

SAFETY DATA SHEET

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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English Translation Of German SDS

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

1.1. Product identifier

Product form : Mixture
Trade name : Scan´ spray black & white
Product code : 500990
SDS Number : 1471
Vaporizer : Aerosol
Product use : Coating material for the optical impression or for medical use

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only
Use of the substance/mixture : Auxiliary for manufacture of dental prothesis

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Dentaco GmbH & Co.KG
Max-Keith-Str. 46
45136 Essen
Deutschland
Tel.: + 49 (0) 201/ 8098290
Fax: + 49 (0) 201/ 80982999
Internet: www.dentaco.de ; info@dentaco.de
E-Mail: HSE@rle.de

1.4. Emergency telephone number

+ 49 (0) 201/ 8098290 (Mo. - Fr. 09:00 - 17:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Physical hazards Aerosol, Category 3 H229 Pressurised container: May burst if heated.

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Pressurised container: May burst if heated.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008

Signal word Warning

Hazard statements

H229 Pressurised container: May burst if heated.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 Do not pierce or burn, even after use.

Storage

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

2.3. Other hazards

Component

1,1,1,2,2,3,3,3-heptafluoropropane (431-89-0) This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS- No EC- No Index No RRN	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Notes
1,1,1,2,2,3,3,3-heptafluoropropane	431-89-0 207-079-2 01-2119485489-18-XXXX	90 - < 100	Press. Gas (Comp.), H280	

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects: : None known.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder.
Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Explosion hazard : Pressurised container: May burst if heated.
Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide. Nitrogen oxides.

5.3. Advice for firefighters

Precautionary measures fire : Evacuate area. In case of fire and/or explosion do not breathe fumes. Do not dispose of fire-fighting water in the environment.
Firefighting instructions : In case of fire and/or explosion do not breathe fumes. On heating, there is a risk of bursting due to internal pressure build-up. Cool down the containers exposed to heat with a water spray.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Keep unnecessary personnel away.

6.1.1. For non-emergency personnel

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Avoid breathing dust, mist or spray. No flames, no sparks. Eliminate all sources of ignition. Provide adequate ventilation. Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Move containers from fire area if it can be done without personal risk.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Do not breathe vapours. Ensure adequate air ventilation. Observe good industrial hygiene practices.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Contents under pressure.

Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place. Keep cool.

Packaging materials : Keep only in the original container in a cool, well-ventilated place away from combustible materials.

Storage class (LGK, TRGS 510) : LGK 2B - Aerosol dispensers and lighters

7.3. Specific end use(s)

For medical use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

1,1,1,2,3,3,3-heptafluoropropane (431-89-0)

DNEL/DMEL (Workers)

Long-term - systemic effects, inhalation 61279 mg/m³

DNEL/DMEL (General population)

Long-term - systemic effects, inhalation 6533 mg/m³

PNEC (Water)

PNEC aqua (freshwater) 0.1 mg/l

PNEC aqua (intermittent, freshwater) 1 mg/l

PNEC (Sediment)

PNEC sediment (freshwater) 1.3 mg/kg dwt

PNEC (STP)

PNEC sewage treatment plant 1.73 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

The recommendation is only valid for the supplied product and the stated application. Special working conditions, like heat or mechanical strain, which deviate from the test conditions, can reduce the protective effect provided by the recommended glove

Material	Permeation	Thickness (mm)	Comments
Butyl rubber	6 (> 480 minutes)	0,6	EN ISO 374
Viton	6 (> 480 minutes)	0,6	EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Grey.
Appearance	: Aerosol.
Odour	: Characteristic.

Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: -16 – -18 °C
Flammability	: Not available
Explosive properties	: Pressurised container: May burst if heated.
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not applicable
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Log Kow	: Not available
Vapour pressure	: 4000 – 4500 hPa 20°C
Vapour pressure at 50°C	: Not available
Density	: 1.4 g/cm ³
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

% of flammable ingredients : 0 %

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Pressurised container: May burst if heated.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Based on available data, the classification criteria are not met

Acute toxicity (dermal)	: Based on available data, the classification criteria are not met
Acute toxicity (inhalation)	: Based on available data, the classification criteria are not met
Skin corrosion/irritation	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met
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	: 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

Scan´ spray black & white	
Vaporizer	Aerosol

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

1,1,1,2,3,3,3-heptafluoropropane (431-89-0)

Biodegradation	1 % OECD 301 D
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12.3. Bioaccumulative potential

1,1,1,2,3,3,3-heptafluoropropane (431-89-0)

Log Pow	2.289
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

1,1,1,2,3,3,3-heptafluoropropane (431-89-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII. This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.
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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Disposal must be done according to official regulations. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation. This material and its container must be disposed of in a safe manner.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Do not pierce or burn, even after use. Empty containers should be taken to an approved waste handling site for recycling or disposal. Disposal must be done according to official regulations.

European List of Waste (LoW) code : 16 05 05 - gases in pressure containers other than those mentioned in 16 05 04
15 01 10* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR) : UN 1950
UN-No. (IMDG) : UN 1950
UN-No. (IATA) : UN 1950
UN-No. (ADN) : UN 1950
UN-No. (RID) : UN 1950

14.2. UN proper shipping name

Proper Shipping Name (ADR) : AEROSOLS
Proper Shipping Name (IMDG) : AEROSOLS
Proper Shipping Name (IATA) : Aerosols, non-flammable
Proper Shipping Name (ADN) : AEROSOLS
Proper Shipping Name (RID) : AEROSOLS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 2.2
Danger labels (ADR) : 2.2

IMDG

Transport hazard class(es) (IMDG) : 2.2
Danger labels (IMDG) : 2.2

IATA

Transport hazard class(es) (IATA) : 2.2
Hazard labels (IATA) : 2.2

ADN

Transport hazard class(es) (ADN) : 2.2
Danger labels (ADN) : 2.2

RID

Transport hazard class(es) (RID) : 2.2
Danger labels (RID) : 2.2

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available.

14.6. Special precautions for user

Overland transport

Classification code (ADR) : 5A
Special provisions (ADR) : 190, 327, 344, 625
Limited quantities (ADR) : 1I
Packing instructions (ADR) : P207
Tunnel restriction code (ADR) : E

Transport by sea

Special provisions (IMDG)	: 63, 190, 277, 327, 344, 959
Limited quantities (IMDG)	: SP277
Packing instructions (IMDG)	: P207, LP02
EmS-No. (Fire)	: F-D
EmS-No. (Spillage)	: S-U
Stowage category (IMDG)	: None

Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Y203
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 203
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 203
CAO max net quantity (IATA)	: 150kg
Special provisions (IATA)	: A98, A145, A167, A802
ERG code (IATA)	: 2L

Inland waterway transport

Classification code (ADN)	: 5A
Special provisions (ADN)	: 190, 327, 344, 625
Limited quantities (ADN)	: 1 L

Rail transport

Special provisions (RID)	: 190, 327, 344, 625
Limited quantities (RID)	: 1L
Packing instructions (RID)	: P207, LP200
Hazard identification number (RID)	: 20

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)

Reference code	Applicable on
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3(a)	Scan´ spray black & white
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Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Other information, restriction and prohibition regulations : 1,1,1,2,3,3,3-Heptafluoropropane (R-227ea), CAS No : 431-89-0 is exempted from the prohibition of mixtures containing fluorinated greenhouse gases in accordance with REGULATION (EU) No 517/2014 as it is used for medical applications.

Directive 2012/18/EU (SEVESO III)

Seveso Additional information : Not applicable.

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Category : 5.2.5 Organic Substances

The total mass flow and total mass concentration shall not exceed the following values:

Mass flow: 0.5 kg/h or Mass concentration: 50 mg/m³

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Section 1 - Section 16. ANNEX II.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
SDS	Safety Data Sheet
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative
OEL	Occupational Exposure Limit
RRN	REACH Registration no.
CAO	Cargo Aircraft Only
PCA	Passenger and Cargo Aircraft
CAO	Cargo Aircraft only
PCA	PASSENGER AND CARGO AIRCRAFT
TWA	Time Weighted Average. The average concentration of a chemical in air over the total exposure time-usually an 8-hour workday.
VOC	Volatile organic compounds

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements

Aerosol 3	Aerosol, Category 3
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
Press. Gas (Comp.)	Gases under pressure : Compressed gas

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Aerosol 3	H229
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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.