



Aluminum grinding spray X 73050

Print date 11.12.2023
Revision date 11.12.2023
Version 2.9 (en)
replaces version of 05.06.2020 (2.8)

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

*** 1.1 Product identifier**

Trade name/designation Aluminum grinding spray X 73050
Unique Formula Identifier UFI: P5E0-M0EA-T00C-1VAD

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

Sector of uses [SU]

SU3 Industrial uses

Product Categories [PC]

Abrasive

Use of the substance/mixture

Technical aerosols

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

Supplier

joke Technology GmbH
Asselborner Weg 14-16
D-51249 Bergisch Gladbach
Telephone +49 (0) 22 04 / 8 39-0
Telefax +49 (0) 22 04 / 8 39-60
E-mail info@joke.de
Website <https://www.joke-technology.com/>

Department responsible for information:

Telephone +49 (0) 22 04 / 8 39-0
Telefax +49 (0) 22 04 / 8 39-60

E-mail (competent person):
sida@joke.de

1.4 Emergency telephone number

Vergiftungs-I-Z. Freiburg (Sprache / Language: DE, EN) +49 (0) 761 / 1 92 40
REACH and CLP UK CA Help Desk +44 171 635 9191

*** SECTION 2: Hazards identification**

*** 2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008 [CLP]	Classification procedure
--	--------------------------

Aerosol 1, H222 H229

STOT SE 3, H336

Aquatic Chronic 2, H411

Hazard statements for physical hazards

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.

Hazard statements for health hazards

H336 May cause drowsiness or dizziness.

Hazard statements for environmental hazards

H411 Toxic to aquatic life with long lasting effects.

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* **2.2 Label elements**

* **Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms



GHS02



GHS07



GHS09

Signal word

Danger

Hazard statements

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

* **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P251 Do not pierce or burn, even after use.
P391 Collect spillage.
P312 Call a POISON CENTER/doctor/if you feel unwell.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P405 Store locked up.
P501 Dispose of contents and containers in accordance with local, regional, national and international regulations.

* **Supplemental hazard information**

EUH066 Repeated exposure may cause skin dryness or cracking.

* **Remark**

This substance is classified as hazardous according to Regulation (EC) No 1272 (2008).

* **2.3 Other hazards**

* **Adverse human health effects and symptoms**

Prolonged or repeated contact may cause skin irritation.

* **Results of PBT and vPvB assessment**

Product does not contain any PBT / vPvB substances according to the formulation.

* **SECTION 3: Composition / information on ingredients**

3.1 Substances

not applicable

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*** 3.2 Mixtures****Hazardous ingredients**

CAS No.	EC No.	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
109-66-0	203-692-4	pentane	≥ 50 ≤ 75 weight-%	Flam. Liq. 2; H225 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411; EUH066	ATE(inhalation vapour): 364 mg/m ³
74-98-6	200-827-9	propane	≥ 10 ≤ 25 weight-%	Flam. Gas 1; H220 Press. Gas (Liq.); H280	
106-97-8	203-448-7	Butan	≥ 10 ≤ 25 weight-%	Flam. Gas 1; H220 Press. Gas (Comp.); H280	
REACH No.		Substance name			
01-2119486944-21		propane			
01-2119474691-32		Butan			

*** Remark**

There are no additional ingredients present which, to the best of the supplier's current knowledge, are classified as hazardous to health or the environment in the applicable concentrations, are PBT or vPvB substances or substances of equivalent concern, or which have an occupational exposure limit and therefore need to be listed in this section.

*** SECTION 4: First aid measures***** 4.1 Description of first aid measures***** General information**

Keep airways open. Loosen tight-fitting clothing (e.g. collar, tie, belt or waistband).

*** Following inhalation**

Provide fresh air.

In case of unconsciousness and breathing, place the patient in the recovery position and seek medical advice.

In case of difficulty in breathing, give oxygen.

If breathing is irregular or stopped, administer artificial respiration.

In the event of symptoms refer for medical treatment.

*** Following skin contact**

After contact with skin, wash immediately with plenty of water and soap.

Take off contaminated clothing.

In case of skin irritation, consult a physician.

*** After eye contact**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Remove contact lenses, if possible



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* **Following ingestion**

Rinse mouth thoroughly with water.
If you feel nauseous, do not continue to drink, as vomiting can be dangerous.
If the substance has been swallowed and the affected person is conscious, drink small amounts of water.
Give small amounts of water to drink.
Medical treatment necessary.

* **Self-protection of the first aider**

First aider: Pay attention to self-protection!
If it is suspected that vapors are still present, the rescuer must wear a suitable respirator or a self-contained breathing apparatus

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

* **Symptoms**

Nausea
Redness, drying and cracking of the skin.
Cough
Dizziness
Headache
Dizziness

Effects

This information is not available.

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

* **Notes for the doctor**

Treat symptomatically.
In case of ingestion or inhalation of large quantities, contact specialist or Poison Control Center immediately.

* **SECTION 5: Firefighting measures**

* **5.1 Extinguishing media**

* **Suitable extinguishing media**

Use an extinguishing agent that is also suitable for adjacent fires.

* **Unsuitable extinguishing media**

This information is not available.

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

* **Hazardous combustion products**

In case of fire formation of dangerous gases possible.
Products of incomplete combustion, smoke, carbon monoxide and carbon dioxide (CO₂)
Extinguishing water contaminated with this substance must be contained and must not be allowed to enter waterways, sewers or drains.
Gas can accumulate in
accumulate in low-lying or enclosed areas or spread very far to a source of ignition to an ignition source and lead to a flashback with fire or explosion.
explosion.
This material is toxic to aquatic organisms and has long-term effects.
Pressure increases when heated or fire, and the container may burst.



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5.3 Advice for firefighters

Special protective equipment for firefighters

Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus.

* **Additional information**

Do not inhale explosion and combustion gases.
Co-ordinate fire-fighting measures to the fire surroundings.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

* **SECTION 6: Accidental release measures**

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

* **For non-emergency personnel**

Provide adequate ventilation.
If a large number of containers break, treat as a bulk spill in accordance with the instructions in the section on clean-up procedures.
Do not touch or walk on spilled substance.
Use personal protection equipment.
Remove all sources of ignition.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

* **For emergency responders**

Personal protection equipment

6.2 Environmental precautions

Do not allow to enter into surface water or drains.
In case of pollution of waters or sewers, inform the competent authorities.

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

* **For containment**

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).
Use spark-proof tools and explosion-proof devices.
Dilute with water and wipe up if water soluble.
Alternatively, or if insoluble in water, absorb with an inert dry material and place in a suitable waste container.
Disposal according to regulations.

* **For cleaning up**

Suitable material for diluting or neutralizing:
Water

* **6.4 Reference to other sections**

Emergency telephone number: see section 1
Disposal: see section 13
Personal protection equipment: see section 8

SECTION 7: Handling and storage



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7.1 Precautions for safe handling

Protective measures

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
 Handle and open container with care.
 Keep away from sources of ignition - No smoking.
 Vapours can form explosive mixtures with air.
 Take precautionary measures against static discharges.
 Avoid effect of heat.
 Do not spray against flames or glowing bodies.
 Container is under pressure.
 Avoid:
 Eye contact
 Skin contact
 Do not inhale aerosols

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff.
 Remove contaminated, saturated clothing immediately.
 Work in rooms with good ventilation.
 Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container.
 Keep container tightly closed.

Storage class

2B Aerosol dispensers and lighters

Materials to avoid

Do not store together with:
 Food and feedingstuffs

Further information on storage conditions

Store only in original container at temperature of 50°C maximum (=122°F).
 Keep container tightly closed in a cool, well-ventilated place.
 Protect from heat and direct solar radiation.

7.3 Specific end use(s)

Recommendation

See section 1.2

*** SECTION 8: Exposure controls/personal protection**

*** 8.1 Control parameters**

*** Occupational exposure limit values**

CAS No.	EC No.	Substance name	occupational exposure limit value
109-66-0	203-692-4	Pentane	1000 [ml/m ³ (ppm)] 3000 [mg/m ³] 2006/15/EC
109-66-0	203-692-4	n-Pentane	1000 [ml/m ³ (ppm)] (IE)
109-66-0	203-692-4	Pentane (all isomers)	1000 [ml/m ³ (ppm)] 3000 [mg/m ³] (IE)

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CAS No.	EC No.	Substance name	occupational exposure limit value
109-66-0	203-692-4	n-Pentane	600 [ml/m ³ (ppm)] 1800 [mg/m ³] (UK)

* **DNEL worker**

CAS No.	Substance name	DNEL value	DNEL type	Remark
109-66-0	pentane	432 mg/kg	long-term dermal (systemic)	
109-66-0	pentane	3003 mg/m ³	long-term inhalative (systemic)	

* **8.2 Exposure controls*** **Appropriate engineering controls*** **Remark**

Use closed process equipment, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below recommended or regulatory limits.
 The technical equipment must also keep the gas, vapor or dust concentrations below any lower explosion lower explosion limits.

* **Technical measures to prevent exposure**

Use explosion-proof ventilation system.

* **Personal protection equipment****Eye/face protection**

tightly fitting goggles

* **Hand protection**

Information on glove material: NBR (nitrile rubber), Thickness:> 0,4 mm, Breakthrough time (maximum wearing time):> 480 min.
 Breakthrough times and swelling properties of the material must be taken into consideration.
 It is recommended to check the chemical resistance of the specified protective gloves for special applications with the glove manufacturer.

* **Body protection:**

Light protective clothing, antistatic
 Chemical resistant safety shoes
 EN 1149

Respiratory protection

Respiratory protection necessary at:
 aerosol or mist formation
 Suitable respiratory protection apparatus:
 Short term: filter apparatus, filter AX

* **Environmental exposure controls*** **Technical measures to prevent exposure**

Exhaust air scrubber

* **Remark**

Avoid release into the environment.



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Additional information

The national and local legal regulations are to be observed.

*** SECTION 9: Physical and chemical properties**

*** 9.1 Information on basic physical and chemical properties**

Physical state

Aerosol

*** Colour**

This information is not available.

*** Odour**

This information is not available.

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:	not determined		
Melting point/freezing point	not determined		
Boiling point or initial boiling point and boiling range	not determined		
flammability			Extremely flammable in the presence of the following substances and conditions: open flames, sparks and electrostatic discharges
Lower and upper explosion limit	Upper explosion limit 10.9 Vol-%		
Lower and upper explosion limit	Lower explosion limit 1.4 Vol-%		
Flash point			Aerosol not applicable
Auto-ignition temperature	not determined		
Decomposition temperature	not determined		
pH	not determined		
Viscosity	not determined		
Solubility(ies)	Water solubility		Immiscible
Partition coefficient n-octanol/water (log value)	3.45		CAS No.109-66-0 pentane
Vapour pressure	6225.5 mm Hg (20°C)		
Density and/or relative density	approx. 0.61 g/mL (20°C)		
Relative vapour density	not determined		
particle characteristics	not determined		

*** 9.2 Other information**

No data available



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*** SECTION 10: Stability and reactivity**

10.1 Reactivity

This information is not available.

*** 10.2 Chemical stability**

The substance is chemically stable under recommended conditions of storage, use and temperature.

*** 10.3 Possibility of hazardous reactions**

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

High temperatures, ignition sources, incompatible materials
 Formation of explosive gas/air mixtures.

10.5 Incompatible materials

No data available

*** 10.6 Hazardous decomposition products**

No data available

*** SECTION 11: Toxicological information**

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

*** Acute toxicity**

*** Animal data**

	Effective dose	Method, Evaluation	Source, Remark
Acute oral toxicity	not determined		
Acute dermal toxicity	not determined		
Acute inhalation toxicity	CAS No.109-66-0 pentane Acute inhalation toxicity (vapour) LC50: 364 mg/m ³ Species Rat Exposure time 4 h		

*** Skin corrosion/irritation**

*** Assessment/classification**

Repeated exposure may cause skin dryness or cracking.

*** Serious eye damage/irritation**

*** Assessment/classification**

Irritating to eyes.

Sensitisation to the respiratory tract

Assessment/classification

No information available.

*** Skin sensitisation**

not determined



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* **Germ cell mutagenicity**

not determined

* **Carcinogenicity**

not determined

* **Reproductive toxicity**

not determined

STOT-single exposure

STOT SE 1 and 2

Other information

May cause drowsiness or dizziness.

STOT-repeated exposure

not determined

* **Aspiration hazard**

* **Assessment/classification**

ASPIRATION HAZARD - Category 1

* **Symptoms related to the physical, chemical and toxicological characteristics**

* **In case of ingestion**

May cause central nervous system (CNS) depression.

* **In case of skin contact**

Has degreasing effect on the skin.
 May cause dryness and irritation of the skin.

* **In case of inhalation**

May cause central nervous system (CNS) depression.

11.2 Information on other hazards

* **Other information**

Irritates eyes and skin.

* **SECTION 12: Ecological information**

* **12.1 Toxicity**

* **Aquatic toxicity**

	Effective dose	Method,Evaluation	Source, Remark
Acute (short-term) fish toxicity	not determined		
Chronic (long-term) fish toxicity	not determined		
Acute (short-term) toxicity to crustacea	not determined		
Chronic (long-term) toxicity to aquatic invertebrate	not determined		
Acute (short-term) toxicity to algae and cyanobacteria	not determined		
Chronic (long-term) toxicity to aquatic algae and cyanobacteria	not determined		



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	Effective dose	Method, Evaluation	Source, Remark
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	not determined		

*** 12.2 Persistence and degradability**

No data available

*** 12.3 Bioaccumulative potential**

	Value	Method	Source, Remark
Bioconcentration factor (BCF)	Bioconcentration factor (BCF) 171		CAS No.109-66-0 pentane

Assessment/classification

This information is not available.

12.4 Mobility in soil

Assessment/classification

This information is not available.

*** 12.5 Results of PBT and vPvB assessment**

Product does not contain any PBT / vPvB substances according to the formulation.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

*** Additional ecotoxicological information**

	Value	Method	Source, Remark
AOX			The product contains no organically bound halogens.

*** Additional information**

Do not allow uncontrolled discharge of product into the environment.
 Product is not allowed to be discharged into the ground water or aquatic environment.
 Product is not allowed to be discharged into aquatic environment, drains or sewage treatment plants.

*** SECTION 13: Disposal considerations**

*** 13.1 Waste treatment methods**

*** Waste codes/waste designations according to EWC/AVV**

Waste code product	Waste name
160504 *	gases in pressure containers (including halons) containing hazardous substances
Waste code packaging	Waste name
150104	metallic packaging

Appropriate disposal / Product

Dispose of waste according to applicable legislation.

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Appropriate disposal / Package

Dispose of according to official regulations.

*** SECTION 14: Transport information**

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN number or ID number	UN 1950	UN 1950	UN 1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS	Aerosols, flammable
14.3 Transport hazard class(es)	2.1	2.1	2.1
14.4 Packing group	-	-	-
14.5 Environmental hazards	ENVIRONMENTALLY HAZARDOUS	ENVIRONMENTALLY HAZARDOUS Marine pollutant	ENVIRONMENTALLY HAZARDOUS

14.6 Special precautions for user

This information is not available.

14.7 Maritime transport in bulk according to IMO instruments

No data available

*** Land transport (ADR/RID)**

UN number or ID number	UN 1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	2.1
Hazard label(s)	2.1
Classification code	5F
Packing group	-
Environmental hazards	ENVIRONMENTALLY HAZARDOUS
Limited quantity (LQ)	1 L
Special provisions	190, 327, 344, 625
Tunnel restriction code	D

*** Remark**

Labelling as an environmentally hazardous substance is not required if this substance is transported in quantities ≤5L or ≤5kgs.

*** Sea transport (IMDG)**

UN number or ID number	UN 1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	2.1
Packing group	-
Environmental hazards	ENVIRONMENTALLY HAZARDOUS
Limited quantity (LQ)	1 L
Marine pollutant	Yes.
EmS	F-D, S-U



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* **Remark**

Labelling as an environmentally hazardous substance is not required if this substance is transported in quantities $\leq 5L$ or $\leq 5kgs$.

Air transport (ICAO-TI / IATA-DGR)

UN number or ID number UN 1950
UN proper shipping name Aerosols, flammable
Transport hazard class(es) 2.1
Packing group -
Environmental hazards ENVIRONMENTALLY HAZARDOUS

* **SECTION 15: Regulatory information**

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

Other regulations (EU)

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive] VOC

VOC content, ready-to-use condition 94 %
VOC-value 569.6 g/L

* **15.2 Chemical Safety Assessment**

No data available

* **SECTION 16: Other information**

* **Indication of changes**

* Data changed compared with the previous version

* **Abbreviations and acronyms**

CLP: Classification, Labelling and Packaging
PBT: persistent and bioaccumulative and toxic
vPvB: very persistent, very bioaccumulative
AOX: Adsorbable Organic halogen compounds
CAS: Chemical Abstracts Service
DMEL: Derived Minimal Effect Level
DNEL: derived no-effect level
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods
JArbSchG: Youth Labor Protection Act (DE)
MuSchRiV: Maternity Protection Guideline Ordinance (DE)
OECD: Organisation for Economic Cooperation and Development
REACH: Registration, Evaluation and Authorization of Chemicals
WGK: water hazard class

* **Key literature references and sources for data**

Datasheets of the manufacturer



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Additional information

National and local regulations concerning chemicals shall be observed.

This safety data sheet complies with the requirements of Commission Regulation (EU) 2020/878 amending Regulation (EC) No 1907/2006.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Relevant H- and EUH-phrases (Number and full text)

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.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

*

Indication of changes

* Data changed compared with the previous version