

Page 1 of 14  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 01.06.2017 / 0011  
Replacing version dated / version: 07.03.2017 / 0010  
Valid from: 01.06.2017  
PDF print date: 01.06.2017  
LM 301 A CONTACT-OIL 150 mL  
Art.: 3236

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

**LM 301 A CONTACT-OIL 150 mL**  
**Art.: 3236**

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

**Relevant identified uses of the substance or mixture:**

Sector of use [SU]:

SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

SU21 - Consumer uses: Private households (=general public = consumers)

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category [PC]:

PC17 - Hydraulic fluids

PC24 - Lubricants, greases, release products

Process category [PROC]:

PROC 7 - Industrial spraying

PROC 8a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC 9 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC10 - Roller application or brushing

PROC11 - Non industrial spraying

PROC13 - Treatment of articles by dipping and pouring

PROC17 - Lubrication at high energy conditions in metal working operation

PROC18 - General greasing/lubrication at high kinetic energy conditions

PROC19 - Manual activities involving hand contact

PROC20 - Use of functional fluids in small devices

Article Categories [AC]:

AC99 - Not required.

Environmental Release Category [ERC]:

ERC 2 - Formulation into mixture

ERC 4 - Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC 7 - Use of functional fluid at industrial site

ERC 8a - Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

ERC 8c - Widespread use leading to inclusion into/onto article (indoor)

ERC 8d - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

ERC 8f - Widespread use leading to inclusion into/onto article (outdoor)

ERC 9a - Widespread use of functional fluid (indoor)

ERC 9b - Widespread use of functional fluid (outdoor)

#### **Uses advised against:**

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH, Jerg-Wieland-Str. 4, 89081 Ulm-Lehr, Germany  
Phone: (+49) 0731-1420-0, Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

**Emergency information services / official advisory body:**

---

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

### Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
STOT SE	3	H336-May cause drowsiness or dizziness.
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.
Aerosol	1	H222-Extremely flammable aerosol.
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.
Aerosol	1	H229-Pressurised container: May burst if heated.

### 2.2 Label elements

#### Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

H336-May cause drowsiness or dizziness. H411-Toxic to aquatic life with long lasting effects. H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

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. P261-Avoid breathing vapours or spray. P273-Avoid release to the environment.

P312-Call a POISON CENTRE / doctor if you feel unwell.

P405-Store locked up. P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

P501-Dispose of contents / container safely.

EUH066-Repeated exposure may cause skin dryness or cracking.

Without adequate ventilation, formation of explosive mixtures may be possible.

Pentane

### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

When using: development of explosive vapour/air mixture possible.

## SECTION 3: Composition/information on ingredients

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.06.2017 / 0011

Replacing version dated / version: 07.03.2017 / 0010

Valid from: 01.06.2017

PDF print date: 01.06.2017

LM 301 A CONTACT-OIL 150 mL

Art.: 3236

### 3.1 Substance

n.a.

### 3.2 Mixture

Butane	
Registration number (REACH)	---
Index	601-004-00-0
EINECS, ELINCS, NLP	203-448-7
CAS	106-97-8
content %	1-50
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Gas 1, H220

Propane	
Registration number (REACH)	---
Index	601-003-00-5
EINECS, ELINCS, NLP	200-827-9
CAS	74-98-6
content %	1-50
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Gas 1, H220

Pentane	
Registration number (REACH)	---
Index	601-006-00-1
EINECS, ELINCS, NLP	203-692-4
CAS	109-66-0
content %	30-40
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Chronic 2, H411 Asp. Tox. 1, H304 STOT SE 3, H336 Flam. Liq. 2, H225

Isobutane	
Registration number (REACH)	---
Index	601-004-00-0
EINECS, ELINCS, NLP	200-857-2
CAS	75-28-5
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Gas 1, H220

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1/3.2 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

#### Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

#### Eye contact

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Keep Data Sheet available.

#### Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

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

Page 4 of 14  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 01.06.2017 / 0011  
Replacing version dated / version: 07.03.2017 / 0010  
Valid from: 01.06.2017  
PDF print date: 01.06.2017  
LM 301 A CONTACT-OIL 150 mL  
Art.: 3236

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

The following may occur:

Coughing

Headaches

Effects/damages the central nervous system

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

### **4.3 Indication of any immediate medical attention and special treatment needed**

Indications for the physician:

Symptomatic treatment.

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

CO<sub>2</sub>

Extinguishment powder

Foam

#### **Unsuitable extinguishing media**

High volume water jet

### **5.2 Special hazards arising from the substance or mixture**

In case of fire the following can develop:

Oxides of carbon

Toxic pyrolysis products.

Explosive vapour/air mixture

In case of spreading near the ground, flashback to distance sources of ignition is possible.

### **5.3 Advice for firefighters**

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Remove possible causes of ignition - do not smoke.

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

### **6.2 Environmental precautions**

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

### **6.3 Methods and material for containment and cleaning up**

If spray or gas escapes, ensure ample fresh air is available.

Active substance:

Soak up with absorbent material (e.g. universal binding agent) and dispose of according to Section 13.

### **6.4 Reference to other sections**

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## **SECTION 7: Handling and storage**

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### **7.1 Precautions for safe handling**

#### **7.1.1 General recommendations**

Ensure good ventilation.

Keep away from sources of ignition - Do not smoke.

GB

Page 5 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

Take precautions against electrostatic charges.  
 Do not use on hot surfaces.  
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
 Observe directions on label and instructions for use.  
 Use working methods according to operating instructions.

### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.  
 Not to be stored in gangways or stair wells.  
 Store product closed and only in original packing.  
 Do not store with oxidizing agents.  
 Observe special regulations for aerosols!  
 Store in a well ventilated place.  
 Keep protected from direct sunlight and temperatures over 50°C.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Chemical Name	Butane	Content %:1-50
WEL-TWA: 600 ppm (1450 mg/m <sup>3</sup> )	WEL-STEL: 750 ppm (1810 mg/m <sup>3</sup> )	---
Monitoring procedures:	- Compur - KITA-221 SA (549 459)	
BMGV: ---	Other information: ---	
Chemical Name	Propane	Content %:1-50
WEL-TWA: 1000 ppm (ACGIH)	WEL-STEL: ---	---
Monitoring procedures:	- Compur - KITA-125 SA (549 954)	
BMGV: ---	Other information: ---	
Chemical Name	Pentane	Content %:30-40
WEL-TWA: 600 ppm (1800 mg/m <sup>3</sup> ) (WEL), 1000 ppm (3000 mg/m <sup>3</sup> ) (EU)	WEL-STEL: ---	---
Monitoring procedures:	- Compur - KITA-113 SB(C) (549 368) - Draeger - Pentane 100/a (67 24 701) - DFG (D) (Lösungsmittelgemische Meth. Nr. 1), DFG (E) (Solvent mixtures 1) - 1998, 2002	
BMGV: ---	Other information: ---	
Chemical Name	Isobutane	Content %:1-<10
WEL-TWA: 1000 ppm (EX) (ACGIH)	WEL-STEL: ---	---
Monitoring procedures:	- Compur - KITA-113 SB(C) (549 368)	
BMGV: ---	Other information: ---	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).  
 (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).  
 (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.  
 \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Page 6 of 14  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 01.06.2017 / 0011  
Replacing version dated / version: 07.03.2017 / 0010  
Valid from: 01.06.2017  
PDF print date: 01.06.2017  
LM 301 A CONTACT-OIL 150 mL  
Art.: 3236

Ensure good ventilation. This can be achieved by local suction or general air extraction.  
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.  
Applies only if maximum permissible exposure values are listed here.  
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.  
These are specified by e.g. EN 14042.  
EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.  
Wash hands before breaks and at end of work.  
Keep away from food, drink and animal feedingstuffs.  
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:  
Tight fitting protective goggles (EN 166) with side protection, with danger of projections.

Skin protection - Hand protection:  
Solvent resistant protective gloves (EN 374).  
If applicable  
Protective Neoprene® / polychloroprene gloves (EN 374).  
Protective PVC gloves (EN 374)  
Minimum layer thickness in mm:  
>= 0,5  
Permeation time (penetration time) in minutes:  
>= 480  
The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.  
The recommended maximum wearing time is 50% of breakthrough time.  
Protective hand cream recommended.

Skin protection - Other:  
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:  
Normally not necessary.  
At high concentrations:  
Filter A P3 (EN 14387), code colour brown, white

Thermal hazards:  
If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.  
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.  
Selection of materials derived from glove manufacturer's indications.  
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.  
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.  
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.  
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Aerosol. Active substance: liquid.
Colour:	Yellow
Odour:	Characteristic
Odour threshold:	Not determined

Page 7 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

pH-value:	n.a.
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	n.a.
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,65 g/ml
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Not determined
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	n.a.
Explosive properties:	Not determined
Oxidising properties:	No
<b>9.2 Other information</b>	
Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See also Subsection 10.2 to 10.6.  
The product has not been tested.

### 10.2 Chemical stability

See also Subsection 10.1 to 10.6.  
Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

See also Subsection 10.1 to 10.6.

### 10.4 Conditions to avoid

See also section 7.  
Heating, open flame, ignition sources  
Pressure increase will result in danger of bursting.

### 10.5 Incompatible materials

See also section 7.  
Avoid contact with oxidizing agents.

### 10.6 Hazardous decomposition products

See also Subsection 10.1 to 10.5.  
See also section 5.2

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

LM 301 A CONTACT-OIL 150 mL  
Art.: 3236

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.

Page 8 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.
Other information:						Classification according to calculation procedure.

Butane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						ataxia, breathing difficulties, drowsiness, unconsciousness, frostbite, disturbed heart rhythm, headaches, cramps, intoxication, dizziness, nausea and vomiting.

Propane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):	NOAEC	21,641	mg/l		OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Symptoms:						breathing difficulties, unconsciousness, frostbite, headaches, cramps, mucous membrane irritation, dizziness, nausea and vomiting.

Pentane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>16000	mg/kg	Rat		



GB

Page 9 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>100	mg/l/4h	Rat		
Skin corrosion/irritation:						Mild irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:						Mild irritant
Respiratory or skin sensitisation:						Not sensitising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Aspiration hazard:						Yes
Symptoms:						drowsiness, vomiting, cramps, drowsiness, mucous membrane irritation

Isobutane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Serious eye damage/irritation:				Rabbit		Not irritant
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						unconsciousness, frostbite, headaches, cramps, dizziness, nausea and vomiting.

## SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

LM 301 A CONTACT-OIL 150 mL Art.: 3236							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.
Other information:							According to the recipe, contains no AOX.

Butane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	24,11	mg/l		QSAR	
12.1. Toxicity to daphnia:	LC50	48h	14,22	mg/l		QSAR	

Page 10 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

12.3. Bioaccumulative potential:	Log Pow		2,98				A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Propane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.3. Bioaccumulative potential:	Log Pow		2,28				A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Pentane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	9,87	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to fish:	LC50	96h	9,87	mg/l	Salmo gairdneri		
12.1. Toxicity to fish:	LC50	96h	9,99	mg/l	Lepomis macrochirus		
12.1. Toxicity to daphnia:	EC50	48h	9,74	mg/l	Daphnia magna		
12.2. Persistence and degradability:		8d	70	%			
12.3. Bioaccumulative potential:	Log Pow		3,39				calculated value

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

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

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

Implement substance recycling.

E.g. suitable incineration plant.

#### For contaminated packing material

Pay attention to local and national official regulations.

If applicable

Return to manufacturer with residual pressure.

Do not perforate, cut up or weld uncleaned container.

Residues may present a risk of explosion.

## SECTION 14: Transport information

### General statements

14.1. UN number:

1950

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

### Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:  
 UN 1950 AEROSOLS  
 14.3. Transport hazard class(es): 2.1  
 14.4. Packing group: -  
 Classification code: 5F  
 LQ: 1 L  
 14.5. Environmental hazards: environmentally hazardous  
 Tunnel restriction code: D



### Transport by sea (IMDG-code)

14.2. UN proper shipping name:  
 AEROSOLS (PENTANES)  
 14.3. Transport hazard class(es): 2.1  
 14.4. Packing group: -  
 EmS: F-D, S-U  
 Marine Pollutant: Yes  
 14.5. Environmental hazards: environmentally hazardous



### Transport by air (IATA)

14.2. UN proper shipping name:  
 Aerosols, flammable  
 14.3. Transport hazard class(es): 2.1  
 14.4. Packing group: -  
 14.5. Environmental hazards: Not applicable



### 14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.  
 All persons involved in transporting must observe safety regulations.  
 Precautions must be taken to prevent damage.

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

Freight as packaged goods rather than in bulk, therefore not applicable.  
 Minimum amount regulations have not been taken into account.  
 Danger code and packing code on request.  
 Comply with special provisions.

## SECTION 15: Regulatory information

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

Observe restrictions:  
 Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
E2		200	500
P3a	11.1	150 (netto)	500 (netto)

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 2 - This product contains the substances listed below:

Entry Nr	Dangerous substances	Notes to Annex I	Qualifying quantity (tonnes) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) for the application of - Upper-tier requirements
18	Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas	19	50	200

Page 12 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): ~ 85 %

## 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 3, 8, 11, 12, 15, 16

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

Employee training in handling dangerous goods is required.

### Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
STOT SE 3, H336	Classification according to calculation procedure.
Aquatic Chronic 2, H411	Classification according to calculation procedure.
Aerosol 1, H222	Classification according to calculation procedure.
Asp. Tox. 1, H304	Classification according to calculation procedure.
Aerosol 1, H229	Classification based on the form or physical state.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

H220 Extremely flammable gas.

STOT SE — Specific target organ toxicity - single exposure - narcotic effects

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Aerosol — Aerosols

Asp. Tox. — Aspiration hazard

Flam. Gas — Flammable gases (including chemically unstable gases)

Flam. Liq. — Flammable liquid

### Any abbreviations and acronyms used in this document:

AC Article Categories

acc., acc. to according, according to

ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOEL Acceptable Operator Exposure Level

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

Page 13 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.06.2017 / 0011  
 Replacing version dated / version: 07.03.2017 / 0010  
 Valid from: 01.06.2017  
 PDF print date: 01.06.2017  
 LM 301 A CONTACT-OIL 150 mL  
 Art.: 3236

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)  
 BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)  
 BMGV Biological monitoring guidance value (EH40, UK)  
 BOD Biochemical oxygen demand  
 BSEF Bromine Science and Environmental Forum  
 bw body weight  
 CAS Chemical Abstracts Service  
 CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids  
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques  
 CIPAC Collaborative International Pesticides Analytical Council  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 COD Chemical oxygen demand  
 CTFA Cosmetic, Toiletry, and Fragrance Association  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon  
 DT50 Dwell Time - 50% reduction of start concentration  
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)  
 dw dry weight  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EC European Community  
 ECHA European Chemicals Agency  
 EEA European Economic Area  
 EEC European Economic Community  
 EINECS European Inventory of Existing Commercial Chemical Substances  
 ELINCS European List of Notified Chemical Substances  
 EN European Norms  
 EPA United States Environmental Protection Agency (United States of America)  
 ERC Environmental Release Categories  
 ES Exposure scenario  
 etc. et cetera  
 EU European Union  
 EWC European Waste Catalogue  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential  
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane  
 HGWP Halocarbon Global Warming Potential  
 IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC Intermediate Bulk Container  
 IBC (Code) International Bulk Chemical (Code)  
 IC Inhibitory concentration  
 IMDG-code International Maritime Code for Dangerous Goods  
 incl. including, inclusive  
 IUCLID International Uniform Chemical Information Database  
 LC lethal concentration  
 LC50 lethal concentration 50 percent kill  
 LCLo lowest published lethal concentration  
 LD Lethal Dose of a chemical  
 LD50 Lethal Dose, 50% kill  
 LDLo Lethal Dose Low  
 LOAEL Lowest Observed Adverse Effect Level  
 LOEC Lowest Observed Effect Concentration  
 LOEL Lowest Observed Effect Level  
 LQ Limited Quantities  
 MARPOL International Convention for the Prevention of Marine Pollution from Ships  
 n.a. not applicable  
 n.av. not available  
 n.c. not checked

Page 14 of 14  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 01.06.2017 / 0011  
Replacing version dated / version: 07.03.2017 / 0010  
Valid from: 01.06.2017  
PDF print date: 01.06.2017  
LM 301 A CONTACT-OIL 150 mL  
Art.: 3236

n.d.a. no data available  
NIOSH National Institute of Occupational Safety and Health (United States of America)  
NOAEC No Observed Adverse Effective Concentration  
NOAEL No Observed Adverse Effect Level  
NOEC No Observed Effect Concentration  
NOEL No Observed Effect Level  
ODP Ozone Depletion Potential  
OECD Organisation for Economic Co-operation and Development  
org. organic  
PAH polycyclic aromatic hydrocarbon  
PBT persistent, bioaccumulative and toxic  
PC Chemical product category  
PE Polyethylene  
PNEC Predicted No Effect Concentration  
POCP Photochemical ozone creation potential  
ppm parts per million  
PROC Process category  
PTFE Polytetrafluorethylene  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
SADT Self-Accelerating Decomposition Temperature  
SAR Structure Activity Relationship  
SU Sector of use  
SVHC Substances of Very High Concern  
Tel. Telephone  
ThOD Theoretical oxygen demand  
TOC Total organic carbon  
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)  
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))  
VOC Volatile organic compounds  
vPvB very persistent and very bioaccumulative  
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).  
WHO World Health Organization  
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.  
No responsibility.

These statements were made by:

**Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90**

© by Chemical Check GmbH Gefahrstoffberatung. The copying or changing of this document is forbidden except with consent of the Chemical Check GmbH Gefahrstoffberatung.