

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

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

· 1.1 Product identifier

·Trade name: OPN-Aluminium Spray - high abrasion resistance -

· Article number: 63020

·Unique formula identifier (UFI): 0JHM-V5RP-Q00M-TQSD

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

No further relevant information available.

· Application of the substance / the mixture Coating compound/ Surface coating/ paint

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

OPN-CHEMIE GmbH

In der Au 14

57290 Neunkirchen

www.opn-chemie.de

· Further information obtainable from:

Barbara Angelika Gros-Petri

E-Mail (competent person) baerbel.petri@opn-chemie.de

· 1.4 Emergency telephone number:

Emergency information service Vergiftungs-Informations-Zentrale Freiburg +49 (0) 761 / 1 92 40

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



Eye Irrit. 2	H319	Causes serious eye irritation.
STOT SE 3	H336	May cause drowsiness or dizziness.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms





GHS02

GHS07

- · Signal word Danger
- · Hazard-determining components of labelling:

acetone

xylene

Hydrocarbons, C9, aromatics

n-butyl acetate

(Contd. on page 2)

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

(Contd. of page 1)

· Hazard statements

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

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use. P261 Avoid breathing vapours or spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

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

P501 Dispose of contents / container in accordance with national regulations of the disposal.

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

Buildup of explosive mixtures possible without sufficient ventilation.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.2 Mixtures
- · Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:		
CAS: 67-64-1 EINECS: 200-662-2 Reg.nr.: 01-2119471330-49-xxxx	acetone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	25-<50%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21-xxxx	propane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-<20%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32-xxxx	butane, pure Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-<20%
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29-xxxx	n-butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	5-<10%
CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27-xxxx	isobutane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	5-<10%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32-xxxx	xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	5-<10%
EC number: 918-668-5 Reg.nr.: 01-2119455851-35-xxxx	Hydrocarbons, C9, aromatics Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336	5-<10%

(Contd. on page 3)

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

	CAS: 108-65-6 EINECS: 203-603-9	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226	ontd. of page 2) 2.5-<5%
L	Reg.nr.: 01-2119475791-29-xxxx		
	EINECS: 231-072-3 Reg.nr.: 01-2119529243-45-xxxx	aluminium powder (stabilized) Flam. Sol. 2, H228; Water-react. 2, H261	2.5-<5%
	CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46-xxxx	ethyl acetate Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	2.5-<5%
_	· Additional information: For the wording of the listed hazard phrases refer to section 16.		

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· After inhalation:

Supply fresh air; consult doctor in case of complaints.

Take affected persons into fresh air and keep quiet.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Immediately remove any clothing soiled by the product.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: Do not induce vomiting; call for medical help immediately.
- \cdot 4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulty

Headache

Dizziness

Dizziness

Nausea

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

If swallowed or in case of vomiting, danger of entering the lungs.

Later observation for pneumonia and pulmonary oedema.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents:

Fire-extinguishing powder

Carbon dioxide

Use fire extinguishing methods suitable to surrounding conditions.

Foam

- 5.2 Special hazards arising from the substance or mixture Can form explosive gas-air mixtures.
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.
- · Additional information

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources.

(Contd. on page 4)

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

(Contd. of page 3)

· 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with skin and eyes.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Observe official regulations on storing packagings with pressurised containers.

- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Protect from heat and direct sunlight.
- \cdot 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.2 E	· 8.2 Exposure controls						
· Ingre	Ingredients with limit values that require monitoring at the workplace:						
CAS	67-64-1 acetone						
WEL	Short-term value: 3620 mg/m³, 1500 ppm Long-term value: 1210 mg/m³, 500 ppm						
CAS	106-97-8 butane, pure						
WEL	Short-term value: 1810 mg/m³, 750 ppm Long-term value: 1450 mg/m³, 600 ppm Carc (if more than 0.1% of buta-1.3-diene)						
CAS	123-86-4 n-butyl acetate						
WEL	Short-term value: 966 mg/m³, 200 ppm Long-term value: 724 mg/m³, 150 ppm						
CAS	1330-20-7 xylene						
WEL	Short-term value: 441 mg/m³, 100 ppm Long-term value: 220 mg/m³, 50 ppm Sk, BMGV						
CAS:	108-65-6 2-methoxy-1-methylethyl acetate						
WEL	Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm Sk						

(Contd. on page 5)

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

			(Contd. of page 4)
CAS: 14	1-78-6 etl	hyl acetate	
		value: 1468 mg/m³, 400 ppm value: 734 mg/m³, 200 ppm	
· DNELs			
CAS: 67-	-64-1 ace	tone	
Oral	DNEL	62 mg(kg (ME)	
Inhalative	DNEL	200 mg/m³ (ME)	
· Ingredie	nts with b	piological limit values:	
CAS: 13.	CAS: 1330-20-7 xylene		
BMGV (650 mmol	/mol creatinine	
1	Medium: 1	arine	
		time: post shift	
		: methyl hippuric acid	

- · Additional information: The lists valid during the making were used as basis.
- · **Appropriate engineering controls** No further data; see item 7.
- · Individual protection measures, such as personal protective equipment
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Not necessary if room is well-ventilated.

- · Recommended filter device for short term use: Filter AX
- · Hand protection



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Material of gloves

Butyl rubber, BR

Recommended thickness of the material: $\geq 0.7 \text{ mm}$

· Penetration time of glove material

≥60 min

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye/face protection



Tightly sealed goggles

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Physical state Aerosol

(Contd. on page 6)

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

(Contd. of page 5) · Colour: Silver-coloured · Odour: Solvent-like · Odour threshold: Not determined. · Melting point/freezing point: Undetermined. · Boiling point or initial boiling point and boiling range Not applicable, as aerosol. · Flammability Not applicable. · Lower and upper explosion limit · Lower: Not determined. · Upper: Not determined. · Flash point: Not applicable, as aerosol. · Ignition temperature: >200 °C \cdot Decomposition temperature: Not determined. Not determined. · pH · Viscosity: · Kinematic viscosity Not determined. · Dynamic: Not determined. · Solubility Not miscible or difficult to mix. · water: Not determined. · Partition coefficient n-octanol/water (log value) Not determined. · Vapour pressure: · Density and/or relative density · Density at 20 °C: 0.72527 g/cm3 Not determined. · Relative density Not determined. · Vapour density · 9.2 Other information · Appearance: · Form: Aerosol · Important information on protection of health and environment, and on safety. Auto-ignition temperature: Not determined. · Explosive properties: Not determined. · Solvent separation test: · Organic solvents: 93.1 % · VOC (EC) 675.2 g/l · Solids content: 0.0 % · Change in condition · Evaporation rate Not applicable. · Information with regard to physical hazard classes · Explosives Void · Flammable gases Void · Aerosols Extremely flammable aerosol. Pressurised container: May burst if heated. Void · Oxidising gases · Gases under pressure Void · Flammable liquids Void Void · Flammable solids · Self-reactive substances and mixtures Void · Pyrophoric liquids Void · Pyrophoric solids Void · Self-heating substances and mixtures Void · Substances and mixtures, which emit flammable gases in contact with water Void · Oxidising liquids Void · Oxidising solids Void · Organic peroxides Void

(Contd. on page 7)

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

Corrosive to metals
Desensitised explosives

Void
Void

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

- \cdot 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity

· LD/LC50 values relevant for classification:			
ATE (Acu	te Toxicit	y Estimates)	
Dermal	LD50	17,377 mg/kg	
Inhalative	LC50/4 h	174 mg/l	
CAS: 67-6	64-1 acetor	ne	
Oral	LD50	5,800 mg/kg (rat)	
Dermal	LD50	20,000 mg/kg (rabbit)	
Inhalative	LC50/4 h	~76 mg/l (rat)	
CAS: 74-9	8-6 propa	ne	
		>20 mg/l (rat)	
CAS: 106	-97-8 buta	ne, pure	
		658 mg/l (rat)	
CAS: 123	-86-4 n-bu	tyl acetate	
Oral	LD50	13,100 mg/kg (rat)	
Dermal	LD50	>5,000 mg/kg (rabbit)	
Inhalative	LC50/4 h	>21 mg/l (rat)	
	28-5 isobut		
Inhalative	LC50/4 h	658 mg/l (rat)	
CAS: 133	0-20-7 xyl	ene	
Oral	LD50	3,523 mg/kg (rat)	
Dermal	LD50	1,100 mg/kg (ATE)	
		11 mg/l (ATE)	
Hydrocar			
Oral	LD50	3,592 mg/kg (rat)	
Dermal	LD50	>3,160 mg/kg (rat)	
Inhalative	LC50/4 h	>6,193 mg/l (rat)	
CAS: 108		thoxy-1-methylethyl acetate	
Oral	LD50	8,532 mg/kg (rat)	
Dermal	LD50	>5,000 mg/kg (rat)	
		(Contd. on page 8)	

– GE

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

		(Contd. of page 7)
Inhalative	LC50/4 h	35.7 mg/l (rat)
CAS: 141-	78-6 ethyl	acetate
Oral	LD50	5,620 mg/kg (rabbit)
Dermal	LD50	>20,000 mg/kg (rat)
Inhalative	LC50/4 h	1,600 mg/l (rat)

- · Serious eye damage/irritation Causes serious eye irritation.
- · STOT-single exposure May cause drowsiness or dizziness.
- · Aspiration hazard May be fatal if swallowed and enters airways.
- · 11.2 Information on other hazards
- · Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- · 12.7 Other adverse effects
- · Remark: Harmful to fish
- · Additional ecological information:
- · General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information		
· 14.1 UN number or ID number	UN1950	
· ADR/RID/ADN, IMDG, IATA	UN1930	
· 14.2 UN proper shipping name		
· ADR/RID/ADN	UN1950 AEROSOLS	
· IMDG	AEROSOLS	
· IATA	AEROSOLS, flammable	
		(Contd. on

on page >

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

	(Contd. of page
· 14.3 Transport hazard class(es)	
· ADR/RID/ADN	
2	
· Class	2 5F Gases.
· Label	2.1 Gases.
· IMDG, IATA	
A	
2	
· Class · Label	2.1 Gases. 2.1
	2.1
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	Void
	VOIU
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code):	Warning: Gases.
· EMS Number:	F-D,S-U
· Stowage Code	SW1 Protected from sources of heat.
	SW22 For AEROSOLS with a maximum capacity of 1
	litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS:
	Category C, Clear of living quarters.
· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1
	litre:
	Segregation as for class 9. Stow "separated from" clas
	1 except for division 1.4. For AEROSOLS with a capacity above 1 litre:
	Segregation as for the appropriate subdivision of class
	2.
	For WASTE AEROSOLS:
	Segregation as for the appropriate subdivision of class 2.
1477 M - 22 4 4 - 1 - 1	·
 14.7 Maritime transport in bulk according to IM instruments 	Not applicable.
· Transport/Additional information:	TT
· ADR/RID/ADN · Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0
	Not permitted as Excepted Quantity
· Transport category	2 D
· Tunnel restriction code	D
· IMDG	11
Limited quantities (LQ)Excepted quantities (EQ)	1L Code: E0
Zincepreu quantitus (EQ)	Not permitted as Excepted Quantity
	(Contd. on page 1

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

(Contd. of page 9)

· UN "Model Regulation":

UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · Seveso category P3a FLAMMABLE AEROSOLS
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

· Relevant phrases

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H228 Flammable solid.
- H261 In contact with water releases flammable gases.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1A: Flammable gases – Category 1A

Aerosol 1: Aerosols - Category 1

Press. Gas (Comp.): Gases under pressure – Compressed gas

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

(Contd. on page 11)

Printing date 03.03.2022 Version number 27 (replaces version 26) Revision: 03.03.2022

Trade name: OPN-Aluminium Spray - high abrasion resistance -

(Contd. of page 10)

Flam. Sol. 2: Flammable solids – Category 2

Water-react. 2: Substances and mixtures which in contact with water emit flammable gases – Category 2 Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

Asp. Tox. 1: Aspiration hazard - Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3

* Data compared to the previous version altered.