



Safety Data Sheet

according to Regulation (EC) No 1907/2006

die:master aqua 1957 0500

Revision date: 04.03.2019

Product code: 19570500

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

1.1. Product identifier

die:master aqua 1957 0500

Further trade names

1957 2000 die:master aqua Set

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

Use of the substance/mixture

Water-Washable Die Spacer

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	

1.4. Emergency telephone number:

GB: 0044 151 951 3317 (Health and Safety Executive (HSE) Chemicals) | USA: 800-222-1222 (National Poison Control number) | CA: British Columbia: 800-567-8911 or 604-682-5050 Alberta: 1-800-332-1414 or 944-1414 Saskatchewan: 1-866-454-1212 Manitoba: 1-855-776-4766 Ontario: 1-800-268-9017 Quebec: 1-800-463-5060 New Brunswick: 911 New Foundland: 1-866-727-1110 Northwest Territories: 1-800-332-1414 Nova Scotia: 1-800-565-8161 | AU: 13 11 26 | ZA: 021 938 6084 (Office Hours) or 021 931 6129 (24 Hours)

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

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Danger

Pictograms:



Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves and eye/face protection.
P337+P313 If eye irritation persists: Get medical advice/attention.

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



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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
64-17-5	ethanol			> 60 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			

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

Provide fresh air.

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. Call a physician immediately.

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

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste 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

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Advice on safe handling

Avoid contact with eyes and skin.
Use only in well-ventilated areas.
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.renfer.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
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL

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: Butyl caoutchouc (butyl rubber)

Thickness of the glove material: 0,5 mm

Breakthrough time: > 480 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: beige
Odour: characteristic

pH-Value:

Test method
not applicable

Changes in the physical state

Melting point: - 114,5 °C
Initial boiling point and boiling range: 78 °C Literaturwert
Flash point: 15 °C DIN 51755 (cc)

Flammability

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Solid: not applicable
 Gas: not applicable

Explosive properties

Vapours can form explosive mixtures with air.

Lower explosion limits: 2 vol. % Literaturwert
 Upper explosion limits: 15 vol. % Literaturwert
 Ignition temperature: 400 °C Literaturwert

Auto-ignition temperature

Solid: not applicable
 Gas: not applicable
 Decomposition temperature: not determined
 Vapour pressure: 58 hPa berechnet
 (at 20 °C)
 Density (at 20 °C): 0,84 - 0,89 g/cm³
 Water solubility: completely miscible
 (at 20 °C)
 Partition coefficient: not determined
 Viscosity / dynamic: not determined
 Viscosity / kinematic: not determined
 Vapour density: not determined
 Evaporation rate: not determined
 Solvent content: 60 - 70 %

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 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
64-17-5	ethanol				
	oral	LD50 > 2000 mg/kg	Rat		OECD 401
	dermal	LD50 > 2000 mg/kg	Rabbit		OECD 402
	inhalation (4 h) vapour	LC50 > 20 mg/l	Rat		OECD 403

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.



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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.

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.

CAS No	Chemical name	Dose	[h] [d]	Species	Source	Method
64-17-5	ethanol					
	Acute fish toxicity	LC50 mg/l	> 2000	96 h	Pimephales promelas (fathead minnow)	OECD 203
	Acute algae toxicity	ErC50 mg/l	> 200	72 h	Chlorella vulgaris	OECD 201
	Acute crustacea toxicity	EC50 mg/l	> 300	48 h	Daphnia magna (Big water flea)	OECD 202

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
64-17-5	ethanol				
	OECD 301B	97 %		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
64-17-5	ethanol	-0,35

12.4. Mobility in soil

No information available.

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****Advice on disposal**

Send to a hazardous waste incinerator facility under observation of official regulations.

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

080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other hazardous substances; hazardous waste

Contaminated packaging

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

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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): 558 g/l

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
ethanol

SECTION 16: Other information

Changes

Abs. 8, 14, 16 * Data changed compared with the previous version

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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

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

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**

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Further trade names

1957 2000 die:master aqua Set

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

die:master aqua thinner

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	

1.4. Emergency telephone number:

GB: 0044 151 951 3317 (Health and Safety Executive (HSE) Chemicals) | USA: 800-222-1222 (National Poison Control number) | CA: British Columbia: 800-567-8911 or 604-682-5050 Alberta: 1-800-332-1414 or 944-1414 Saskatchewan: 1-866-454-1212 Manitoba: 1-855-776-4766 Ontario: 1-800-268-9017 Quebec: 1-800-463-5060 New Brunswick: 911 New Foundland: 1-866-727-1110 Northwest Territories: 1-800-332-1414 Nova Scotia: 1-800-565-8161 | AU: 13 11 26 | ZA: 021 938 6084 (Office Hours) or 021 931 6129 (24 Hours)

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

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

2.2. Label elements**Regulation (EC) No. 1272/2008**

Signal word: Danger

Pictograms:

**Hazard statements**

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves and eye/face protection.
P337+P313 If eye irritation persists: Get medical advice/attention.

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**

Solvent mixture



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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
64-17-5	ethanol			> 80 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			

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

Provide fresh air.

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. Call a physician immediately.

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

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste 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

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Advice on safe handling

Avoid contact with eyes and skin.
Use only in well-ventilated areas.
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
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL

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: Butyl caoutchouc (butyl rubber)

Thickness of the glove material 0,5 mm

Breakthrough time: > 480 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: like: Alcohol

pH-Value:

Test method
not applicable

Changes in the physical state

Melting point: - 121 °C
Initial boiling point and boiling range: 78 °C Literaturwert
Flash point: 12 °C DIN 51755 (cc)

Flammability

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Solid: not applicable
 Gas: not applicable

Explosive properties

Vapours can form explosive mixtures with air.

Lower explosion limits: 3,5 vol. % Literaturwert
 Upper explosion limits: 15 vol. % Literaturwert
 Ignition temperature: 400 °C Literaturwert

Auto-ignition temperature

Solid: not applicable
 Gas: not applicable

Decomposition temperature: No data available
 Vapour pressure: 58 hPa berechnet

(at 20 °C)
 Density (at 20 °C): 0,75 - 0,85 g/cm³
 Water solubility: completely miscible

(at 20 °C)
 Partition coefficient: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Evaporation rate: No data available

Solvent content: 100 %

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

Oxidising agent

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
64-17-5	ethanol				
	oral	LD50 > 2000 mg/kg	Rat		OECD 401
	dermal	LD50 > 2000 mg/kg	Rabbit		OECD 402
	inhalation (4 h) vapour	LC50 > 20 mg/l	Rat		OECD 403

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.

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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.

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.

CAS No	Chemical name	Dose	[h] [d]	Species	Source	Method
64-17-5	ethanol					
	Acute fish toxicity	LC50 mg/l	> 2000	96 h	Pimephales promelas (fathead minnow)	OECD 203
	Acute algae toxicity	ErC50 mg/l	> 200	72 h	Chlorella vulgaris	OECD 201
	Acute crustacea toxicity	EC50 mg/l	> 300	48 h	Daphnia magna (Big water flea)	OECD 202

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
64-17-5	ethanol				
	OECD 301B	97 %		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
64-17-5	ethanol	-0,35

12.4. Mobility in soil

No information available.

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****Advice on disposal**

Send to a hazardous waste incinerator facility under observation of official regulations.

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

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Contaminated packaging

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

SECTION 14: Transport information

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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

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): 100 %

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
ethanol

SECTION 16: Other information**Changes**

Abs. 8, 14, 16 * Data changed compared with the previous version

Abbreviations and acronyms

PBT: Persistent, Bioaccumulative and Toxic

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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

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.

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

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

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

Telefax: +49 7731 8208-70
Telephone: +49 7731 8208-927

1.4. Emergency telephone number:

GB: 0044 151 951 3317 (Health and Safety Executive (HSE) Chemicals) | USA:
800-222-1222 (National Poison Control number) | CA: British Columbia: 800-567-8911 or
604-682-5050 Alberta: 1-800-332-1414 or 944-1414 Saskatchewan: 1-866-454-1212
Manitoba: 1-855-776-4766 Ontario: 1-800-268-9017 Quebec: 1-800-463-5060 New
Brunswick: 911 New Foundland: 1-866-727-1110 Northwest Territories: 1-800-332-1414
Nova Scotia: 1-800-565-8161 | AU: 13 11 26 | ZA: 021 938 6084 (Office Hours) or 021
931 6129 (24 Hours)

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.



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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			< 75 %
	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 - 25 %
	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.

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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

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

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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: - 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/cm³

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.

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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
78-93-3	butanone				
	oral	LD50 mg/kg >2193	Rat		OECD 423
	dermal	LD50 mg/kg > 5000	Rabbit		OECD 402
	inhalation (4 h) vapour	LC50 34 mg/l	Rat		
123-86-4	n-butyl acetate				
	oral	LD50 mg/kg > 10000	Rat		OECD 423 (calculated.)
	dermal	LD50 mg/kg > 10000	Rabbit		OECD 402

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.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
78-93-3	butanone					
	Acute fish toxicity	LC50 2990 mg/l	96 h	Pimephales promelas (fathead minnow)		OECD 203
	Acute algae toxicity	ErC50 1972 mg/l	72 h	Pseudokirchneriella subcapitata		OECD 201
	Acute crustacea toxicity	EC50 308 mg/l	48 h	Daphnia magna (Big water flea)		OECD 202

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.

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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****Advice on disposal**

Send to a hazardous waste incinerator facility under observation of official regulations.

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

080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other 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 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

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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 contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

butanone

n-butyl acetate

SECTION 16: Other information**Changes**

Abs. 9, 14, 16 * Data changed compared with the previous version

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; 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.)