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

1.1. Product identifier

Model Spray 1736 0000

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

Use of the substance/mixture

Model Spray for model casting

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Company name:	Renfert GmbH		
Street:	Untere Giesswiesen 2		
Place:	D-78247 Hilzingen		
Telephone:	+49 7731 8208-0	Telefax:	+49 7731 8208-70
e-mail:	info@renfert.com		
Contact person:	Frau Andris	Telephone:	+49 7731 8208-927
e-mail:	silke.andris@renfert.com		
Internet:	www.renfert.com		

Importer: Ivoclar Vivadent Pty Ltd
1- 5 Overseas Drive Noble Park North VIC 3174
Tel: + 61 3 9795 9599 Fax: + 61 3 9795 9645
Email: info@ivoclarvivadent.com

1.4. Emergency telephone number:

13 11 26
Poisons Hotline (24 hours / 7 days)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Aerosol: Aerosol 1
Serious eye damage/eye irritation: Eye Irrit. 2
Specific target organ toxicity - single exposure: STOT SE 3
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Extremely flammable aerosol.
Pressurised container: May burst if heated.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

ethyl acetate
n-butyl acetate

Signal word: Danger

Pictograms:

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Surface hardener (acrylic resins)

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
106-97-8	butane			20 - 30 %
	203-448-7	601-004-00-0		
	Flam. Gas 1; H220			
115-10-6	dimethyl ether			10 - 20 %
	204-065-8	603-019-00-8		
	Flam. Gas 1; H220			
141-78-6	ethyl acetate			10 - 20 %
	205-500-4	607-022-00-5	01-2119475103-46	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
123-86-4	n-butyl acetate			10 - 20 %
	204-658-1	607-025-00-1	01-2119485493-29	
	Flam. Liq. 3, STOT SE 3; H226 H336 EUH066			
74-98-6	propane			1 - 10 %
	200-827-9	601-003-00-5		
	Flam. Gas 1; H220			
75-28-5	isobutane			1 - 10 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1; H220			
67-64-1	acetone			1 - 10 %
	200-662-2	606-001-00-8	01-2119471330-49	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
68920-06-9	Hydrocarbons C7-9			0,5 - 1%
	920-750-0			
	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H336 H304 H411			
92128-66-0	Hydrocarbons C6-7			0,5 - 1%
	926-605-8			
	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H335 H304 H411			
110-82-7	cyclohexane			1 - 10%
	203-806-2	601-017-00-1		
	Flam. Liq. 2, Asp. Tox. 1, Skin Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H225 H304 H315 H336 H400 H410			
110-54-3	n-hexane			< 0,5%
	203-777-6	601-037-00-0		
	Flam. Liq. 2, Repr. 2, Asp. Tox. 1, STOT RE 2, Skin Irrit. 2, STOT SE 3, Aquatic Chronic 2; H225 H361f *** H304 H373 ** H315 H336 H411			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air.

In case of respiratory tract irritation, consult a physician.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.
In case of skin irritation, consult a physician.

After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

After ingestion

Rinse mouth. When in doubt or if symptoms are observed, get medical advice.

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

The following symptoms may occur: Vapours may cause drowsiness and dizziness. Processing vapours can irritate the respiratory tracts, skin and eyes. Repeated exposure may cause skin dryness or cracking.

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 (CO_2), Extinguishing powder, Sand

Unsuitable extinguishing media

Water

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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

Use personal protection equipment.
Remove all sources of ignition.
Provide adequate ventilation.

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

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. If handled uncovered, arrangements with local exhaust ventilation should be used if possible.
Keep away from sources of ignition - No smoking.
Avoid contact with eyes and skin.

Advice on protection against fire and explosion

Vapours can form explosive mixtures with air.
Pressurised container: May burst if heated. 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. Do not pierce or burn, even after use.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place.

Further information on storage conditions

Protect against: Heat, UV-radiation/sunlight
Heating causes rise in pressure with risk of bursting.

7.3. Specific end use(s)

Please refer to our internet website for more information: www.renfert.com

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
67-64-1	Acetone	500	1210		TWA (8 h)	WEL
		1500	3620		STEL (15 min)	WEL
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL
123-86-4	Butyl acetate	150	724		TWA (8 h)	WEL
		200	966		STEL (15 min)	WEL
110-82-7	Cyclohexane	100	350		TWA (8 h)	WEL
		300	1050		STEL (15 min)	WEL
115-10-6	Dimethyl ether	400	766		TWA (8 h)	WEL
		500	958		STEL (15 min)	WEL
141-78-6	Ethyl acetate	200	-		TWA (8 h)	WEL
		400	-		STEL (15 min)	WEL
110-54-3	n-Hexane	20	72		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

8.2. Exposure controls

Appropriate engineering controls

Safe handling: see section 7

Protective and hygiene measures

Provide adequate ventilation.
Avoid contact with skin, eyes and clothes.
Wash hands before breaks and after work.

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
Suitable material: Butyl caoutchouc (butyl rubber)
Thickness of the glove material: >= 0,4 mm
Breakthrough time: >= 60 min
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Respiratory protection

If handled uncovered, arrangements with local exhaust ventilation have to be used.
Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	colourless
Odour:	characteristic
pH-Value:	not applicable

Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not applicable

Flash point:		- 60 °C

Explosive properties

not explosive.
Vapours can form explosive mixtures with air.

Lower explosion limits:		1,2 vol. %
Upper explosion limits:		18,6 vol. %
Ignition temperature:		235 °C
Decomposition temperature:		not determined
Vapour pressure: (at 20 °C)		4000 hPa
Density (at 20 °C):		0,68 g/cm³
Water solubility:		Immiscible
Partition coefficient:		not determined
Viscosity / dynamic:		not determined
Viscosity / kinematic:		not determined
Evaporation rate:		not determined
Solvent content:	ca. 91 - 93 %	

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapours can form explosive mixtures with air.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

10.4. Conditions to avoid

In case of warming: Danger of bursting container.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

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
106-97-8	butane				
	inhalative (4 h) gas	LC50 273000 ppm	Rat	GESTIS	
141-78-6	ethyl acetate				
	oral	LD50 > 2000 mg/kg	Rat		
	dermal	LD50 > 2000 mg/kg	Rabbit		
	inhalative (4 h) vapour	LC50 > 20 mg/l	Rat		
123-86-4	n-butyl acetate				
	oral	LD50 > 10000 mg/kg	Rat		OECD 423 (calculated.)
	dermal	LD50 > 10000 mg/kg	Rabbit		OECD 402
67-64-1	acetone				
	oral	LD50 5800 mg/kg	Rat	RTECS	
	dermal	LD50 20000 mg/kg	Rabbit	IUCLID	
	inhalative (4 h) vapour	LC50 76 mg/l	Rat		

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: 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

May cause drowsiness or dizziness. (ethyl acetate; n-butyl acetate; acetone)

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

Aspiration hazard

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

Further information

The product has not been tested. The statement is derived from the properties of the single components.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
67-64-1	acetone						
	Acute fish toxicity	LC50	5540 mg/l	96 h	Onchorhynchus mykiss		
	Acute crustacea toxicity	EC50	6100 mg/l	48 h	Daphnia magna (Big water flea)		
110-54-3	n-hexane						
	Acute fish toxicity	LC50	2,5 mg/l	96 h	Pimephales promelas	Geiger et al. 1990	

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
106-97-8	butane	2,89
115-10-6	dimethyl ether	0,1
74-98-6	propane	2,36
75-28-5	isobutane	2,8
67-64-1	acetone	-0,24
110-54-3	n-hexane	3,9

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information

The product has not been tested. The statement is derived from the properties of the single components. Do not allow uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Consult the appropriate authorities about waste disposal.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1950
14.2. UN proper shipping name: DRUCKGASPACKUNGEN
14.3. Transport hazard class(es): 2

Marine transport (IMDG)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1

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

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Further information: see section 6, 7, 8

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

not applicable

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: butane; isobutane
Entry 57: cyclohexane

2004/42/EC (VOC): 92,7 %

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 2 - clearly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
ethyl acetate
n-butyl acetate
isobutane
acetone

SECTION 16: Other information

Changes

Abs. 13, 14, 15, 16 * Data changed compared with the previous version

Abbreviations and acronyms

CAS: Chemical Abstracts Service (division of the American Chemical Society)
LD50: lethal dose, 50%
LC50: lethal concentration, 50%
EC50: half maximal effective concentration
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement concernant le transport international ferroviaire de marchandises Dangereuses (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
VOC: volatile organic compound(s)

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Eye Irrit. 2; H319	Bridging principle "Aerosols"
STOT SE 3; H336	Bridging principle "Aerosols"
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
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 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.
Restricted to professional users.

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