**	Must not be disposed together with the household garbage. Do not allow product to reach sewage system.
	Uncleaned packaging – **Recommendation:**	Disposal must be made according to official regulations.

SECTION 14: Transport information *

14.1	**UN-Number** **ADR, IMDG, IATA**	UN1993
14.2	**UN proper shipping name** **ADR**	1993 FLA MM ABLE LIQUID , N. O. S. (HEPTANE S, ISOPROPANOL (ISOPROPYL ALCOHOL))
	IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (HEPTANES, ISOPROPANOL (ISOPROPYL ALCOHOL))
14.3	**Transport hazard class:** **ADR:**	

	Class:	3 Flammable liquids.
	Label:	3
	IMDG, IATA	

	Class:	3 Flammable liquids.
	Label: **ADR, IMDG, IATA**	3
14.4	**Packaging group:**	II
14.5	**Environmental hazards:**	
	Marine pollutant:	No.
	Special marking (ADR):	Symbol (fish and tree)
14.6	**Special precautions for user**	Warning: Flammable liquids.
	Hazard identification number (Kemler code):	33
	EMS Number:	F-E,S-E
14.7	**Maritime transport in bulk according to IMO instruments:**	Not applicable.
	Transport/Additional information:	
	ADR	
	Excepted quantities (EQ):	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

Limited quantities (LQ):	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

SECTION 15: Regulatory information *

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

Labelling according to Regulation (EC) No 1272/2008:	GHS label elements The product is classified and labelled according to the GB CLP regulation.

Hazard pictograms

GHS02 GHS07 GHS08 GHS09

Signal word:	Danger.
Hazard-determining components of labelling:	heptane propan-2-ol methylcyclohexane cyclohexane

Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H304	May be fatal if swallowed and enters airways.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P280	Wear eye protection / face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321	Specific treatment (see on this label).
P331	Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.

Directive 2012/18/EU
Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information *

This information is based on our present knowledge. However this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Toxic to aquatic life with long lasting effects.
H411	Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

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”.
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the “International Civil Aviation Organization”.
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals.
EINECS:	European Inventory of Existing Commercial Chemical Substances
ELINCS:	European List of Notified Chemical Substances
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
VOC:	Volatile Organic Compounds (USA, EU)
PBT:	Persistent, Bioaccumulative and Toxic
vPvB:	very Persistent and very Bioaccumulative
Flam. Liq. 2:	Flammable liquids, Hazard Category 2
Skin Irrit. 2:	Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2:	Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3:	Specific target organ toxicity - Single exposure, Hazard Category 3
Asp. Tox. 1:	Aspiration hazard, Hazard Category 1
Aquatic Acute 1:	Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1:	Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2:	Hazardous to the aquatic environment - Chronic Hazard, Category 2

* Data compared to the previous version altered.