

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Roti®Histofix acid free (pH 7), formaldehyde solution 4%

article number: **P087**
Version: **2.0 en**
Replaces version of: 13.06.2016
Version: (1)

date of compilation: 13.06.2016
Revision: 27.01.2020

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

1.1 Product identifier

Identification of the substance **Roti®Histofix**
Article number **P087**
Registration number (REACH) **not relevant (mixture)**

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

Identified uses: laboratory chemical
laboratory and analytical use

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

e-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	(Acute Tox. 4)	H302
3.45	skin sensitisation	(Skin Sens. 1)	H317
3.5	germ cell mutagenicity	(Muta. 2)	H341
3.6	carcinogenicity	(Carc. 1B)	H350

2.2 Label elements

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

Signal word **Danger**

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Pictograms

GHS07, GHS08



Hazard statements

H302 Harmful if swallowed
H317 May cause an allergic skin reaction
H341 Suspected of causing genetic defects
H350 May cause cancer

Precautionary statements

Precautionary statements - prevention

P202 Do not handle until all safety precautions have been read and understood.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves.

Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P308+P313 IF exposed or concerned: Get medical advice/attention.

For professional users only

Hazardous ingredients for labelling: Formaldehyde ... %, Methanol

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P308+P313 IF exposed or concerned: Get medical advice/attention.
contains: Formaldehyde ... %, Methanol

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Composition/information on ingredients.

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Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Specific Conc. Limits
Formaldehyde ... %	CAS No 50-00-0 EC No 200-001-8 Index No 605-001-00-5 REACH Reg. No 01-2119488953- 20-xxxx	4	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 3 / H331 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Muta. 2 / H341 Carc. 1B / H350 STOT SE 3 / H335		Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 5 % ≤ C < 25 % Eye Dam. 1; H318: C ≥ 25 % Eye Irrit. 2; H319: 5 % ≤ C < 25 % Skin Sens. 1; H317: C ≥ 0,2 % STOT SE 3; H335: C ≥ 5 %
Methanol	CAS No 67-56-1 EC No 200-659-6 Index No 603-001-00-X REACH Reg. No 01-2119433307- 44-xxxx	< 3	Flam. Liq. 2 / H225 Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 3 / H331 STOT SE 1 / H370		STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %

Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In case of skin reactions, consult a physician.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth immediately and drink plenty of water. Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions, Vomiting, Effects on special senses (such as sight, hearing and sense of smell)

4.3 Indication of any immediate medical attention and special treatment needed

none

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SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, alcohol resistant foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Ingredients of the mixture Combustible.

Hazardous combustion products

in case of fire and/or explosion do not breathe fumes

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Do not breathe vapour/spray. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

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

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid exposure.

Advice on general occupational hygiene

Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool place.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

- **Ventilation requirements**

Use local and general ventilation.

- **Specific designs for storage rooms or vessels**

Recommended storage temperature: 15 - 25 °C.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Source
EU	formaldehyde	50-00-0	sect	IOELV	0,3	0,37	0,74	0,6			2019/983/EU
EU	methanol	67-56-1		IOELV	200	260					2006/15/EC
MT	methanol	67-56-1		OELV	200	260					CAP. 424

Notation

Ceiling-C

sect

STEL

TWA

Ceiling value is a limit value above which exposure should not occur
Limit value of 0,62 mg/m³ or 0,5 ppm for the health care, funeral and embalming sectors until 11 July 2024
Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs/DMELs/PNECs and other threshold levels

- **relevant DNELs of components of the mixture**

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Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Formaldehyde ... %	50-00-0	DNEL	1 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Formaldehyde ... %	50-00-0	DNEL	9 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Formaldehyde ... %	50-00-0	DNEL	0,375 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Formaldehyde ... %	50-00-0	DNEL	0,75 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Formaldehyde ... %	50-00-0	DNEL	240 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Formaldehyde ... %	50-00-0	DNEL	37 µg/cm ²	human, dermal	worker (industry)	chronic - local effects
Methanol	67-56-1	DNEL	260 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Methanol	67-56-1	DNEL	40 mg/kg	human, dermal	worker (industry)	acute - systemic effects
Methanol	67-56-1	DNEL	260 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Methanol	67-56-1	DNEL	260 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Methanol	67-56-1	DNEL	40 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Methanol	67-56-1	DNEL	260 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

• relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Formaldehyde ... %	50-00-0	PNEC	4,44 mg/l	water
Formaldehyde ... %	50-00-0	PNEC	0,44 mg/l	freshwater
Formaldehyde ... %	50-00-0	PNEC	0,44 mg/l	marine water
Formaldehyde ... %	50-00-0	PNEC	0,19 mg/l	sewage treatment plant (STP)
Formaldehyde ... %	50-00-0	PNEC	2,3 mg/kg	freshwater sediment
Formaldehyde ... %	50-00-0	PNEC	2,3 mg/kg	marine sediment
Formaldehyde ... %	50-00-0	PNEC	0,2 mg/kg	soil
Methanol	67-56-1	PNEC	20,8 mg/l	freshwater
Methanol	67-56-1	PNEC	2,08 mg/l	marine water
Methanol	67-56-1	PNEC	100 mg/l	sewage treatment plant (STP)
Methanol	67-56-1	PNEC	77 mg/kg	freshwater sediment
Methanol	67-56-1	PNEC	7,7 mg/kg	marine sediment

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Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Methanol	67-56-1	PNEC	100 mg/kg	soil

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggles with side protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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 times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

• material thickness

0,7mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: ABEK (combined filters against gases and vapours, colour code: Brown/Grey/Yellow/Green).

Environmental exposure controls

Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid (fluid)
Colour	colourless
Odour	characteristic
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	7
Melting point/freezing point	not determined
Initial boiling point and boiling range	~ 100 °C
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	~ 1 g/cm ³ at 20 °C
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	miscible in any proportion
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	Information on this property is not available.
Decomposition temperature	no data available
Viscosity	not determined
Explosive properties	Shall not be classified as explosive
Oxidising properties	none

9.2 Other information

There is no additional information.

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SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Formaldehyde ... %	50-00-0	oral	100 mg/kg
Formaldehyde ... %	50-00-0	dermal	300 mg/kg
Formaldehyde ... %	50-00-0	inhalation: vapour	2 mg/l/4h
Methanol	67-56-1	oral	100 mg/kg
Methanol	67-56-1	dermal	300 mg/kg
Methanol	67-56-1	inhalation: vapour	3 mg/l/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

May cause an allergic skin reaction. May cause sensitization by skin contact.

Summary of evaluation of the CMR properties

Germ cell mutagenicity:

Suspected of causing genetic defects

Carcinogenicity:

May cause cancer

• Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

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• Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting

• If in eyes

data are not available

• If inhaled

data are not available

• If on skin

irritant effects, a skin sensitiser

Other information

Other adverse effects: Effects on special senses (such as sight, hearing and sense of smell)

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Formaldehyde ... %	50-00-0	LC50	31,8 mg/l	fish	24 h
Formaldehyde ... %	50-00-0	EC50	5,8 mg/l	aquatic invertebrates	48 h
Formaldehyde ... %	50-00-0	ErC50	4,89 mg/l	algae	72 h
Methanol	67-56-1	LC50	15.400 mg/l	bluegill (Lepomis macrochirus)	96 h
Methanol	67-56-1	EC50	12.700 mg/l	bluegill (Lepomis macrochirus)	96 h
Methanol	67-56-1	ErC50	22.000 mg/l	Pseudokirchneriella subcapitata	96 h

Aquatic toxicity (chronic)

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Formaldehyde ... %	50-00-0	EC50	19 mg/l	microorganisms	3 h

12.2 Process of degradability

The substance is readily biodegradable.

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Process	Degradation rate	Time
biotic/abiotic	97 %	5 d

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
Formaldehyde ... %	50-00-0	DOC removal	99 %	28 d
Methanol	67-56-1	biotic/abiotic	99 %	30 d
Methanol	67-56-1	oxygen depletion	76 %	5 d

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	Log KOW
Methanol	67-56-1	-0,77

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

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

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

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SECTION 14: Transport information

- 14.1** UN number (not subject to transport regulations)
- 14.2** UN proper shipping name not relevant
- 14.3** Transport hazard class(es) not relevant
Class -
- 14.4** Packing group not relevant not assigned to a packing group
- 14.5** Environmental hazards none (non-environmentally hazardous acc. to the dangerous goods regulations)
- 14.6** **Special precautions for user**
There is no additional information.
- 14.7** **Transport in bulk according to Annex II of MARPOL and the IBC Code**
The cargo is not intended to be carried in bulk.
- 14.8** **Information for each of the UN Model Regulations**
- **Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)**
Not subject to ADR, RID and ADN.
 - **International Maritime Dangerous Goods Code (IMDG)**
Not subject to IMDG.
 - **International Civil Aviation Organization (ICAO-IATA/DGR)**
Not subject to ICAO-IATA.

SECTION 15: Regulatory information

- 15.1** **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Relevant provisions of the European Union (EU)**
- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients are listed.
 - **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**
None of the ingredients are listed.
 - **Regulation 850/2004/EC on persistent organic pollutants (POP)**
None of the ingredients are listed.
 - **Restrictions according to REACH, Annex XVII**

Name of substance	CAS No	Wt%	Type of registration	Conditions of restriction	No
Roti®Histofix		100	1907/2006/EC annex XVII	R3	3
Formaldehyde ... %		4	1907/2006/EC annex XVII	R28-30	28
Methanol	67-56-1	2,9	2018/0589/EC annex XVII	R69	69
Methanol		2,9	1907/2006/EC annex XVII	R40	40

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Legend

- R28-30
1. Shall not be placed on the market, or used,
 - as substances,
 - as constituents of other substances, or,
 - in mixtures,for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than:
 - either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or,
 - the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008.Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows:
'Restricted to professional users'.
 2. By way of derogation, paragraph 1 shall not apply to:
 - (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC;
 - (b) cosmetic products as defined by Directive 76/768/EEC;
 - (c) the following fuels and oil products:
 - motor fuels which are covered by Directive 98/70/EC,
 - mineral oil products intended for use as fuel in mobile or fixed combustion plants,
 - fuels sold in closed systems (e.g. liquid gas bottles);
 - (d) artists' paints covered by Directive 1999/45/EC;
 - (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2.Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.
- R3
1. Shall not be used in:
 - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
 2. Articles not complying with paragraph 1 shall not be placed on the market.
 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
 - can be used as fuel in decorative oil lamps for supply to the general public, and,
 - present an aspiration hazard and are labelled with R65 or H304,
 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
 - (a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
 - (b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
 - (c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
 6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.
- R40
1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
 - metallic glitter intended mainly for decoration,
 - artificial snow and frost,
 - 'whoopee' cushions,
 - silly string aerosols,
 - imitation excrement,
 - horns for parties,
 - decorative flakes and foams,
 - artificial cobwebs,
 - stink bombs.
 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:
'For professional users only'.
 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.
- R69
- Shall not be placed on the market to the general public after 9 May 2019 in windscreen washing or defrosting fluids, in a concentration equal to or greater than 0,6 % by weight.

• Restrictions according to REACH, Title VIII

None.

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• List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

none of the ingredients are listed

• Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
	not assigned		

• Directive 75/324/EEC relating to aerosol dispensers

Filling batch

Deco-Paint Directive (2004/42/EC)

VOC content	5 - 10 % 1.499 g/l
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Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content	5 - 10 %
VOC content Water content was discounted	1.499 g/l

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

Regulation 98/2013/EU on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors

none of the ingredients are listed

National inventories

Country	National inventories	Status
AU	AICS	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed

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Country	National inventories	Status
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

Legend

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1	Remarks: For full text of Hazard- and EU Hazard-statements: see SECTION 16.		yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
8.1		Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)	yes
8.1		• relevant DNELs of components of the mixture: change in the listing (table)	yes
8.1		• relevant PNECs of components of the mixture: change in the listing (table)	yes
14.4	Packing group: not relevant	Packing group: not relevant not assigned to a packing group	yes
14.8		• International Civil Aviation Organization (ICAO-IATA/DGR): Not subject to ICAO-IATA.	yes

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Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2006/15/EC	Commission Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC
2019/983/EU	Directive of the European Parliament and of the Council amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAP. 424	Occupational Health and Safety Authority Act (CAP. 424)
Carc.	carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
Flam. Liq.	flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-octanol/water

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Abbr.	Descriptions of used abbreviations
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Muta.	germ cell mutagenicity
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
Skin Sens.	skin sensitisation
STEL	short-term exposure limit
STOT SE	specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	time-weighted average
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	highly flammable liquid and vapour
H301	toxic if swallowed
H302	harmful if swallowed
H311	toxic in contact with skin
H314	causes severe skin burns and eye damage
H317	may cause an allergic skin reaction
H318	causes serious eye damage
H331	toxic if inhaled
H335	may cause respiratory irritation
H341	suspected of causing genetic defects
H350	may cause cancer
H370	causes damage to organs

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Disclaimer

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.