



SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : LMM14 BLACK LASER MARKING AEROSOL

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

Paint.

1.3. Details of the supplier of the safety data sheet

Registered company name : GRAVOTECH MARKING SAS.
Address : 56, avenue Jean Jaurès.10600.La Chapelle Saint Luc.France.
Telephone : +33 (0)3 25 41 65 65. Fax : +33 (0)3 25 79 04 25.
e-mail : info@gravograph.fr
http://www.gravograph.com

1.4. Emergency telephone number : +33 (0)1 45 42 59 59.

Association/Organisation : INRS / ORFILA <http://www.centres-antipoison.net>.

Other emergency numbers

National Poisons Information Service of England: <http://npis.org> - NHS 111: dial 111 - National Poisons Information Centre of Ireland: 353 (1) 809 2166 - LUXEMBOURG : (+352) 8002 5500 - European Emergency Number Association (EENA) : 112

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Aerosol, Category 1 (Aerosol 1, H222 - H229).
Repeated exposure may cause skin dryness or cracking (EUH066).
Eye irritation, Category 2 (Eye Irrit. 2, H319).
Skin sensitisation, Category 1 (Skin Sens. 1, H317).
Carcinogenicity, Category 2 (Carc. 2, H351).
Specific target organ toxicity (single exposure), Category 3 (STOT SE 3, H335).
Specific target organ toxicity (single exposure), Category 3 (STOT SE 3, H336).
Specific target organ toxicity (repeated exposure), Category 2 (STOT RE 2, H373).
This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.
The propellant gas is not taken into account when determining the health and environmental classification of the mixture.

2.2. Label elements

Mixture for aerosol application.

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS08



GHS02



GHS07

Signal Word :

DANGER

Product identifiers :

606-001-00-8

ACETONE

042-001-00-9

MOLYBDENUM TRIOXIDE

028-002-00-7

NICKEL

Hazard statements :

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer .
H373	May cause damage to organs through prolonged or repeated exposure (if inhaled).
EUH066	Repeated exposure may cause skin dryness or cracking.

Precautionary statements - Prevention :

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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.
P260	Do not breathe spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response :

P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor/if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary statements - Storage :

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Precautionary statements - Disposal :

P501 Dispose of contents/container at a disposal facility in accordance with local regulations.



2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) $\geq 0.1\%$ published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances $\geq 0.1\%$ with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures



Composition :

Identification	Classification (EC) 1272/2008	Note	%
INDEX: 606-001-00-8 CAS: 67-64-1 EC: 200-662-2 REACH: 01-2119471330-49 ACETONE	GHS02, GHS07 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH:066	[1]	25 \leq x % < 50
INDEX: 042-001-00-9 CAS: 1313-27-5 EC: 215-204-7 MOLYBDENUM TRIOXIDE	GHS08, GHS07 Wng Carc. 2, H351 Eye Irrit. 2, H319 STOT SE 3, H335	[1] [2]	10 \leq x % < 25
INDEX: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6 REACH: 01-2119457610-43	GHS02 Dgr Flam. Liq. 2, H225	[1]	10 \leq x % < 25

ETHANOL			
INDEX: 601-004-00-0 CAS: 75-28-5 EC: 200-857-2 REACH: 01-2119474691-32	GHS02, GHS04 Dgr Flam. Gas 1, H220	C [1] [7]	10 <= x % < 25
ISOBUTANE			
INDEX: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9 REACH: 01-2119486944-21	GHS02, GHS04 Dgr Flam. Gas 1, H220	[1] [7]	10 <= x % < 25
PROPANE			
CAS: 14808-60-7 EC: 238-878-4		[1]	2.5 <= x % < 10
QUARTZ (SIO2)			
CAS: 1309-37-1 EC: 215-168-2 REACH: 01-2119457614-35		[1]	1 <= x % < 2.5
DIIRON TRIOXIDE			
CAS: 7439-96-5 EC: 231-105-1		[1]	1 <= x % < 2.5
MANGANESE			
CAS: 7440-47-3 EC: 231-157-5 REACH: 01-2119485652-31		[1]	1 <= x % < 2.5
CHROME			
CAS: 12001-26-2 EC: 310-127-6		[1]	1 <= x % < 2.5
MICA			
INDEX: 028-002-00-7 CAS: 7440-02-0 EC: 231-111-4 REACH: 01-2119438727-29	GHS08, GHS07 Dgr Carc. 2, H351 STOT RE 1, H372 Skin Sens. 1, H317	S [1] [2] [XVII]	0.1 <= x % < 1
NICKEL			

 **Information on ingredients :**

(Full text of H-phrases: see section 16)

[XVII] Restricted substance under Regulation (EC) No. 1907/2006 (REACH), Annex XVII.

[1] Substance for which maximum workplace exposure limits are available.

[2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

[7] Propellant gas

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

 **4.1. description of first aid measures****In the event of exposure by inhalation :**

In the event of massive inhalation, remove the person exposed to fresh air. Keep warm and at rest.

If the person is unconscious, place in recovery position. Notify a doctor in all events, to ascertain whether observation and supportive hospital care will be necessary.

If breathing is irregular or has stopped, effect mouth-to-mouth resuscitation and call a doctor.

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.



In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

5.1. Extinguishing media

Keep packages near the fire cool, to prevent pressurised containers from bursting.

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive
- halon
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO₂)

Prevent the effluent of fire-fighting measures from entering drains or waterways.

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

5.3. Advice for firefighters

Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Because of the organic solvents contained in the mixture, eliminate sources of ignition and ventilate the area.

Avoid inhaling the vapors.

Avoid any contact with the skin and eyes.

If a large quantity has been spilt, evacuate all personnel and only allow intervention by trained operators equipped with safety apparatus.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.
Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

7.1. Precautions for safe handling

Always wash hands after handling.
Remove and wash contaminated clothing before re-using.
Ensure that there is adequate ventilation, especially in confined areas.

Fire prevention :

Handle in well-ventilated areas.
Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.
Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.
Do not spray on a naked flame or any incandescent material.
Do not pierce or burn, even after use.
Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.
Keep packages tightly closed and away from sources of heat, sparks and naked flames.
Do not use tools which may produce sparks. Do not smoke.
Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.
Observe precautions stated on label and also industrial safety regulations.
Do not inhale vapours.
Do not breathe in aerosols.
Avoid inhaling vapors. Carry out any industrial operation which may give rise to this in a sealed apparatus.
Provide vapor extraction at the emission source and also general ventilation of the premises.
Also provide breathing apparatus for certain short tasks of an exceptional nature and for emergency interventions.
In all cases, recover emissions at source.
Avoid skin and eye contact with this mixture.
Avoid exposure - obtain special instructions before use.
Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep the container tightly closed in a dry, well-ventilated place.
Keep away from all sources of ignition - do not smoke.
Keep well away from all sources of ignition, heat and direct sunlight.
The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- European Union (2022/431, 2019/1831, 2017/2398, 2017/164, 2009/161, 2006/15/CE, 2000/39/CE, 98/24/CE) :

CAS	VME-mg/m ³ :	VME-ppm :	VLE-mg/m ³ :	VLE-ppm :	Notes :
67-64-1	1210	500	-	-	-
7440-47-3	2	-	-	-	-

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
67-64-1	500 ppm	750 ppm		A4; BEI	
64-17-5		1000 ppm		A3	
75-28-5	1000 ppm				
74-98-6	1000 ppm				
14808-60-7	0.05 mg/m3	-	-	-	R
1309-37-1	5 mg/m3	-	-	-	-
7439-96-5	0.2 mg/m3				
7440-47-3	0.5 mg/m3	-	-	-	-
12001-26-2	3 (R) mg/m3				
7440-02-0	1.5 mg/m3	-	-	-	I

- Germany - AGW (BAuA - TRGS 900, 02/2022) :

CAS	VME :	VME :	Excess	Notes
67-64-1		500 ppm 1200 mg/m ³		2(I)
64-17-5		200 ppm 380 mg/m ³		4(II)
75-28-5		1000 ppm 2400 mg/m ³		4(II)
74-98-6		1000 ppm 1800 mg/m ³		4(II)
7439-96-5		0.2 E mg/m ³		8(II)
7440-47-3		2E mg/m ³		1(I)
7440-02-0		0.006 A mg/m ³		8(II)

- Australia (NOHSC: 3008, 1995) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
67-64-1	500 ppm 1185 mg/m3	1000 ppm 2375 mg/m3		A	
1313-27-5	5 mg/m3			H	
64-17-5	1000 ppm 1880 mg/m3			H	
14808-60-7	0.1 mg/m3				
1309-37-1	5 mg/m3			H	
7439-96-5	1 mg/m3	3 mg/m3		H	
7440-47-3	0.5 mg/m3			H	
12001-26-2	2.5 (inspirable) mg/m3			A*	
7440-02-0	0.1 mg/m3			H	

- Austria (BGBl. II Nr. 156/2021) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
67-64-1	500 ppm 1200 mg/m ³	2000 ppm 4800 mg/m ³			
64-17-5	1000 ppm 1900 mg/m ³	2000 ppm 3800 mg/m ³			
75-28-5	800 ppm 1900 mg/m ³	1600 ppm 3800 mg/m ³			
74-98-6	1000 ppm 1800 mg/m ³	2000 ppm 3600 mg/m ³			
14808-60-7	0.05 A mg/m ³				
1309-37-1	5A mg/m ³	10A mg/m ³			
7439-96-5	0.2 E mg/m ³	1.6 E mg/m ³			
7440-47-3	2 mg/m ³				
7440-02-0	0.5 E mg/m ³	2E mg/m ³			

- Belgium (Royal decree of 11/05/2021) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
67-64-1	246 ppm 594 mg/m ³	492 ppm 1187 mg/m ³			
1313-27-5	0.5 mg/m3				
64-17-5	1000 ppm 1907 mg/m ³				
75-28-5		980 ppm 2370 mg/m ³			
74-98-6	1000 ppm				

14808-60-7	0.1 mg/m ³			C	
1309-37-1	5 mg/m ³				
7439-96-5	0.05 mg/m ³			"	
7440-47-3	0.01 mg/m ³	-	-	-	-
12001-26-2	3 mg/m ³				
7440-02-0	1 mg/m ³				

- France (INRS - Outils 65 / 2021-1849, 2021-1763, decree of 09/12/2021) :

CAS	VME-ppm :	VME-mg/m ³ :	VLE-ppm :	VLE-mg/m ³ :	Notes :	TMP No :
67-64-1	500	1210	1000	2420	-	84
1313-27-5	-	-	-	5	-	-
64-17-5	1000	1900	5000	9500	-	84
14808-60-7	-	0.1 A	-	-	-	25
1309-37-1	-	5	-	-	-	44.44 Bis.94
7439-96-5	-	1	-	-	-	-
7440-47-3	-	2	-	-	-	-
7440-02-0	-	1	-	-	C3	-

- Switzerland (Suva 2021) :

CAS	VME	VLE	Valeur plafond	Notations
67-64-1	500 ppm 1200 mg/m ³	1000 ppm 2400 mg/m ³		
1313-27-5	5 i mg/m ³			
64-17-5	500 ppm 960 mg/m ³	1000 ppm 1920 mg/m ³		
75-28-5	800 ppm 1900 mg/m ³	3200 ppm 7600 mg/m ³		
74-98-6	1000 ppm 1800 mg/m ³	4000 ppm 7200 mg/m ³		
14808-60-7	0.15 ppm			
1309-37-1	3 ppm			
7439-96-5	0.5 ppm			
7440-47-3	0.5 ppm			
12001-26-2	3 ppm			
7440-02-0	0.05 ppm			

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
67-64-1	500 ppm 1210 mg/m ³	1500 ppm 3620 mg/m ³			
1313-27-5	5 mg/m ³	10 mg/m ³			
64-17-5	1000 ppm 1920 mg/m ³				
14808-60-7	0.3 mg/m ³	-	-	-	R
1309-37-1	5 mg/m ³	10 mg/m ³	-	-	-
7439-96-5	0.5 mg/m ³	-	-	-	-
7440-47-3	0.5 mg/m ³				
12001-26-2	0.8 mg/m ³				
7440-02-0	0.1 mg/m ³	-	-	-	-

- USA / OSHA PEL (Occupational Safety and Health Administration, Permissible Exposure Limits) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
67-64-1	1000 ppm 2400 mg/m ³				
1313-27-5	5 mg/m ³				
64-17-5	1000 ppm 1900 mg/m ³				
74-98-6	1000 ppm 1800 mg/m ³				
14808-60-7	-	-	-	-	T
1309-37-1	15 mg/m ³				
7439-96-5			5 mg/m ³		
7440-47-3	0.5 mg/m ³	-	-	-	-
12001-26-2	20 mppcf	-	-	-	-
7440-02-0	1 mg/m ³				

8.2. Exposure controls

Personal protection measures, such as personal protective equipment



Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- PVA (Polyvinyl alcohol)

- Butyl Rubber (Isobutylene-isoprene copolymer)

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Avoid inhaling vapors.

If the ventilation is insufficient, wear appropriate breathing apparatus.

When workers are confronted with concentrations that are above occupational exposure limits, they must wear a suitable, approved, respiratory protection device.

Type of FFP mask :

Wear a disposable half-mask aerosol filter in accordance with standard EN149/A1.

Category :

- FFP1

- FFP3

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

- A3 (Brown)

Particle filter according to standard EN143 :

- P1 (White)

- P3 (White)

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state

Physical state :	Fluid liquid.
	Spray.

Colour

Colour:	Black.
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Odour

Odour threshold :	Not stated.
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 Freezing point	
Freezing point / Freezing range :	Not stated.
 Boiling point or initial boiling point and boiling range	
Boiling point/boiling range :	Not relevant.
 Flammability	
Flammability (solid, gas) :	Not stated.
 Lower and upper explosion limit	
Explosive properties, lower explosivity limit (%) :	2.2
Explosive properties, upper explosivity limit (%) :	9.5
 Flash point	
Flash point interval :	Not relevant.
 Auto-ignition temperature	
Self-ignition temperature :	Not relevant.
 Decomposition temperature	
Decomposition point/decomposition range :	Not relevant.
 pH	
pH (aqueous solution) :	Not stated.
pH :	Not relevant.
 Kinematic viscosity	
Viscosity :	Not stated.
 Solubility	
Water solubility :	Insoluble.
Fat solubility :	Not stated.
 Partition coefficient n-octanol/water (log value)	
Partition coefficient: n-octanol/water :	Not stated.
 Vapour pressure	
Vapour pressure (50°C) :	Below 110 kPa (1.10 bar).
 Density and/or relative density	
Density :	< 1
 Relative vapour density	
Vapour density :	Not stated.
 9.2. Other information	
% VOC :	84
 9.2.1. Information with regard to physical hazard classes	
No data available.	
 Aerosols	
Chemical combustion heat :	Not specified.
Inflammation time :	Not specified.
Deflagration density :	Not specified.
Inflammation distance :	Not specified.
Flame height :	Not specified.
Flame duration :	Not specified.
 9.2.2. Other safety characteristics	
No data available.	
 Evaporation rate	
Evaporation rate :	< 1 (BuAc=1)

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be

allowed on the premises.

Avoid :

- heating
- heat



10.5. Incompatible materials

Keep away from :

- acids
- oxidising agents

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

SECTION 11 : TOXICOLOGICAL INFORMATION



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

Exposure to vapours from solvents in the mixture in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms produced will include headaches, numbness, dizziness, fatigue, muscular asthenia and, in extreme cases, loss of consciousness.

Repeated or prolonged contact with the mixture may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

Splashes in the eyes may cause irritation and reversible damage

Respiratory tract irritation may occur, together with symptoms such as coughing, choking and breathing difficulties.

Narcotic effects may occur, such as drowsiness, narcosis, decreased alertness, loss of reflexes, lack of coordination or dizziness.

Effects may also occur in the form of violent headaches or nausea, judgement disorder, giddiness, irritability, fatigue or memory disturbance.

May cause an allergic reaction by skin contact.

Suspected human carcinogen.

May cause severe damage to organs in the event of repeated or prolonged exposure.

11.1.1. Substances

No toxicological data available for the substances.

11.1.2. Mixture

No toxicological data available for the mixture.



11.2. Information on other hazards



Monograph(s) from the IARC (International Agency for Research on Cancer) :

CAS 7440-02-0 : IARC Group 2B : The agent is possibly carcinogenic to humans.

CAS 7440-47-3 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

CAS 1309-37-1 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

CAS 14808-60-7 : IARC Group 1 : The agent is carcinogenic to humans.

CAS 64-17-5 : IARC Group 1 : The agent is carcinogenic to humans.

CAS 1313-27-5 : IARC Group 2B : The agent is possibly carcinogenic to humans.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.



12.6. Endocrine disrupting properties

No data available.



12.7. Other adverse effects

No data available.



German regulations concerning the classification of hazards for water (WGK, AwSV Annex I, KBWs) :

WGK 1 : Slightly hazardous for water.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2023 - IMDG 2020 [40-20] - ICAO/IATA 2023 [64]).

14.1. UN number or ID number

1950

14.2. UN proper shipping name

UN1950=AEROSOLS, flammable

14.3. Transport hazard class(es)

- Classification :



2.1

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	2	5F	-	2.1	-	1 L	190 327 344 625	E0	2	D
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation	
	2	See SP63	-	See SP277	F-D. S-U	63 190 277 327 344 381 959	E0	- SW1 SW22	SG69	
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
	2.1	-	-	203	75 kg	203	150 kg	A145 A167 A802	E0	
	2.1	-	-	Y203	30 kg G	-	-	A145 A167 A802	E0	

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2022/692 (ATP 18)

**Container information:**

No data available.

**Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):**

The mixture contains at least one restricted substance under Annex XVII of Regulation (EC) No. 1907/2006 (REACH):
<https://echa.europa.eu/substances-restricted-under-reach>. Please refer to Section 3 to identify the substance involved.

**Explosives precursors :**

The mixture contains at least one substance subject to Regulation (EU) 2019/1148 on the marketing and use of explosives precursors:

- Acetone (CAS 67-64-1)

The acquisition, introduction, possession or use of this restricted explosive precursor by members of the general public is subject to the reporting obligations.

**Particular provisions :**

No data available.

**German regulations concerning the classification of hazards for water (WGK, AwSV Annex I, KBws) :**

WGK 1 : Slightly hazardous for water.

**Swiss ordinance on the incentive tax on volatile organic compounds :**

67-64-1	acétone
64-17-5	éthanol, seulement s'il s'agit d'alcools impropres à la consommation (art. 31 de la loi fédérale sur l'alcool)
75-28-5	2-méthylpropane (alcool isobutylique, isobutane)
74-98-6	propane

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer .
H372	Causes damage to organs through prolonged or repeated exposure .
EUH066	Repeated exposure may cause skin dryness or cracking.

**Abbreviations and acronyms :**

REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.

CMR: Carcinogenic, mutagenic or reprotoxic.

STEL : Short-term exposure limit

TWA : Time Weighted Averages

TMP : French Occupational Illness table

TLV : Threshold Limit Value (exposure)

AEV : Average Exposure Value.

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

GHS02 : Flame

GHS07 : Exclamation mark

GHS08 : Health hazard

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.