## 1. Identification of the substance / Preparation and Company: *

| | | |
|---|---|---|
| 1.1 | Product identifier | |
| | Tradename: | HinriScan-Spray Plus |
| 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: | Flatting agent, Matting agent |
| 1.3 | Details of the supplier of the safety data sheet | |
| | Manufacturer/Supplier: | ERNST HINRICHS Dental GmbH |
| | Street / mailbox: | Borsigstr. 1 |
| | Country code. / postal code / city: | D - 38644 Goslar |
| | Phone: | 0 53 21 / 5 06 24 |
| | Fax: | 0 53 21 / 5 08 81 |
| | E-mail / Website: | info@hinrichs-dental.de / www.hinrichs-dental.de |
| | Further information obtainable from: | ERNST HINRICHS Dental GmbH |
| 1.4 | Emergency telephone number | |
| | ERNST HINRICHS Dental GmbH: | +49 (0) 53 21 / 5 06 24 - 25 (Mon-Fri. 8 a.m. – 4 p.m.) |

## 2. Hazards Identification: *

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS02 flame

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

| | |
|---|---|
| Signal word: | Danger. |
| Hazard statements: | |
| H222-H229 | Extremely flammable aerosol. Pressurised container: May burst if heated. |
| H412 | Harmful 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. |
| P251 | Do not pierce or burn, even after use. |
| P273 | Avoid release to the environment. |
| 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: | Keep out of the reach of children |

2.3 Other hazards:

| | |
|---|---|
| Results of PBT and vPvB assessment: | PBT: Not applicable.<br>vPvB: Not applicable |

## 3. Composition/ information on ingredients *

Chemical characterization: Mixtures

Description: Mixture of substances listed below with non-hazardous additions.

Dangerous components:

| | | |
|---|---|---|
| CAS: 75-28-5<br>EINECS: 200-857-2 | isobutane<br>  Flam. Gas 1, H220; Press. Gas, H280 | 50-100% |
| CAS: 64-17-5<br>EINECS: 200-578-6 | ethanol<br>  Flam. Liq. 2, H225 | 10-25% |
| CAS: 109-66-0<br>EINECS: 203-692-4 | pentane<br>  Flam. Liq. 2, H225;  Asp. Tox. 1, H304;  Aquatic Chronic 2, H411;  STOT SE 3, H336 | 2,5-5 % |

Additional information: For the wording of the listed risk phrases refer to section 16.

## 4. First aid measures:

4.1 Description of first aid measures
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: If symptoms persist consult doctor.

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.

## 5. Fire Fighting measures: *

5.1 Extinguishing media
Suitable extinguishing agents: $CO_2$, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 For safety reasons unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture: No further relevant information available.

5.3 Advice for firefighters
Protective equipment: Do not inhale explosion gases or combustion gases.

## 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: 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.

## 7. Handling and Storage: *

7.1 Handling:
Precautions for safe handling: Keep away from heat and direct sunlight. Use only in well ventilated areas. Open and handle receptacle with care.
Information about fire - and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

7.2 Storage:

| | |
|---|---|
| Requirements to be met by storerooms and receptacles: | Store in a cool location.<br>Observe official regulations on storing packagings with pressurized containers. |
| Information about storage in one common storage facility: | Not required. |
| Further information about storage conditions: | Keep container tightly sealed.<br>Do not seal receptacle gas tight.<br>Store in cool, dry conditions in well, sealed receptacles.<br>Protect from heat and direct sunlight. |

7.3 Specific end use(s): No further relevant information available.

## 8. Exposure controls / Personal protection: *

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

8.1 Control parameters:

| Ingredients with limit values that require monitoring at the workplace: | |
|---|---|
| **64-17-5 ethanol** | |
| WEL | Long-term value: 1920 mg/m³, 1000 ppm |
| 109-66-0 pentane | |
| WEL | Long-term value: 1800 mg/m³, 600 ppm |

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

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures: Wash hands before breaks and at the end of work.

Respiratory protection: Not necessary if room is well-ventilated.

Protection of hands: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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´t be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable:
Nitrile rubber, NBR
Butyl rubber, BR
Natural rubber, NR

Eye protection:

Tightly sealed goggles

## 9. Physical and chemical properties: *

9.1 Information on basic physical and chemical properties

General information:

Appearance:

| | |
|---|---|
| Form: | Aerosol |
| Colour: | Whitish |
| Odour: | Characteristic |
| Odour threshold: | Not determined. |
| pH-value: | Not determined. |

| | | |
|---|---|---|
| 9.2 | Change in condition: | |
| | Melting point / Melting range: | Undetermined. |
| | Boiling point / Boiling range: | -11°C |
| | Flash point: | Not applicable, as aerosol. |
| | Flammability (solid, gaseous): | Not applicable. |
| | Ignition temperature: | 460°C |
| | Decomposition temperature: | Not determined. |
| | Auto-ignition temperature: | Product is not self-igniting. |
| | Explosive properties: | Not determined. |
| | Explosion limits: | |
| | Lower: | 1,8 Vol % ( Isobutan ) |
| | Upper: | 8,5 Vol % ( Isobutan ) |
| | Vapour pressure at 20°C: | 3000 hPa |
| | Density at 20°C: | 0,64 g/cm³ |
| | Relative density | Not determined. |
| | Vapour density | 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 applicable.<br>Not determined. |
| | Kinematic: | Not applicable.<br>Not determined. |
| | Solvent content: | 21.8 9% |
| | Organic solvents: | 90 % |
| | VOC (EC) | |
| | Solids content: | 8.0 % |
| | Other information | No further relevant information available. |

## 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. |

## 11. Toxicological Information: *

| | | |
|---|---|---|
| 11.1 | Information on toxicological effects | |
| | Acute toxicity: | Based on available data, the classification criteria are not met. |
| | Primary irritant effect: | |
| | 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. |
| | 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: | 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. |

## 12. Ecological Information:

| | | |
|---|---|---|
| 12.1 | Toxicity | |
| | Aquatic toxicity: | No further relevant information available. |
| 12.2 | Persistence and degradability: | The single components are biodegradable. |
| 12.3 | Bioaccumulative potential: | No further relevant information available. |
| 12.4 | Mobility in soil: | No further relevant information available. |
| | Additional ecological information: | |
| | General notes: | Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.<br>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. |
| | vPvB: | Not applicable. |
| 12.6 | Other adverse effects: | No further relevant information available. |

## 13. Disposal Considerations: *

| | | |
|---|---|---|
| 13.1 | Waste treatment methods | Must not be disposed together with the household garbage. |
| | Recommendation | Do not allow product to reach sewage system. |
| 13.2 | European waste catalogue: | |

| | |
|---|---|
| 16 00 00 | WASTES NOT OTHERWISE SPECIFIED IN THE LIST. |
| 16 05 00 | Gases in pressure containers and discarded chemicals. |
| 16 05 04 | Gases in pressure containers (including halons) containing dangerous substances. |

| | | |
|---|---|---|
| 13.3 | Uncleaned packaging – Recommendation: | Disposal must be made according to official regulations. |

## 14. Transport Information: *

| | | |
|---|---|---|
| 14.1 | UN-Number | |
| | ADR, IMDG, IATA | UN1950 |
| 14.2 | UN proper shipping name | |
| | ADR: | 1950 AEROSOLS |
| | IMDG: | AEROSOLS |
| | IATA: | AEROSOLS, flammable |
| 14.3 | Transport hazard class(es) | |
| | ADR | |


| | |
|---|---|
| Class: | 2 5F Gases. |
| Label: | 2.1 |
| IMDG, IATA | |


| | |
|---|---|
| Class: | 2.1 |
| Label: | 2.1 |
| 14.4 Packaging group | |
| ADR, IMDG, IATA: | Void |
| 14.5 Environmental hazards | |
| Marine pollutant: | No. |
| 14.6 Special precautions for user: | Warning Gases. |
| Danger code Kemmler: | - |
| EMS Number: | F-D,S-U |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | Not applicable. |
| Transport / Additional information: | |

| | |
|---|---|
| ADR | |
| Excepted quantities (EQ): | E0 |
| Limited quantities (LQ): | 1L |
| Excepted quantities (EQ): | Code: E0 Not permitted as Excepted Quantity |
| Transport category: | 2 |
| Tunnel restriction code: | D |
| IMDG | |
| Limited quantities (LQ): | 1L |
| Excepted quantities (EQ): | Code: E0 Not permitted as Excepted Quantity |
| UN „Model Regulation“: | UN1950, AEROSOLS**,** 2.1 |

## 15. Regulatory Information: *

| | | |
|---|---|---|
| 15.1 | Labelling according to Regulation (EC) No. 1272/2008: | The product is classified and labelled according to the CLP regulation. |
| | Labelling according to Regulation (EC) No 1272/2008: | GHS label elements |
| | 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 | |
| | REGULATION (EC) No 1907/2006 ANNEX XVII: | Conditions of restriction: 3 |
| 15.2 | Chemical Safety Assessment: | A Chemical Safety Assessment has not been carried out. |

## 16. Further 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.

16.1 Relevant phrases:

| | |
|---|---|
| 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. |

16.2 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). |
| IATA-DGR: | Dangerous Goods Regulations by the “International Air Transport Association”. |
| ICAO: | International Civil Aviation Organization. |
| ICAO-TI: | Technical Instructions by the “International Civil Aviation Organization”. |
| ADR: | Accord européen sur le transport 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 Harmonized 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). |
| PBT: | Persistent, Bioaccumulative 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 |
| STOT SE 3: | Specific target organ toxicity (single exposure) – Category 3 |
| 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.