

SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1. Product identifier

FINOSCAN Scan Spray 1
 Article numbers: 55554
Further trade names
 ISOBUTANE
 ALCOHOL
 Product code: 55554
 Product group: organische Gase
 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	Uses advised against
Auxiliary for manufacture of dental prothesis	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.
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.
P260	Do not breathe Aerosols.
P271	Use only outdoors or in a well-ventilated area.
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.

Special labelling of certain mixtures

Keep out of the reach of children.
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.
Do not pierce or burn, even after use.
8,5 % by mass of the contents are flammable.

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

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	
	GHS Classification			
75-28-5	isobutane			50-100 %
	200-857-2	601-004-00-0		
	Flam. Gas 1; H220			
109-66-0	pentane			2,5-5,0 %
	203-692-4	601-006-00-1		
	Flam. Liq. 2, Asp. Tox. 1, STOT SE 3, Aquatic Chronic 2; H225 H304 H336 H411 EUH066			

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 flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

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

Treat symptomatically.

SECTION 5: Firefighting measures
5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Extinguishing powder

In case of major fire and large quantities: Water spray jet, alcohol resistant foam

Unsuitable extinguishing media

Not known.

5.2. Special hazards arising from the substance or mixture

No information available.

5.3. Advice for firefighters

Do not inhale explosion and combustion gases.

In case of fire: Wear self-contained breathing apparatus. Full protection suit

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures

Keep out of reach of children.

Use personal protection equipment.

Keep unprotected persons away.

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.

6.4. Reference to other sections

No dangerous materials are released.

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

Ensure good ventilation / exhaustion at the workplace.

Handle and open container with care.

Protect from heat and direct sunlight.

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

No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels

Keep/Store only in original container.

Observe official regulations on storing packagings with pressurized containers.

Hints on joint storage

No special measures are necessary.

Further information on storage conditions

Keep in a cool place.

Heating causes rise in pressure with risk of bursting.

Betriebssicherheitsverordnung (BetrSichV) ---

7.3. Specific end use(s)

Auxiliary for manufacture of dental prothesis

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
109-66-0	Pentane	600	1800		TWA (8 h)	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.

Wash hands before breaks and after work.

Do not breathe gas/vapour/aerosol.

Eye/face protection

Tightly sealed safety glasses.

Hand protection

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 Butyl caoutchouc (butyl rubber) FKM (fluoro rubber)

Skin protection

Body protection: not required.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	whitish
Odour:	characteristic

	Test method
pH-Value:	not determined
Changes in the physical state	
Melting point:	not determined
Initial boiling point and boiling range:	-11,7 °C
Softening point:	not applicable
Melting point/freezing point:	-159,4 °C
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:	8,5 vol. %
Ignition temperature:	460 °C

Auto-ignition temperature

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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:	not determined
Viscosity / kinematic:	not determined
Vapour density:	not determined
Evaporation rate:	not applicable
Solvent content:	Organic solvents: -,-% Maximum VOC content: 95 %

9.2. Other information

Solid content:	< 5 %
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SECTION 10: Stability and reactivity
10.1. Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Intense heating.

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

No decomposition if used and stored according to specifications.

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
109-66-0	pentane				
	inhalation (4 h) vapour	LC50 364 mg/l	Rat	GESTIS	

Irritation and corrosivity

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

Following skin contact Cooling effect in the spray area.

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
75-28-5	isobutane					
	Acute fish toxicity	LC50 mg/l	27,98	96 h		
	Acute algae toxicity	ErC50 mg/l	7,71	96 h		
109-66-0	pentane					
	Acute crustacea toxicity	EC50 mg/l	9,74	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
109-66-0	pentane	3,39

12.4. Mobility in soil

Respective data are not 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 sewers/surface or ground water.

Waste disposal number of waste from residues/unused products

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

Waste disposal number of contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information
Land transport (ADR/RID)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
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
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, 381,959
 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)
 E0

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

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 3: pentane

Entry 28: isobutane

2010/75/EU (VOC): 100 % (640 g/l)

2004/42/EC (VOC): 100 % (640 g/l)

Information according to 2012/18/EU P3a FLAMMABLE AEROSOLS

(SEVESO III):

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): 1 - slightly 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)
 VOC: Volatile Organic Compounds (USA, EU)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Gas. 1: Flammable gases, Hazard Category 1
 Aerosol 1: Aerosole, Hazard Category 1
 Press. Gas Comp: Gases under pressure - compacted gas
 Flam. Lig. 2: Flammable liquids, Hazard Category 2
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 Asp. Tox. 1: Aspiration hazard, Hazard Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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.
 H304 May be fatal if swallowed and enters airways.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.
 EUH066 Repeated exposure may cause skin dryness or cracking.

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.

Identified uses

No	Short title	SU main	SU	PC	PROC	ERC	AC	Specification
1	Flammable gases	-	0	0	16	4	0	11

SU main: Main user groups

PC: Product categories

ERC: Environmental release categories

SU: Sectors of use

PROC: Process categories

AC: Article categories

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