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

. 1.1 Product identifier

RS-Spray . Trade name: . Article number: 5140-1092

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

No further relevant information available.

. Application of the substance / the

Attachment for dental instruments mixture

. 1.3 Details of the supplier of the safety data sheet

Hager & Meisinger GmbH . Manufacturer/Supplier:

Hansemannstrasse 10

41468 Neuss

Telefon: +49(0)2131/20 12 - 0 Telefax: +49(0)2131/20 12 - 222 e-mail: info@meisinger.de

. Further information obtainable

QMB: Frau Wiebke Eckhardt

. 1.4 Emergency telephone

Advice centre for poisoning university Mainz phone +49(0)6131/19240 number:

or poison information:+49(0)700/GIFTINFO

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.

. 2.2 Label elements

. Labelling according to Regulation

(EC) No 1272/2008

. Hazard pictograms

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



GHS02 GHS07

Signal word

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

H319 Causes serious eye irritation.

P102 . Precautionary statements Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other

ignition sources. No smoking.

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

P251 Do not pierce or burn, even after use. P264 Wash thoroughly after handling. Wear eye protection / face protection. P280

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

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

P337+P313 If eye irritation persists: Get medical advice/attention.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50

°C/122 °F.

. Additional information: Buildup of explosive mixtures possible without sufficient ventilation.

2.3 Other hazards

. Results of PBT and vPvB assessment

. PBT: Not applicable. Not applicable. . vPvB

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Active substance with propellant

. Description.	Notive Substance with properlant	
. Dangerous compone	ents:	
CAS: 106-97-8	butane (containing ≤ 0,1 % butadiene (106-99-0))	25 – 50%
EINECS: 203-448-7	♦ Flam. Gas 1, H220; ♦ Press. Gas C, H280	
CAS: 109-87-5	dimethoxymethane	10 – 25%
EINECS: 203-714-2	♦ Flam. Liq. 2, H225	
CAS: 67-64-1	acetone	10 – 25%
EINECS: 200-662-2	🅸 Flam. Liq. 2, H225; 🤨 Eye Irrit. 2, H319; STOT SE 3, H336	
CAS: 74-98-6	propane	10 – 25%
EINECS: 200-827-9	🅸 Flam. Gas 1, H220; ❖ Press. Gas C, H280	
CAS: 75-28-5	isobutane (containing ≤ 0,1 % butadiene (106-99-0))	< 2.5%
EINECS: 200-857-2	🍪 Flam. Gas 1, H220; 📀 Press. Gas C, H280	

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. 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

. General information: Immediately remove any clothing soiled by the product.

Take affected persons out of danger area and lay down.

Position and transport stably in side position.

. After inhalation: Supply fresh air; consult doctor in case of complaints. . After skin contact: Wash with water and soap and rinse thoroughly

If skin irritation continues, consult a doctor.

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

. After swallowing: Seek immediate medical advice.

A person vomiting while laying on their back should be turned onto their side.

. 4.2 Most important symptoms and effects, both acute and

delaved

No further relevant information available.

4.3 Indication of any immediate medical attention and special

No further relevant information available. treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

. For safety reasons unsuitable

extinguishing agents: Water in the ful ray

5.2 Special hazards arising from

the substance or mixture 5.3 Advice for firefighters Formation of toxic gases is possible during heating or in case of fire.

. Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

. 6.1 Personal precautions, protective equipment and

emergency procedures

Keep away from ignition sources.

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

Do not get in eyes, on skin, or on clothing.

. 6.2 Environmental precautions: Do not allow product to reach sewage system or any water course.

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

. 6.3 Methods and material for

. 6.4 Reference to other sections

containment and cleaning up:

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents 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

Keep away from heat and direct sunlight.

Information about fire - and

explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

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

. 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:

Store away from foodstuffs.

Do not store together with oxidising and acidic materials.

. Further information about storage

conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight. No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about

. 7.3 Specific end use(s)

design of technical facilities: No further data; see item 7.

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Trade name: RS-Spray (Contd. of page 2) 8.1 Control parameters . Ingredients with limit values that require monitoring at the workplace: CAS: 106-97-8 butane (containing ≤ 0,1 % butadiene (106-99-0)) 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: 109-87-5 dimethoxymethane WEL Short-term value: 3950 mg/m³, 1250 ppm Long-term value: 3160 mg/m³, 1000 ppm CAS: 67-64-1 acetone WEL Short-term value: 3620 mg/m³, 1500 ppm Long-term value: 1210 mg/m³, 500 ppm **DNELs** CAS: 109-87-5 dimethoxymethane DNEL Long-term - systemic effects 18.1 mg/kg bw/day (general (Allgemeinbevölkerung)) Dermal DNEL Long-term - systemic effects 18.1 mg/kg bw/day (general (Allgemeinbevölkerung)) 17.9 mg/kg bw/day (employee / Arbeitnehmer) Inhalative DNEL Long-term - systemic effects 31.5 mg/m³ (general (Allgemeinbevölkerung)) 126.6 mg/m³ (employee / Arbeitnehmer) CAS: 67-64-1 acetone Oral DNEL Long-term - systemic effects 62 mg/kg bw/day (general (Allgemeinbevölkerung)) Dermal DNEL Long-term - systemic effects 62 mg/kg bw/day (general (Allgemeinbevölkerung)) 186 mg/kg bw/day (Workers (Arbeitnehmer)) 2,420 mg/m³ (Workers (Arbeitnehmer)) Inhalative | DNEL Acute - local effects DNEL Long-term - systemic effects 200 mg/m³ (general (Allgemeinbevölkerung)) 1,210 mg/m³ (Workers (Arbeitnehmer)) CAS: 73398-61-5 Glycerides, mixed decanoyl and octanoyl DNEL Long-term - systemic effects 12.61 mg/kg bw/day (general (Allgemeinbevölkerung)) Oral Dermal DNEL Long-term - systemic effects 12.61 mg/kg bw/day (general (Allgemeinbevölkerung)) 25.21 mg/kg bw/day (Workers (Arbeitnehmer)) 43.84 mg/m³ (general (Allgemeinbevölkerung)) Inhalative | DNEL Long-term - systemic effects 177.79 mg/m³ (Workers (Arbeitnehmer)) **PNECs** CAS: 109-87-5 dimethoxymethane PNEC Soil (Boden) 4.65 mg/kg PNEC fresh water sediment (Süßwassersediment) 13.135 mg/kg PNEC fresh water (Süßwasser) 14.5 mg/l PNEC marine water sediment 1.3135 mg/kg **PNEC Marine water** 1.48 mg/l CAS: 67-64-1 acetone PNEC Soil (Boden) 29.5 mg/kg () PNEC fresh water sediment (Süßwassersediment) 30.4 mg/kg () PNEC fresh water (Süßwasser) 10.6 mg/l () PNEC marine water sediment 14 mg/kg () **PNEC Marine water** 1.06 mg/l() PNEC-STP 100 mg/l () . Additional information: The lists valid during the making were used as basis. . 8.2 Exposure controls . Personal protective equipment: General protective and hygienic

Avoid close or long term contact with the skin. measures:

Do not eat or drink while working.

Wash hands before breaks and at the end of work.

. Respiratory protection: . Protection of hands: Use suitable respiratory protective device in case of insufficient ventilation.

Solvent resistant gloves

Protective gloves

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

preparation.

Due to missing tests no recommendation to the glove material can be given for the

product/ the preparation/ the chemical mixture.

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

and the degradation Nitrile rubber, NBR

. Material of gloves 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.

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. Penetration time of glove material Value for the permeation: Level ≤ 0,7 mm 480min (8h) EN374

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective

gloves and has to be observed. Tightly sealed goggles

. Eye protection:

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

. Appearance: Form:

Aerosol Colour: Colourless Odour: Characteristic Odour threshold: Not determined . pH-value: Not determined.

. Change in condition

Initial boiling point and boiling range: -44.5 °C Flash point: -97 °C

. Flammability (solid, gas): Not applicable

235 °C . Ignition temperature: . Decomposition temperature: Not determined.

. Auto-ignition temperature: Product is not selfigniting.

. Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are

possible.

. Explosion limits: Lower:

1.5 Vol % Upper: 17.6 Vol % 8,300 hPa

Vapour pressure at 20 °C: Density at 20 °C: 0.726 g/cm³ Relative density Not determined Vapour density Not determined. Evaporation rate Not applicable.

. Solubility in / Miscibility with

Not miscible or difficult to mix. Not determined.

Partition coefficient: n-octanol/water:

Viscosity: Not determined

Dynamic:

Solvent content: Organic solvents: Water:

0.0 % VOC (EC) 97.5 % 44.1 % Solids content:

9.2 Other information No further relevant information available

96.4 %

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 . 10.5 Incompatible materials: No further relevant information available.

. 10.6 Hazardous decomposition products:

No further relevant information available.

Hazardous thermal decomposition products may include: Formaldehyde, Carbon dioxide, Carbon monoxide, Methanol

SECTION 11: Toxicological information

. 11.1 Information on toxicological effects

Based on available data, the classification criteria are not met. Acute toxicity

. LD/LC50 values relevant for classification:

CAS: 109-87-5 dimethoxymethane

Oral LD50 6,453 mg/kg (rat)

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		(Contd. of page 4	.)
Dermal	LD50	> 5,000 mg/kg (rabbit)	1
CAS: 67-64-1 acetone			1
Oral	LD50	5,800 mg/kg (rat)	1
Dermal	LD50	> 15,688 mg/kg (rabbit)	
Inhalative	LC50/4h	76 mg/l (rat)	
CAS: 73398-61-5 Glycerides, mixed decanoyl and octanoyl			1
Oral	LD50	> 5,000 mg/kg (rat)	1
Dermal	LD50	> 2,000 mg/kg (rat)	

. Primary irritant effect:

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation

CAS: 67-64-1 acetone

Schwere Augenschädigung/-reizung (rabbit) (Acute Eye Irritation/Corrosion)

Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Based on available data, the classification criteria are not met. Germ cell mutagenicity 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 Based on available data, the classification criteria are not met. 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

	. IZIT TOXION			
	. Aquatic toxicity:			
ſ	CAS: 106-97-8 butane (containing ≤ 0,1 % butadiene (106-99-0))			
ſ	EC50 (96h) 7.71 mg/l (Algae)			
	LC50 (96h) 27.98 mg/l (Fisch)			
Ī	CAS: 109-87-5 dimethoxymethane			
ſ	EC50 (48h) > 1,000 mg/l (daphnia magnia/gr. Wasserfloh)			
	LC50 (96h) > 1,000 mg/l (Brachydanio rerio)			
Ī	CAS: 67-64-1 acetone			
ſ	EC50 (48h) > 100 mg/l (daphnia magnia/gr. Wasserfloh) (Daphnia sp. Acute Immobilisation Test)			
	EC50 (96h) 8,300 mg/l (Lepomis macrochirus)			
1	7,500 mg/l (Selenastrum capricornutum)			
İ	LC50 (96h) 7,500 mg/l (Leuciscus idus (Goldorfe))			
İ	6,500 mg/l (Oncorhynchus mykiss)			
	8,120 mg/l (Pimephales promelas (fettköpf. Ellritze)) (Fish, Acute Toxicity Test)			
ſ	CAS: 74-98-6 propane			
Γ	EC50 (96h) 7.71 mg/l (Algae)			
	LC50 (96h) 27.98 mg/l (Fisch)			
CAS: 73398-61-5 Glycerides, mixed decanoyl and octanoyl				
г	CCO (49h) > 400 mg/l (Dagudamanaa nutida) (Mikraarganiaman/Mikrung auf Balahtaahlamm)			

EC0 (18h) > 100 mg/l (Pseudomonas putida) (Mikroorganismen/Wirkung auf Belebtschlamm)

> 100 mg/l (daphnia magnia/gr. Wasserfloh) EC50 > 100 mg/l (Scenedesmus subspicatus)

LC50 (72h) > 100 mg/l (Brachydanio rerio) (Fish, Acute Toxicity Test)

CAS: 75-28-5 isobutane (containing ≤ 0,1 % butadiene (106-99-0))

EC50 (96h) 7.71 mg/l (Algae) LC50 (96h) 27.98 mg/l (Fisch)

12.2 Persistence and degradability

CAS: 109-87-5 dimethoxymethane

Biodegradability 30d 88 %

CAS: 67-64-1 acetone

Biodegradability 81 - 92 % (aerob) ((Derterm. of the "Ready" Biodegr. Closed Bottle))

12.3 Bioaccumulative potential

CAS: 67-64-1 acetone

Log Kow 0.24

12.4 Mobility in soil

. Additional ecological information: . General notes:

No further relevant information available.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

. 12.5 Results of PBT and vPvB assessment

. PBT: Not applicable.

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. vPvB: Not applicable. (Contd. of page 5)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

. 12.6 Other adverse effects

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

No further relevant information available.

sewage system.

. European waste catalogue

HP3 Flammable

. Uncleaned packaging:

. Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

. 14.1 UN-Number

UN1950 ADR, IMDG, IATA

. 14.2 UN proper shipping name

. ADR 1950 AEROSOLS . IMDG **AEROSOLS** AEROSOLS, flammable . IATA

. 14.3 Transport hazard class(es)

. ADR



2 5F Gases. Class . Label

2.1

. IMDG, IATA



Class 2.1

. Label

14.4 Packing group

. ADR, IMDG, ĬĂTA Void

. 14.5 Environmental hazards:

Marine pollutant:

14.6 Special precautions for user Danger code (Kemler): Warning: Gases.

. EMS Number:

. 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:

No

Category B. For WASTE AEROSOLS: Category C, Clear of

living quarters. SG69 For AEROSOLS with a maximum capacity of 1 litre: . Segregation Code

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 Annex II of Marpol and

the IBC Code Not applicable.

. Transport/Additional information:

. ADR

Limited quantities (LQ) 11

 Excepted quantities (EQ) Code: E0 Not permitted as Excepted Quantity

Transport category

Tunnel restriction code D

. Limited quantities (LQ)

Excepted quantities (ÉQ) Code: E0

Not permitted as Excepted Quantity

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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

Qualifying quantity (tonnes) for the

application of upper-tier requirements

REGULATION (EC) No 1907/2006

ANNEX XVII

15.2 Chemical safety

assessment:

Conditions of restriction: 3

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.

. Department issuing SDS: Environment protection department.

500 t

QMB Helmut Pötgen . Contact:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning . Abbreviations and acronyms:

the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

IMDS: 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)
PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic

PB1: Persistent, Bloaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1: Flammable gases – Category 1
Aerosol 1: Aerosols – Category 1
Press. Gas C: 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.