

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

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

1.1 Product identifier

Product name : UNIMOLY PA Spray

Article-No. : 081045

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

Use of the Substance/Mixture : Lubricant spray

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company : Klüber Lubrication München GmbH & Co. KG
Geisenhausenerstr. 7
81379 München
Deutschland
Tel.: +49 (0) 89 7876 0
Fax: +49 (0) 89 7876 333
info@klueber.com

E-mail address of person responsible for the SDS : mcm@klueber.com
Material Compliance Management

National contact : Klüber Lubrication Great Britain Limited
Unit 10 Pennine Business Park
Longbow Close
Huddersfield
West Yorkshire HD2 1GQ
Great Britain
Tel: +44-1422-205115
Fax: +44-1422-206073
sales@uk.klueber.com

1.4 Emergency telephone number

Emergency telephone number : +49 89 7876 700 (24 hrs)

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB

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UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Skin irritation, Category 2	H315: Causes skin irritation.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms	:	  										
Signal word	:	Danger										
Hazard statements	:	<table><tbody><tr><td>H222</td><td>Extremely flammable aerosol.</td></tr><tr><td>H229</td><td>Pressurised container: May burst if heated.</td></tr><tr><td>H304</td><td>May be fatal if swallowed and enters airways.</td></tr><tr><td>H315</td><td>Causes skin irritation.</td></tr><tr><td>H412</td><td>Harmful to aquatic life with long lasting effects.</td></tr></tbody></table>	H222	Extremely flammable aerosol.	H229	Pressurised container: May burst if heated.	H304	May be fatal if swallowed and enters airways.	H315	Causes skin irritation.	H412	Harmful to aquatic life with long lasting effects.
H222	Extremely flammable aerosol.											
H229	Pressurised container: May burst if heated.											
H304	May be fatal if swallowed and enters airways.											
H315	Causes skin irritation.											
H412	Harmful to aquatic life with long lasting effects.											
Precautionary statements	:	Prevention: <table><tbody><tr><td>P210</td><td>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</td></tr><tr><td>P211</td><td>Do not spray on an open flame or other ignition source.</td></tr><tr><td>P251</td><td>Do not pierce or burn, even after use.</td></tr></tbody></table> Response: <table><tbody><tr><td>P301 + P310</td><td>IF SWALLOWED: Immediately call a POISON CENTER/ doctor.</td></tr><tr><td>P331</td><td>Do NOT induce vomiting.</td></tr></tbody></table>	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.	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.	P331	Do NOT induce vomiting.
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.											
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.											
P331	Do NOT induce vomiting.											

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version 4.3	Revision Date: 11.08.2022	Date of last issue: 03.12.2020 Date of first issue: 08.05.2015	Print Date: 11.08.2022
----------------	------------------------------	---	---------------------------

Storage:

P410 + P412

Protect from sunlight. Do not expose to
temperatures exceeding 50 °C/ 122 °F.

Hazardous components which must be listed on the label:

Hydrocarbons, C7-C9, isoalkanes

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Propellant
solvent (hydrocarbons)
Molybdenum disulfide
Mineral oil.
graphite

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	specific concentration limit M-Factor Notes Acute toxicity estimate	Concentration (% w/w)
isobutane	75-28-5 200-857-2 601-004-00-0	Flam. Gas1A; H220 Press. GasCompr. Gas; H280		>= 30 - < 50
Hydrocarbons, C7-C9, isoalkanes	921-728-3	Flam. Liq.2; H225 Skin Irrit.2; H315 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2; H411		>= 10 - < 20
propane	74-98-6 200-827-9 601-003-00-5	Flam. Gas1; H220 Press. GasCompr. Gas; H280		>= 1 - < 10

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version 4.3	Revision Date: 11.08.2022	Date of last issue: 03.12.2020 Date of first issue: 08.05.2015	Print Date: 11.08.2022
----------------	------------------------------	---	---------------------------

Substances with a workplace exposure limit :				
molybdenum disulphide	1317-33-5 215-263-9	Not classified		$\geq 10 - < 20$
Graphite	7782-42-5 231-955-3	Not classified		$\geq 1 - < 10$
butane	106-97-8 203-448-7 601-004-00-0	Flam. Gas1; H220 Press. GasCompr. Gas; H280		$\geq 1 - < 10$

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Take off all contaminated clothing immediately.
Wash off immediately with soap and plenty of water.
Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
If eye irritation persists, consult a specialist.
- If swallowed : Move the victim to fresh air.
Keep respiratory tract clear.
Do NOT induce vomiting.
Obtain medical attention.
Rinse mouth with water.
Aspiration hazard if swallowed - can enter lungs and cause

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

damage.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Inhalation may provoke the following symptoms:
Unconsciousness
Dizziness
Drowsiness
Headache
Nausea
Tiredness
Skin contact may provoke the following symptoms:
Erythema

Aspiration may cause pulmonary oedema and pneumonitis.

Risks : Risk of product entering the lungs on vomiting after ingestion.
Health injuries may be delayed.
Causes skin irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : ABC powder

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Fire Hazard
Do not let product enter drains.
Contains gas under pressure; may explode if heated.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Hazardous combustion products : Carbon oxides
Sulphur oxides
Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment. Exposure to decomposition products may be a hazard to health.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

Further information : Standard procedure for chemical fires.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Cool containers/tanks with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Ensure adequate ventilation.
Remove all sources of ignition.
Do not breathe vapours or spray mist.
Refer to protective measures listed in sections 7 and 8.
Only qualified personnel equipped with suitable protective equipment may intervene.

6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.
Non-sparking tools should be used.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not use in areas without adequate ventilation.
Do not breathe vapours or spray mist.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin and eyes.
For personal protection see section 8.
Keep away from fire, sparks and heated surfaces.
Smoking, eating and drinking should be prohibited in the application area.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version
4.3

Revision Date:
11.08.2022

Date of last issue: 03.12.2020
Date of first issue: 08.05.2015

Print Date:
11.08.2022

Wash hands and face before breaks and immediately after handling the product.
Do not get in eyes or mouth or on skin.
Do not get on skin or clothing.
Do not ingest.
Do not use sparking tools.
These safety instructions also apply to empty packaging which may still contain product residues.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Store in accordance with the particular national regulations.

7.3 Specific end use(s)

Specific use(s) : Specific instructions for handling, not required.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
molybdenum disulphide	1317-33-5	TWA	10 mg/m ³ (Molybdenum)	GB EH40GB EH40 (2005-04-06)
		STEL	20 mg/m ³ (Molybdenum)	GB EH40GB EH40 (2005-04-06)
Graphite	7782-42-5	TWA (inhalable dust)	10 mg/m ³	GB EH40GB EH40 (2020-01-01)
		TWA (Respirable dust)	4 mg/m ³	GB EH40GB EH40 (2020-01-01)
butane	106-97-8	STEL	750 ppm 1,810 mg/m ³	GB EH40GB EH40 (2007-08-01)
Further information: Capable of causing cancer and/or heritable genetic				

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB

KLÜBER
LUBRICATION

UNIMOLY PA Spray

Version
4.3

Revision Date:
11.08.2022

Date of last issue: 03.12.2020
Date of first issue: 08.05.2015

Print Date:
11.08.2022

	damage.			
		TWA	600 ppm 1,450 mg/m ³	GB EH40GB EH40 (2007-08-01)
	Further information: Capable of causing cancer and/or heritable genetic damage.			

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
Hydrocarbons, C7-C9, isoalkanes	Workers	Inhalation	Long-term systemic effects	2035 mg/m ³
	Workers	Dermal	Long-term systemic effects	773 mg/kg bw/day
White mineral oil (petroleum)	Workers	Inhalation	Long-term systemic effects	160 mg/m ³
	Workers	Skin contact	Long-term systemic effects	220 mg/kg

8.2 Exposure controls

Engineering measures

Use only in an area equipped with explosion proof exhaust ventilation.
Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Eye protection : Safety glasses with side-shields

Hand protection

Material : Nitrile rubber
Break through time : > 10 min
Protective index : Class 1

Remarks : Wear protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Short term only

Filter type : Filter type A-P

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version
4.3

Revision Date:
11.08.2022

Date of last issue: 03.12.2020
Date of first issue: 08.05.2015

Print Date:
11.08.2022

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: aerosol
Colour	: black
Odour	: characteristic
Odour Threshold	: No data available

Values refer to the propellant:

pH	: Not applicable substance/mixture is non-soluble (in water)
Melting point/range	: No data available
Boiling point/boiling range	: < -10 °C
Flash point	: -80 °C Method: closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Upper explosion limit / Upper flammability limit	: 11.2 %(V)
Lower explosion limit / Lower flammability limit	: 1.5 %(V)
Vapour pressure	: 2,700 hPa (20 °C)
Relative vapour density	: No data available
Relative density	: 0.6 (20 °C) Reference substance: Water The value is calculated
Density	: 0.60 g/cm ³ (20 °C)
Bulk density	: No data available
Solubility(ies)	

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version 4.3	Revision Date: 11.08.2022	Date of last issue: 03.12.2020 Date of first issue: 08.05.2015	Print Date: 11.08.2022
----------------	------------------------------	---	---------------------------

Water solubility : < 0.1 g/l insoluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : > 350 °C

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : No data available

9.2 Other information

Sublimation point : No data available

Self-ignition : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.
Strong sunlight for prolonged periods.
Risk of receptacle bursting.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB

KLÜBER
LUBRICATION

UNIMOLY PA Spray

Version
4.3

Revision Date:
11.08.2022

Date of last issue: 03.12.2020
Date of first issue: 08.05.2015

Print Date:
11.08.2022

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

- Acute oral toxicity : Remarks: This information is not available.
- Acute inhalation toxicity : Symptoms: Inhalation may provoke the following symptoms:
Respiratory disorder
- Acute dermal toxicity : Symptoms: Redness, Local irritation

Components:

isobutane:

- Acute inhalation toxicity : LC50 (Rat): 658 mg/l
Exposure time: 4 h
Test atmosphere: gas

Hydrocarbons, C7-C9, isoalkanes:

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
- Acute inhalation toxicity : LC50 (Rat): > 21 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute
inhalation toxicity
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal
toxicity

molybdenum disulphide:

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
- Acute dermal toxicity : LD50 (Rat): > 16,000 mg/kg

Graphite:

- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral
toxicity

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

Acute inhalation toxicity : LC50 (Rat): > 2,000 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

butane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l
Exposure time: 4 h
Test atmosphere: gas

Skin corrosion/irritation

Product:

Remarks : Irritating to skin.

Components:

Hydrocarbons, C7-C9, isoalkanes:

Species : Rabbit
Assessment : Irritating to skin.
Method : OECD Test Guideline 404
Result : Irritating to skin.

molybdenum disulphide:

Assessment : No skin irritation
Result : No skin irritation

Graphite:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Product:

Remarks : Contact with eyes may cause irritation.

Components:

Hydrocarbons, C7-C9, isoalkanes:

Species : Rabbit
Assessment : No eye irritation
Method : OECD Test Guideline 405
Result : No eye irritation

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

molybdenum disulphide:

Assessment	:	No eye irritation
Result	:	No eye irritation

Graphite:

Species	:	Rabbit
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Respiratory or skin sensitisation

Product:

Remarks : This information is not available.

Components:

Hydrocarbons, C7-C9, isoalkanes:

Species	:	Guinea pig
Assessment	:	Did not cause sensitisation on laboratory animals.
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitisation on laboratory animals.

molybdenum disulphide:

Assessment	:	Does not cause skin sensitisation.
Result	:	Does not cause skin sensitisation.

Graphite:

Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

Hydrocarbons, C7-C9, isoalkanes:

Germ cell mutagenicity- Assessment	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
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SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

molybdenum disulphide:

Germ cell mutagenicity-
Assessment : Animal testing did not show any mutagenic effects.

Graphite:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)
Method: OECD Test Guideline 471
Result: negative

Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Carcinogenicity

Product:

Remarks : No data available

Components:

Hydrocarbons, C7-C9, isoalkanes:

Carcinogenicity -
Assessment : Not classifiable as a human carcinogen.

molybdenum disulphide:

Carcinogenicity -
Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal
development : Remarks: No data available

Components:

Hydrocarbons, C7-C9, isoalkanes:

Reproductive toxicity -
Assessment : - Fertility -
No toxicity to reproduction
- Teratogenicity -
No toxicity to reproduction

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

Graphite:

Effects on fertility : Species: Rat
Application Route: Oral
General Toxicity F1: NOAEL: 813 mg/kg body weight
Method: OECD Test Guideline 422

STOT - single exposure

Components:

Hydrocarbons, C7-C9, isoalkanes:

Exposure routes : Inhalation
Target Organs : Central nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

molybdenum disulphide:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

molybdenum disulphide:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Remarks : This information is not available.

Components:

Graphite:

Species : Rat
NOAEL : 813 mg/kg
Application Route : Oral
Method : OECD Test Guideline 422

Species : Rat
NOAEL : > 2 mg/l
Application Route : inhalation (dust/mist/fume)
Method : OECD Test Guideline 412

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version
4.3

Revision Date:
11.08.2022

Date of last issue: 03.12.2020
Date of first issue: 08.05.2015

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11.08.2022

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

Components:

Hydrocarbons, C7-C9, isoalkanes:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

Components:

molybdenum disulphide:

Remarks : Information given is based on data on the components and the toxicology of similar products.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae/aquatic plants : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Additional ecological information : Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not dispose of with domestic refuse.
Dispose of as hazardous waste in compliance with local and national regulations.

Waste codes should be assigned by the user based on the application for which the product was used.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.
Offer empty spray cans to an established disposal company.
Pressurized container: Do not pierce or burn, even after use.

The following Waste Codes are only suggestions:

Waste Code : unused product, packagings not completely emptied
16 05 04*, gases in pressure containers (including halons)
containing hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

ADR	: UN 1950
RID	: UN 1950
IMDG	: UN 1950
IATA	: UN 1950

14.2 UN proper shipping name

ADR	: AEROSOLS
RID	: AEROSOLS
IMDG	: AEROSOLS
IATA	: Aerosols, flammable

14.3 Transport hazard class(es)

ADR	: 2
RID	: 2
IMDG	: 2.1
IATA	: 2.1

14.4 Packing group

ADR	
Packing group	: Not assigned by regulation
Classification Code	: 5F
Labels	: 2.1
Tunnel restriction code	: (D)
RID	
Packing group	: Not assigned by regulation
Classification Code	: 5F
Hazard Identification Number	: 23
Labels	: 2.1

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

IMDG

Packing group : Not assigned by regulation
Labels : 2.1
EmS Code : F-D, S-U

IATA (Cargo)

Packing instruction (cargo aircraft) : 203
Packing instruction (LQ) : Y203
Packing group : Not assigned by regulation
Labels : Flammable Gas

IATA (Passenger)

Packing instruction (passenger aircraft) : 203
Packing instruction (LQ) : Y203
Packing group : Not assigned by regulation
Labels : Flammable Gas

14.5 Environmental hazards

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). (EU SVHC) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version 4.3	Revision Date: 11.08.2022	Date of last issue: 03.12.2020 Date of first issue: 08.05.2015	Print Date: 11.08.2022
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(EU. REACH-Annex XIV)

Regulation (EC) No 1005/2009 on substances that
deplete the ozone layer
(EC 1005/2009) : Not applicable

Regulation (EU) 2019/1021 on persistent organic
pollutants (recast)
(EU POP) : Not applicable

Regulation (EC) No 649/2012 of the European
Parliament and the Council concerning the export and
import of dangerous chemicals
(EU PIC) : Not applicable

UK REACH List of substances subject to authorisation
(Annex XIV)
(UK. REACH Annex XIV) : Not applicable

GB Export and import of hazardous chemicals - Prior
Informed Consent (PIC) Regulation
(GB PIC) : Not applicable

Regulation (EU) 2019/1148 on the marketing and use of
explosives precursors : Not applicable

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of R-Phrases

- Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- Note P : The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102)-P260-P262-P301 + P310-P331 shall apply.
- Note U (table 3.1) : When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

Full text of H-Statements

H220	:	Extremely flammable gas.
H225	:	Highly flammable liquid and vapour.
H280	:	Contains gas under pressure; may explode if heated.
H304	:	May be fatal if swallowed and enters airways.
H315	:	Causes skin irritation.
H336	:	May cause drowsiness or dizziness.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Note C	:	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
Note P	:	The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 shall apply.
Note U (table 3.1)	:	When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture:

Aerosol 1	H222, H229
Skin Irrit. 2	H315
Asp. Tox. 1	H304
Aquatic Chronic 3	H412

Classification procedure:

Based on product data or assessment
Calculation method
Based on product data or assessment
Calculation method

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SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758 - GB



UNIMOLY PA Spray

Version	Revision Date:	Date of last issue: 03.12.2020	Print Date:
4.3	11.08.2022	Date of first issue: 08.05.2015	11.08.2022

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