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

- · 1.1 Product identifier
- · Trade name: MR® 511 Shot peening controller (Aerosol)
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Life cycle stages

F Formulation or re-packing

IS Use at industrial Sites

· Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

· Product category

PC9a Coatings and paints, thinners, paint removers

PC14 Metal surface treatment products

Process category

PROC7 Industrial spraying

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Environmental release category

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

- Article category AC7 Metal articles
- · Application of the substance / the mixture Coating material
- · 1.3 Details of the supplier of the safety data sheet

### Manufacturer/Supplier:

MR Chemie GmbH

Nordstr. 61-63

59427 Unna (Germany)

Tel. +49 (0)2303 95151 0

Fax: +49 (0)2303 95151 10

post@mr-chemie.de

www.mr-chemie.de

### · Further information obtainable from:

MR Chemie GmbH, Dep. safety data sheets, Tel.: +49/(0)2303/95151-38, QS@mr-chemie.de

### 1.4 Emergency telephone number:

24h- Emergency Contact Phone Number For Chemical Emergency, Spill, Leak, Fire, Exposure or

Accident (WISAG FMO Cargo Service GmbH & CO.KG)

Call Day or Night within USA and Canada: 1 800 424 9300

Outside USA and Canada: 001 703 527 3887

In-Country Emergency Number for:

Germany: 0800-181-7059

China: 4001 204937 (Mandarin)
Hong Kong: 800 968 793 (Cantonese)
India: 000 800 100 7141 (Hindi)
South Africa: 0 800 983 611 (English)

### **SECTION 2: Hazards identification**

### · 2.1 Classification of the substance or mixture

### · Classification according to Regulation (EC) No 1272/2008

The mixture is classified according to Regulation (EC) No 1272/2008 according to the most recent ATP.

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.

#### 2.2 Label elements

### · Labelling according to Regulation (EC) No 1272/2008

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

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### · Hazard pictograms





GHS02 GHS07

### · Signal word Danger

#### · Hazard-determining components of labelling:

acetone

#### · Hazard statements

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

H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

#### · 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.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents/container in accordance with local/regional/national/

international regulations.

### · Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

Buildup of explosive mixtures possible without sufficient ventilation.

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

### 2.3 Other hazards

- · Results of PBT and vPvB assessment
- PBT: Not applicable.vPvB: Not applicable.

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

#### · 3.2 Chemical characterisation: 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	30 - 40%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32- XXXX	butane (containing < 0,01 % butadiene (203-450-8)) Flam. Gas 1A, H220 Press. Gas (Comp.), H280	10 - 20%
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%

(Contd. on page 3)

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Trade name: MR® 511 Shot peening controller (Aerosol)

		(Contd. of page 2)
CAS: 78-93-3	butanone	≥ 10 - < 20%
EINECS: 201-159-0	Flam. Lig. 2, H225	1
Reg.nr.: 01-2119457290-43-	Eye Irrit. 2, H319; STOT SE 3, H336	
XXXX		

· Propellant: Propane-Butane

· Additional information:

Wording of the listed hazard phrases are indicated in section 16 and relate to individual raw components.

### **SECTION 4: First aid measures**

- · 4.1 Description of first aid measures
- · General information:

Take affected persons out into the fresh air.

Immediately remove any clothing soiled by the product.

- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eve contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

- After swallowing: Not relevant aerosol can.
- · Information for doctor:

Grease with skin-cream to restore fat film in order to prevent skin inflammation.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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

No further relevant information available.

### **SECTION 5: Firefighting measures**

· 5.1 Extinguishing media

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

- 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

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

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

Wear protective equipment. Keep unprotected persons away.

- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to section 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.

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See Section 13 for disposal information.

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

- · 7.1 Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
- Information about fire and explosion protection:

Do not spray onto a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

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

Protect against electrostatic charges.

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

Store in a cool location.

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.
- · Recommended storage temperature: 5 45°C, 41 113 °F
- 7.3 Specific end use(s) No further relevant information available.

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

- · 8.1 Control parameters
- · Additional information about design of technical facilities: No further data; see section 7.

· Ingredients with lin	nit values that require monitoring at the wo	rkplace:
67-64-1 acetone		
IOELV (EU)	Long-term value: 1210 mg/m³, 500 ppm	
WEL (Great Britain)	Short-term value: 3620 mg/m³, 1500 ppm Long-term value: 1210 mg/m³, 500 ppm	
AGW (Germany)	Long-term value: 1200 mg/m³, 500 ppm 2(I);DFG, EU	
78-93-3 butanone		
IOELV (EU)	Short-term value: 900 mg/m³, 300 ppm Long-term value: 600 mg/m³, 200 ppm	
WEL (Great Britain)	Short-term value: 899 mg/m³, 300 ppm Long-term value: 600 mg/m³, 200 ppm Sk, BMGV	
AGW (Germany)	Long-term value: 600 mg/m³, 200 ppm 1(I);DFG, EU, H, Y	
74-98-6 propane		
AGW (Germany)	Long-term value: 1800 mg/m³, 1000 ppm 4(II);DFG	
106-97-8 butane (co	ontaining < 0,01 % butadiene (203-450-8))	
WEL (Great Britain)	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)	
AGW (Germany)	Long-term value: 2400 mg/m³, 1000 ppm 4(II);DFG	
		(Contd. on page 5)

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			(Contd. of pa
DNELs			
67-64-1 ad			
Dermal	Long-term	- systemic effects, worke	r 186 mg/kg bw/day (worker)
Inhalative	Long-term	- systemic effects, worke	r 1,210 mg/m³ (worker)
	Long-term	- local effects, worker	2,420 mg/m³ (worker)
78-93-3 bi	utanone		
Dermal	Long-term	- systemic effects, worke	r 1,161 mg/kg bw/day (worker)
Inhalative	Long-term	- systemic effects, worke	r 600 mg/m³ (worker)
DNEL (De	rived No E	ffect Level) for the gene	eral population
67-64-1 ad	cetone		
Oral	Long term population		eneral 62 mg/kg bw/day (general population)
Dermal	Long term population		eneral 62 mg/kg bw/day (general population)
Inhalative	Long ter population	m - local effects, ge	eneral 200 mg/m³ (general population)
78-93-3 bi	utanone		•
Oral	Long term population		eneral 31 mg/kg bw/day (general population)
Dermal	Long term population		eneral 412 mg/kg bw/day (general population)
Inhalative		n - systemic effects, g	eneral 106 mg/m³ (general population)
PNECs			
67-64-1 ad	cetone		
Aquatic co	mpartment	- freshwater	10.6 mg/L (freshwater)
Aquatic co	mpartment	- marine water	1.06 mg/L (marine water)
Aquatic co	mpartment	- sediment freshwater	30.4 mg/kg sed dw (sediment fresh water)
Aquatic co	mpartment	- sediment marine water	3.04 mg/kg sed dw (sediment marine water)
			29.5 mg/kg dw (soil)
78-93-3 bi			
Aquatic co	mpartment	- freshwater	55.8 mg/L (sediment fresh water)
-	-	- marine water	55.8 mg/L (marine water)
•	•	- sediment freshwater	284.74 mg/kg sed dw (sediment fresh water)
•	•		284.7 mg/kg sed dw (sediment marine water)
Terrestrial	compartme	ent - soil	22.5 mg/kg dw (soil)
	ndary poiso		1,000 mg/kg food (secundary poisoning (food))
		logical limit values:	
67-64-1 ac		304: 74:400:	
BGW (Ge		80 mg/l	
2011 (06)	many)	Untersuchungsmaterial:	Urin Expositionsende bzw. Schichtende
			(Contd. on pa

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	(Contd. of page 5
78-93-3 butanone	
BMGV (Great Britain)	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one
BGW (Germany)	5 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Parameter: 2-Butanon

· Additional information: The lists valid during the making were used as basis.

### · 8.2 Exposure controls

· 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 and skin.

#### Respiratory protection:

Filter AX-P2

For good ventilation provide, this can be achieved by local or space exhaust. If the concentration lies over the job limit values, then, a certified respirator suitable for this purpose must be used.

#### Protection of hands:

Check the permeability prior to each anewed use of the glove.

For the protection against chemicals in areas with heightened risk of injury (mechanical hazard) no recommendation for a suitable glove material can be given.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### · Material of gloves

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Recommended thickness of the material:  $\geq 0.5 \text{ mm}$ 

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### Penetration time of glove material

Value for the permeation: Level  $\leq 4$ 

Supplier for suitable protection gloves:

ASD ArbeitsSicherheit Dortmund

Torstr. 101 - 37355 Niederorschel OT Rüdigershagen

Tel.: 02301 / 919543 - Fax: 02301 / 9453893

E-Mail: m.schnellhardt@t-online.de - http://www.arbeitssicherheitdortmund.de

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

### · Eye protection:



Tightly sealed goggles

· Body protection: Protective work clothing

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<ul> <li>9.1 Information on basic physical and ch</li> </ul>	iemicai bi	operties
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· General Information

· Appearance:

Form: Aerosol

**Colour:** white, fluorescent under UV-light

Odour: CharacteristicOdour threshold: Not determined.pH-value: Not determined.

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Not applicable, as aerosol.

· Flash point: -80 °C

Basis: propellant

· Flammability (solid, gas): Not applicable.

• Auto-ignition temperature: Not determined - aerosol.

· **Decomposition temperature:** Not determined.

Ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of

explosive air/vapour mixtures are possible.

Not determined.

· Explosion limits:

**Lower:** 1.5 Vol % **Upper:** 13 Vol %

· Vapour pressure at 20 °C: 8,300 hPa

Basis: propellant

· Density at 20 °C: 0.97 g/cm<sup>3</sup>

Basis: active substance

Relative densityVapour densityNot determined.Not determined.

• Evaporation rate Not applicable.

· Solubility in / Miscibility with

water: Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

**Dynamic:** Not determined. **Kinematic:** Not determined.

· Solvent separation test:

 Organic solvents:
 82.5 %

 VOC (EU)
 82.54 %

• **9.2 Other information** No further relevant information available.

### **SECTION 10: Stability and reactivity**

· 10.1 Reactivity No further relevant information available.

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- · 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided:

Danger of bursting of the aerosol can during overheating

- · 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**

- 11.1 Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50	· LD/LC50 values relevant for classification:			
67-64-1 a	67-64-1 acetone			
Oral	LD50	5,800 mg/kg (rat)		
Dermal	LD50	20,000 mg/kg (rbt)		
106-97-8	106-97-8 butane (containing < 0,01 % butadiene (203-450-8))			
Inhalative	LC50/4 h	658 mg/l (rat)		
78-93-3 b	78-93-3 butanone			
Oral	LD50	3,300 mg/kg (rat)		
Dermal	LD50	5,000 mg/kg (rbt)		

- Primary irritant effect:
- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation

Causes serious eye irritation.

- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · General remarks:
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure

May cause drowsiness or dizziness.

- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

### **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.
- · Additional ecological information:
- · General notes:

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

Water hazard class 1: weakly water-endangering

- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

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• 12.6 Other adverse effects No further relevant information available.

### **SECTION 13: Disposal considerations**

- · 13.1 Waste treatment methods
- · Recommendation

Eliminate the pure, unchanged substance in accordance with local regulations.

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

· Waste disposal key:

For this product no waste key number can be specified, because only the intended purpose permits an allocation. The waste key number is to be specified in arrangement with the regional waste disposal.

The indications for Waste key reflect the pure unmodified product and are only a recommendation.

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

٠	14.1	<b>UN-Number</b>	r
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· ADR, IMDG, IATA UN1950

· 14.2 UN proper shipping name

· ADR 1950 AEROSOLS AEROSOLS

· IATA AEROSOLS, flammable

· 14.3 Transport hazard class(es)

· ADR



· Class 2 5F Gases.

· Label 2.1

· IMDG, IATA



· Class 2.1 Gases.

· Label 2.1

· 14.4 Packing group

· ADR, IMDG, IATA Void

· 14.5 Environmental hazards:

· Marine pollutant: No

• 14.6 Special precautions for user Warning: Gases.

· Hazard identification number (Kemler code): -

· EMS Number: F-D,S-U

• Stowage Code SW1 Protected from sources of heat.

SW2 Clear of living quarters.

· Segregation Code SG69 For AEROSOLS with a maximum capacity

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	of 1 litre: Segregation as for class 9. Stow "separated from" class 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.
· 14.7 Transport in bulk according to Ar of Marpol and the IBC Code	nnex II Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	1L Code: E0 Not permitted as Excepted Quantity 2 D
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN1950, 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
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- · National regulations:
- · Waterhazard class: Water hazard class 1: slightly hazardous for water.
- · VOC (EU) 800.6 q/l
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### **SECTION 16: Other information**

#### Relevant phrases

The wording of the listed risk phrases are those of the individual raw materials.

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

### Recommended restriction of use

Existing national and local laws concerning chemicals are to be considered.

### Department issuing SDS:

MR Chemie GmbH, Dep. safety data sheets, Tel.: +49/(0)2303/95151-38

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### · Contact:

MR Chemie GmbH, Dep. safety data sheets, Tel.: +49/(0)2303/95151-38, QS@mr-chemie.de

### Abbreviations and acronyms:

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 (UK REACH)

PNEC: Predicted No-Effect Concentration (ÚK 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

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

\* Data compared to the previous version altered.