

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

die:master spacer varnish

Revision date: 12.11.2020

Product code: 19560x00_AUS_IV

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

die:master spacer varnish

Further trade names

1956 0100 die:master gray
1956 0200 die:master red
1956 0300 die:master blue
1956 0400 die:master silver
1956 0500 die:master gold
1956 0800 die:master Set red
1956 0900 die:master Set blue
1956 1000 die:master Set gold/silver

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

One-pack coating

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Company name: Renfert GmbH
Street: Untere Giesswiesen 2
Place: D-78247 Hilzingen
Telephone: +49 7731 8208-0
e-mail: info@renfert.com
Internet: www.renfert.com

Telefax: +49 7731 8208-70

Supplier

Company name: Ivoclar Vivadent Pty. Ltd.
Street: 1-5 Overseas Drive
Place: - Noble Park North VIC 3174
Telephone: + 61 3 9795 9599

Telefax: + 61 3 9795 9645

1.4. Emergency telephone number: 131 126 (Poisons Information Centre - 24 hours / 7 days)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:
Flammable liquid: Flam. Liq. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Specific target organ toxicity - single exposure: STOT SE 3
Specific target organ toxicity - single exposure: STOT SE 3
Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

butanone
pentan-3-one
n-butyl acetate

Signal word: Danger**Pictograms:****Hazard statements**

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.



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H336 May cause drowsiness or dizziness.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves and eye/face protection.
P337+P313 If eye irritation persists: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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**

One-pack coating

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
78-93-3	butanone			20 - 55%
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
96-22-0	pentan-3-one			5 - 35%
	202-490-3	606-006-00-5	01-2119531111-60	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3, STOT SE 3; H225 H319 H335 H336 EUH066			
123-86-4	n-butyl acetate			5 - 20%
	204-658-1	607-025-00-1	01-2119485493-29	
	Flam. Liq. 3, STOT SE 3; H226 H336 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**

Remove contaminated, saturated clothing immediately.

After inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

After contact with skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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 immediately and drink plenty of water. 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**Extinguishing powder, Carbon dioxide (CO₂), alcohol resistant foam, Water spray jet**Unsuitable extinguishing media**

Full water jet

5.2. Special hazards arising from the substance or mixture

Vapours can form explosive mixtures with air.

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Thermal decomposition can lead to the escape of irritating gases and vapours.

5.3. Advice for firefighters

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

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

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

Provide adequate ventilation.

Use personal protection equipment.

Remove all sources of ignition.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Collect in closed and suitable containers for disposal.

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.

Avoid contact with eyes and skin.

When using do not eat, drink or smoke.

Advice on protection against fire and explosion

Vapours can form explosive mixtures with air.

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges.

Further information on handling

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

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

Keep container tightly closed in a cool, well-ventilated place.

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/m ³	fibres/ml	Category	Origin
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
123-86-4	Butyl acetate	150	724		TWA (8 h)	WEL
		200	966		STEL (15 min)	WEL
96-22-0	Pentan-3-one	200	716		TWA (8 h)	WEL
		250	895		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

8.2. Exposure controls**Appropriate engineering controls**

Safe handling: see section 7

Protective and hygiene measures

Do not breathe vapour.

Avoid contact with skin, eyes and clothes.

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Wash hands before breaks and after work.
Keep away from food, drink and animal feedingstuffs.

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: NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)

Thickness of the glove material: 0,5 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

Use only in well-ventilated areas.

Usually no personal respirative protection necessary.

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:	Liquid	
Colour:	various, depending on coloration	
Odour:	characteristic	
		Test method
pH-Value:		not applicable
Changes in the physical state		
Melting point:		not determined
Initial boiling point and boiling range:		79 °C
Flash point:		< 0 °C DIN 51755 (cc)
Flammability		
Solid:		not applicable
Gas:		not applicable
Explosive properties		
not explosive.		
Vapours can form explosive mixtures with air.		
Lower explosion limits:		1,2 vol. %
Upper explosion limits:		11,5 vol. %
Ignition temperature:		370 °C
Auto-ignition temperature		
Solid:		not applicable
Gas:		not applicable
Decomposition temperature:		not determined
Vapour pressure:		105 hPa
(at 20 °C)		
Density (at 20 °C):		0,8 - 1,0 g/cm ³
Water solubility:		Immiscible
Partition coefficient:		not determined
Viscosity / dynamic:		not determined
Viscosity / kinematic:		not determined
Evaporation rate:		not determined

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



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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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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.

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 respiratory irritation. (pentan-3-one)

May cause drowsiness or dizziness. (butanone; pentan-3-one)

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**

There are no data available on the mixture itself.

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name	Method	Value	d	Source
78-93-3	butanone	OECD 301D	98 %	28	
	Readily biodegradable (according to OECD criteria).				

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
96-22-0	pentan-3-one	0,82

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

No information available.

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

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13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

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 1263
14.2. UN proper shipping name: FARBE
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Marine transport (IMDG)

14.1. UN number: UN 1263
14.2. UN proper shipping name: PAINT
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Marine pollutant: no

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1263
14.2. UN proper shipping name: PAINT
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



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

2004/42/EC (VOC): 1956-0100: 72,8% / 1956-0200: 69,4% / 1956-0300: 69,6%
1956-0400: 82,3% / 1956-0500: 74,1%

National regulatory information

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

Water hazard class (D): 1 - slightly hazardous to water

Additional information

Regulation (EC) No 1005/2009 (Ozone depleting substances): not applicable
Regulation (EU) 2019/1021 (persistent organic pollutants): not applicable

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Regulation (EU) No 649/2012 (export and import of hazardous chemicals): not applicable

SECTION 16: Other information**Abbreviations and acronyms**

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H335	Calculation method
STOT SE 3; H336	Calculation method

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

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.)

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

die:master duo 1956 0600

Further trade names

contained in: 1956 0800 die:master Set red
1956 0900 die:master Set blue
1956 1000 die:master Set gold/silver
1957 1000 die:master Set ivory
1957 2000 die:master Set aqua

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

One-pack coating

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet**Manufacturer**

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
Internet: www.renfert.com

Supplier

Company name: Ivoclar Vivadent Pty. Ltd.
Street: 1-5 Overseas Drive
Place: - Noble Park North VIC 3174
Telephone: + 61 3 9795 9599 Telefax: + 61 3 9795 9645

1.4. Emergency telephone number: 131 126 (Poisons Information Centre - 24 hours / 7 days)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:
Flammable liquid: Flam. Liq. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Specific target organ toxicity - single exposure: STOT SE 3
Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

butanone
n-butyl acetate

Signal word: Danger**Pictograms:****Hazard statements**

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves and eye/face protection.
P337+P313 If eye irritation persists: Get medical advice/attention.



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P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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**

One-pack coating

Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	GHS Classification			
78-93-3	butanone			> 60 %
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
123-86-4	n-butyl acetate			10 - < 30 %
	204-658-1	607-025-00-1	01-2119485493-29	
	Flam. Liq. 3, STOT SE 3; H226 H336 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**

Remove contaminated, saturated clothing immediately.

After inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

After contact with skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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 immediately and drink plenty of water. Do NOT induce vomiting. 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**Extinguishing powder, Carbon dioxide (CO₂), alcohol resistant foam, Water spray jet**Unsuitable extinguishing media**

Full water jet

5.2. Special hazards arising from the substance or mixture

Vapours can form explosive mixtures with air.

Thermal decomposition can lead to the escape of irritating gases and vapours.

5.3. Advice for firefighters

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

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

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

Provide adequate ventilation.

Use personal protection equipment.

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Remove all sources of ignition.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Collect in closed and suitable containers for disposal.

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.

Avoid contact with eyes and skin.

When using do not eat, drink or smoke.

Advice on protection against fire and explosion

Vapours can form explosive mixtures with air.

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges.

Further information on handling

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

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

Keep container tightly closed in a cool, well-ventilated place.

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/m ³	fibres/ml	Category	Origin
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
123-86-4	Butyl acetate	150	724		TWA (8 h)	WEL
		200	966		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

8.2. Exposure controls**Appropriate engineering controls**

Safe handling: see section 7

Protective and hygiene measures

Do not breathe vapour.

Avoid contact with skin, eyes and clothes.

Wash hands before breaks and after work.

Keep away from food, drink and animal feedingstuffs.

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: NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)

Thickness of the glove material: 0,5 mm

Breakthrough time: >= 60 min

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above



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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

Use only in well-ventilated areas.

Usually no personal respirative protection necessary.

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:	Liquid	
Colour:	colourless	
Odour:	characteristic	
		Test method
pH-Value:		not applicable
Changes in the physical state		
Melting point:		not determined
Initial boiling point and boiling range:		79 °C
Flash point:		- 5 °C DIN 51755 (cc)
Flammability		
Solid:		not applicable
Gas:		not applicable
Explosive properties		
not explosive.		
Vapours can form explosive mixtures with air.		
Lower explosion limits:		1,2 vol. %
Upper explosion limits:		11,5 vol. %
Ignition temperature:		370 °C
Auto-ignition temperature		
Solid:		not applicable
Gas:		not applicable
Decomposition temperature:		not determined
Vapour pressure:		101 hPa
(at 20 °C)		
Density (at 20 °C):		0,78 - 0,88 g/cm ³
Water solubility:		Immiscible
Partition coefficient:		not determined
Viscosity / dynamic:		not determined
Viscosity / kinematic:		not determined
Evaporation rate:		not determined

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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

No special measures are necessary.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

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11.1. Information on toxicological effects**Acute toxicity**

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

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. (butanone)

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**

There are no data available on the mixture itself.

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
78-93-3	butanone			
	OECD 301D	98 %	28	
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

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

No information available.

Further information

Do not allow uncontrolled discharge of product into the environment.

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

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation.

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 1263**14.2. UN proper shipping name:** FARBE**14.3. Transport hazard class(es):** 3**14.4. Packing group:** II

Hazard label: 3

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**Marine transport (IMDG)**

14.1. UN number: UN 1263
14.2. UN proper shipping name: PAINT
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Marine pollutant: no

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1263
14.2. UN proper shipping name: PAINT
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3

**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**

2004/42/EC (VOC): 749,3 g/l

National regulatory information

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

Water hazard class (D): 1 - slightly hazardous to water

Additional information

Regulation (EC) No 1005/2009 (Ozone depleting substances): not applicable

Regulation (EU) 2019/1021 (persistent organic pollutants): not applicable

Regulation (EU) No 649/2012 (export and import of hazardous chemicals): not applicable

SECTION 16: Other information**Abbreviations and acronyms**

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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

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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
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.)

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

die:master thinner 1956 0700

Further trade names

contained in:

1956 0800 die:master Set red

1956 0900 die:master Set blue

1956 1000 die:master Set gold/silver

1957 1000 die:master Set ivory

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

die:master thinner

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Company name: Renfert GmbH
Street: Untere Giesswiesen 2
Place: D-78247 Hilzingen
Telephone: +49 7731 8208-0
e-mail: info@renfert.com
Internet: www.renfert.com

Telefax: +49 7731 8208-70

Supplier

Company name: Ivoclar Vivadent Pty. Ltd.
Street: 1-5 Overseas Drive
Place: - Noble Park North VIC 3174
Telephone: + 61 3 9795 9599

Telefax: + 61 3 9795 9645

1.4. Emergency telephone number: 131 126 (Poisons Information Centre - 24 hours / 7 days)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Flammable liquid: Flam. Liq. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause respiratory irritation.

May cause drowsiness or dizziness.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

butanone

pentan-3-one

n-butyl acetate

Signal word:

Danger

Pictograms:**Hazard statements**

H225

Highly flammable liquid and vapour.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

H336

May cause drowsiness or dizziness.



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Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves and eye/face protection.
P337+P313 If eye irritation persists: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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

Solvents/Thinner

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
78-93-3	butanone			50 - 70 %
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
96-22-0	pentan-3-one			20 - 40%
	202-490-3	606-006-00-5	01-2119531111-60	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3, STOT SE 3; H225 H319 H335 H336 EUH066			
123-86-4	n-butyl acetate			5 - 15%
	204-658-1	607-025-00-1	01-2119485493-29	
	Flam. Liq. 3, STOT SE 3; H226 H336 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

Remove contaminated, saturated clothing immediately.

After inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

After contact with skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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 immediately and drink plenty of water. Do NOT induce vomiting. 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

Extinguishing powder, Carbon dioxide (CO₂), alcohol resistant foam, Water spray jet

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Vapours can form explosive mixtures with air.

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Thermal decomposition can lead to the escape of irritating gases and vapours.

5.3. Advice for firefighters

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

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

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

Provide adequate ventilation.

Use personal protection equipment.

Remove all sources of ignition.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Collect in closed and suitable containers for disposal.

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.

Avoid contact with eyes and skin.

When using do not eat, drink or smoke.

Advice on protection against fire and explosion

Vapours can form explosive mixtures with air.

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges.

Further information on handling

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

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

Keep container tightly closed in a cool, well-ventilated place.

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/m ³	fibres/ml	Category	Origin
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
123-86-4	Butyl acetate	150	724		TWA (8 h)	WEL
		200	966		STEL (15 min)	WEL
96-22-0	Pentan-3-one	200	716		TWA (8 h)	WEL
		250	895		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

8.2. Exposure controls**Appropriate engineering controls**

Safe handling: see section 7

Protective and hygiene measures

Do not breathe vapour.

Avoid contact with skin, eyes and clothes.

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Wash hands before breaks and after work.
Keep away from food, drink and animal feedingstuffs.

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: NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)

Thickness of the glove material: 0,5 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

Use only in well-ventilated areas.

Usually no personal respirative protection necessary.

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:	Liquid
Colour:	colourless
Odour:	characteristic

Test method

pH-Value: not applicable

Changes in the physical state

Melting point: not determined

Initial boiling point and boiling range: 79 °C

Flash point: - 1,5 °C DIN 51755 (cc)

Flammability

Solid: not applicable

Gas: not applicable

Explosive properties

not explosive.

Vapours can form explosive mixtures with air.

Lower explosion limits: 1,2 vol. %

Upper explosion limits: 11,5 vol. %

Ignition temperature: 370 °C

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Vapour pressure: 105 hPa

(at 20 °C)

Density (at 20 °C): 0,7 - 0,9 g/cm³

Water solubility: Immiscible

Partition coefficient: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Vapour density: not determined

Evaporation rate: not determined

Solvent content: 100%

9.2. Other information

Solid content: 0 %

SECTION 10: Stability and reactivity

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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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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.

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 respiratory irritation. (pentan-3-one)

May cause drowsiness or dizziness. (butanone; pentan-3-one)

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**

There are no data available on the mixture itself.

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
78-93-3	butanone			
	OECD 301D	98 %	28	
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
96-22-0	pentan-3-one	0,82

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

No information available.

Further information

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

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uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation.

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 1263
14.2. UN proper shipping name: FARBZUBEHÖRSTOFFE
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3

**Marine transport (IMDG)**

14.1. UN number: UN 1263
14.2. UN proper shipping name: PAINT RELATED MATERIAL
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Marine pollutant: no

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1263
14.2. UN proper shipping name: PAINT RELATED MATERIAL
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Additional 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**

2004/42/EC (VOC): 100 %

National regulatory information

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

Water hazard class (D): 1 - slightly hazardous to water

Additional information

Regulation (EC) No 1005/2009 (Ozone depleting substances): not applicable



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Regulation (EU) 2019/1021 (persistent organic pollutants): not applicable

Regulation (EU) No 649/2012 (export and import of hazardous chemicals): not applicable

SECTION 16: Other information

Abbreviations and acronyms

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H335	Calculation method
STOT SE 3; H336	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
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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.)