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

1.1. Product identifier

FINOSCAN Spray 2

Article numbers: 55556/ 55558

Further trade names

ISOBUTANE
ALCOHOL

Product code: 55556

CAS No: 75-28-5

Index No: 601-004-00-0

EC No: 200-857-2

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

Use of the substance/mixture

Auxiliary for dental technology

Uses advised against

No further relevant information available.

1.3. Details of the supplier of the safety data sheet

Company name: FINO GmbH
Street: Mangelsfeld 18
Place: D-97708 Bad Bocklet
Telephone: +49-97 08-90 94 20
Telefax: +49-97 08-90 94 21
e-mail: info@fino.com
Internet: www.fino.com
Contact person: Joachim Mahlmeister
Telephone: +49-97 08-90 94 20

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Aerosol: Aerosol 1
Hazard Statements:
Extremely flammable aerosol.
Pressurised container: May burst if heated.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

isobutane

Signal word: Danger

Pictograms:

Hazard statements

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

Precautionary statements

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.
P211 Do not spray on an open flame or other ignition source.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling of certain mixtures

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.
Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

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

2.3. Other hazards

Results of PBT and vPvB assessment not applicable.
Heating causes rise in pressure with risk of bursting.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture from the below listed substances with harmless additives.

Sum formula: C4-H10
Molecular weight: 58,12 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
75-28-5	isobutane			50-100 %
	200-857-2	601-004-00-0		
	Flam. Gas 1; H220			
64-17-5	ethanol, ethyl alcohol			10-25 %
	200-578-6	603-002-00-5		
	Flam. Liq. 2; H225			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No special measures are necessary.

After inhalation

Provide fresh air.
Seek medical attention if problems persist.

After contact with skin

The product is not skin irritating.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart.
In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water.
Seek medical attention if problems persist.

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

Suitable extinguishing media

Carbon dioxide (CO_2), Extinguishing powder
In case of major fire and large quantities: Water spray jet, alcohol resistant foam

Unsuitable extinguishing media

High power water jet, Water

5.2. Special hazards arising from the substance or mixture

No information available.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Keep away from unprotected people. Keep upwind.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Provide adequate ventilation.
Do not flush with water or watery cleaning agents

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Treat the recovered material as prescribed in the section on waste disposal. Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Protect from heat and direct sunlight.
Ensure good ventilation / exhaustion at the workplace.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.

Further information on handling

Handle and open container with care.
Use only in well-ventilated areas.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.
Observe official regulations on storing packagings with pressurized containers.

Advice on storage compatibility

Not required.

Further information on storage conditions

Keep container tightly closed.
Do not keep the container sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

Betriebssicherheitsverordnung (BetrSichV) Flammable aerosol.

7.3. Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

Additional advice on limit values

The lists valid during the making were used as basis.

8.2. Exposure controls




Appropriate engineering controls

See chapter 7. No additional measures necessary.

Protective and hygiene measures

The usual precautionary measures are to be adhered to when handling chemicals.
When using do not eat, drink, smoke, sniff.
Wash hands before breaks and after work.
Avoid contact with skin, eyes and clothes.
Do not breathe gas/fumes/vapour/spray.

Eye/face protection

Tightly sealed safety glasses.

Hand protection

Hand protection: not required.
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.
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.
The precise time of rupture can be found out from the manufacturer of the protective gloves and must be observed.
Recommended glove articles: NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber), NR (natural rubber, natural latex)

Skin protection

lab coat

Respiratory protection

Respiratory protection necessary at: insufficient ventilation

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	colourless
Odour:	characteristic

		Test method
pH-Value:	not determined	
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	- 11 °C	
Softening point:	not applicable	
Flash point:	Not applicable, as aerosol.	
Sustaining combustion:	No data available	
Flammability		
Solid:	not determined	
Explosive properties		
not explosive. However, formation of explosive air/vapour mixtures are possible.		
Lower explosion limits:	1,8 vol. %	
Upper explosion limits:	15,0 vol. %	
Ignition temperature:	460 °C	
Auto-ignition temperature		
Solid:	Product is not selfigniting.	
Decomposition temperature:	not determined	
Vapour pressure: (at 20 °C)	3000 hPa	

Density (at 20 °C):	0,64 g/cm³
Bulk density:	not determined
Water solubility:	Immiscible
Partition coefficient:	not determined
Viscosity / dynamic:	---
Vapour density:	not determined
Evaporation rate:	not determined
Solvent content:	Organic solvents: 9,0% Maximum VOC content: 94%

9.2. Other information

Solid content:	6%

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

No specific if used according to specifications.

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.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol, ethyl alcohol				
	oral	LD50 6200 mg/kg	Rat	IUCLID	
	inhalative (4 h) vapour	LC50 95,6 mg/l	Rat	RTECS	

Irritation and corrosivity

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

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Specific effects in experiment on an animal

Toxicological analyses are not available.

Additional information on tests

Based on our experiences and information the product does not cause harmful health effects if handled according to specifications and used according to indications.

Practical experience

Observations relevant to classification

No special precautionary measures.

Other observations

No special references.

SECTION 12: Ecological information

12.1. Toxicity

Don't let flow into the ground water, in waters or the sewage system undiluted resp. in larger quantities.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
64-17-5	ethanol, ethyl alcohol					
	Acute crustacea toxicity	EC50 9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	

12.2. Persistence and degradability

The single components are biodegradable.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
75-28-5	isobutane	2,8
64-17-5	ethanol, ethyl alcohol	-0,31

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No effects known.

Further information

Water hazard class (WGK) slightly hazardous to water (WGK 1)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Must not be disposed together with household garbage.
Do not allow to enter into surface water or drains.

Waste disposal number of waste from residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances Classified as hazardous waste.

Waste disposal number of used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances Classified as hazardous waste.

Contaminated packaging

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1950

14.2. UN proper shipping name: AEROSOLS isobutane

14.3. Transport hazard class(es): 2

14.4. Packing group: -

Hazard label: 2.1

Classification code: 5F

Special Provisions: 190 327 344 625

Limited quantity: 1 L

Excepted quantity: E0

Transport category: 2

Tunnel restriction code: D

Other applicable information (land transport)

E0

Inland waterways transport (ADN)

14.1. UN number: UN 1950

14.2. UN proper shipping name: AEROSOLS isobutane

14.3. Transport hazard class(es): 2

14.4. Packing group: -

Hazard label: 2.1

Classification code: 5F

Special Provisions: 190 327 344 625

Limited quantity: 1 L

Excepted quantity: E0

Other applicable information (inland waterways transport)

E0

Marine transport (IMDG)

14.1. UN number: UN 1950

14.2. UN proper shipping name: AEROSOLS

14.3. Transport hazard class(es): 2.1

14.4. Packing group: -

Hazard label: 2.1

Special Provisions: 63, 190, 277, 327, 344, 959

Limited quantity: 1000 mL

Excepted quantity: E0

EmS: F-D, S-U

Other applicable information (marine transport)

E0

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1950

14.2. UN proper shipping name: AEROSOLS, flammable

14.3. Transport hazard class(es): 2.1

14.4. Packing group: -

Hazard label: 2.1

Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

Other applicable information (air transport)

AEROSOLS

14.6. Special precautions for user

Warning: Aerosols

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No special precautionary measures.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 28: isobutane

Information according to 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS
Additional information:	P3a

Additional information

The product is classified and labelled according to EC directives or corresponding national laws.

National regulatory information

Water contaminating class (D): - - not water contaminating

Additional information

Betriebssicherheitsverordnung (BetrSichV) Flammable aerosol.

No further data.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

* Data changed compared with the previous version

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" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
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)
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)