Aerospray® Hematology Pro Reagent A, Buffer (pH 7.2) Concentrate

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

1.1. Product identifier

Product form	:	Mixture
Product name	:	Aerospray® Hematology Pro Reagent A, Buffer (pH 7.2) Concentrate
Product code	:	SS-172A or SS-172A-EU
Product group	:	Trade product

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

1.2.1. Relevant identified uses

Industrial/Professional use spec	:	For professional use only
Use of the substance/mixture	:	Staining reagent concentrate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ELITechGroup Inc.
370 West 1700 South
US– 84321 Logan, UT – Cache
USA
T +1 (435) 752-6011 - F +1 (435) 752-4127
qara_ebs@elitechgroup.com - www.elitechgroup.com

1.4. Emergency telephone number

Emergency number	:	Contact your distributor or poison control center in your country. InfoTrac Emergency Response: Calls within the USA, phone: 1-800-535-5053. Calls outside the USA, phone: +1 352-323-3500 (call collect) Customer ID: #90104 (NOTE: this number is required when a customer calls into either phone number above).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 4	H312
Skin corrosion/irritation, Category 1	H314
Skin sensitisation, Category 1	H317
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Carcinogenicity, Category 2	H351
Reproductive toxicity, Category 1B	H360
Specific target organ toxicity – Single exposure, Category 2	H371

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

Adverse physicochemical, human health and environmental effects

Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs. Harmful in contact with skin. Harmful if swallowed. May cause respiratory irritation. Causes severe skin burns and eye damage. May cause an allergic skin reaction.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS05 GHS07 GHS08

Signal word (CLP) : Danger

Contains : maleic acid; potassium hydroxide; 1H-imidazole; formaldehyde; methanol

Hazard statements (CLP) : H302+H312 - Harmful if swallowed or in contact with skin.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer (if swallowed, if inhaled).
H360 - May damage fertility or the unborn child (if inhaled, if swallowed).
H371 - May cause damage to organs (oral, inhalation).

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P260 - Do not breathe mist, spray, vapours, fume.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, eye protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
maleic acid (110-16-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
potassium hydroxide (1310-58-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
1H-imidazole (288-32-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
formaldehyde (50-00-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
methanol (67-56-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
maleic acid	CAS-No.: 110-16-7 EC-No.: 203-742-5 EC Index-No.: 607-095-00-3	5 – 15	Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Skin Sens. 1, H317 STOT SE 3, H335
potassium hydroxide	CAS-No.: 1310-58-3 EC-No.: 215-181-3 EC Index-No.: 019-002-00-8	5 – 15	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314
1H-imidazole	CAS-No.: 288-32-4 EC-No.: 206-019-2 EC Index-No.: 613-319-00-0	5 – 15	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Repr. 1B, H360D STOT RE 2, H373
formaldehyde substance with a Community workplace exposure limit	CAS-No.: 50-00-0 EC-No.: 200-001-8	< 10	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351
methanol substance with a Community workplace exposure limit	CAS-No.: 67-56-1 EC-No.: 200-659-6 EC Index-No.: 603-001-00-X	< 5	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:vapour), H331 STOT SE 1, H370

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits**
maleic acid	CAS-No.: 110-16-7 EC-No.: 203-742-5 EC Index-No.: 607-095-00-3	(0.1 ≤C ≤ 100) Skin Sens. 1, H317

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits**
potassium hydroxide	CAS-No.: 1310-58-3 EC-No.: 215-181-3 EC Index-No.: 019-002-00-8	(0.5 ≤C < 2) Skin Irrit. 2, H315 (0.5 ≤C < 2) Eye Irrit. 2, H319 (2 ≤C < 5) Skin Corr. 1B, H314 (5 ≤C < 100) Skin Corr. 1A, H314
formaldehyde	CAS-No.: 50-00-0 EC-No.: 200-001-8	(0.2 ≤C < 100) Skin Sens. 1, H317 (5 ≤C < 25) Skin Irrit. 2, H315 (5 ≤C < 25) Eye Irrit. 2, H319 (5 ≤C < 100) STOT SE 3, H335 (25 ≤C < 100) Skin Corr. 1B, H314
methanol	CAS-No.: 67-56-1 EC-No.: 200-659-6 EC Index-No.: 603-001-00-X	(3 ≤C < 10) STOT SE 2, H371 (10 ≤C < 100) STOT SE 1, H370

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Immediately call a POISON CENTER/doctor. Specific measures (see supplemental first aid instruction on this label). Wash with plenty of water/…. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). Gently wash with plenty of soap and water. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation : May cause an allergic skin reaction. May cause respiratory irritation.

Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Burns. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Burns.

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 : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not classified as flammable. Could burn but do not ignite readily.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapours/spray. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Separate working clothes from town clothes. Launder separately. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

potassium hydroxide (1310-58-3)	
Belgium - Occupational Exposure Limits	
OEL STEL	2 mg/m³ (The word “M” indicates that when exposure exceeds the limit value, irritations appear or a danger of acute intoxication exists. The work process must be designed in such a way that exposure does not never exceeds the limit value. When making measurements, the sampling period should be as short as possible in order to make reliable measurements. The measurement result is calculated based on the sampling period.)
France - Occupational Exposure Limits	
VLE (OEL C/STEL)	2 mg/m³
United Kingdom - Occupational Exposure Limits	
WEL STEL (OEL STEL)	2 mg/m³
USA - ACGIH - Occupational Exposure Limits	
Local name	Potassium hydroxide
ACGIH OEL C	2 mg/m³
Remark (ACGIH)	URT, eye, & skin irr
Regulatory reference	ACGIH 2022

formaldehyde (50-00-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	0.37 mg/m³ (Limit value of 0,62 mg/m3 or 0,5 ppm (3) for the health care, funeral and embalming sectors until 11 July 2024)
IOEL TWA [ppm]	0.3 ppm
IOEL STEL	0.74 mg/m³
IOEL STEL [ppm]	0.6 ppm

formaldehyde (50-00-0)	
Belgium - Occupational Exposure Limits	
OEL STEL	0.38 mg/m³ (The word “M” indicates that when exposure exceeds the limit value, irritations appear or a danger of acute intoxication exists. The work process must be designed in such a way that exposure does not never exceeds the limit value. When making measurements, the sampling period should be as short as possible in order to make reliable measurements. The measurement result is calculated based on the sampling period.)
OEL STEL [ppm]	0.3 ppm (The word “M” indicates that when exposure exceeds the limit value, irritations appear or a danger of acute intoxication exists. The work process must be designed in such a way that exposure never exceeds the limit value. During measurements, the sampling period should be as short as possible in order to make reliable measurements. The result of the measurements is calculated according to the sampling period.)
France - Occupational Exposure Limits	
VME (OEL TWA)	0.37 mg/m³ 0.62 mg/m³ (Limit value for healthcare, funeral and embalming sectors)
VME (OEL TWA) [ppm]	0.3 ppm 0.5 ppm (Limit value for healthcare, funeral and embalming sectors)
VLE (OEL C/STEL)	0.74 mg/m³
VLE (OEL C/STEL) [ppm]	0.6 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	0.15 mg/m³ (Skin sensitization)
TGG-8u (OEL TWA) [ppm]	0.12 ppm
TGG-15min (OEL STEL)	0.5 mg/m³
TGG-15min (OEL STEL) [ppm]	0.4 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	2.5 mg/m³
WEL TWA (OEL TWA) [2]	2 ppm
WEL STEL (OEL STEL)	2.5 mg/m³
WEL STEL (OEL STEL) [ppm]	2 ppm
USA - ACGIH - Occupational Exposure Limits	
Local name	Formaldehyde
ACGIH OEL TWA [ppm]	0.1 ppm
ACGIH OEL STEL [ppm]	0.3 ppm
Remark (ACGIH)	URT & eye irr
Regulatory reference	ACGIH 2022

methanol (67-56-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	260 mg/m³
IOEL TWA [ppm]	200 ppm

methanol (67-56-1)	
Belgium - Occupational Exposure Limits	
OEL TWA	266 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	333 mg/m³
OEL STEL [ppm]	250 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	260 mg/m³
VME (OEL TWA) [ppm]	200 ppm
VLE (OEL C/STEL)	1300 mg/m³
VLE (OEL C/STEL) [ppm]	1000 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	133 mg/m³
TGG-8u (OEL TWA) [ppm]	100 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	266 mg/m³
WEL TWA (OEL TWA) [2]	200 ppm
WEL STEL (OEL STEL)	333 mg/m³
WEL STEL (OEL STEL) [ppm]	250 ppm
USA - ACGIH - Occupational Exposure Limits	
Local name	Methanol
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	250 ppm
Remark (ACGIH)	Headache; eye dam; dizziness; nausea
Regulatory reference	ACGIH 2022
USA - ACGIH - Biological Exposure Indices	
Local name	METHANOL
BEI	15 mg/l Parameter: Methanol - Medium: urine - Sampling time: End of shift - Notations: B, Ns
Regulatory reference	ACGIH 2022

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure. Wash hands thoroughly after handling.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Wear protective gloves. Suitable gloves should be tested to EN 374. The glove material has to be impermeable and resistant to the product/the substance/the preparation. As the product is a preparation of several substances, the resistance and penetration time/breakthrough time of the glove material cannot be calculated/observed in advance and, therefore, has to be checked prior to the application. The following are recommended: materials - natural latex or nitrile; thickness - 4 to 6 mils (0.1 mm - 0.15 mm); minimum breakthrough time - 60 minutes.

8.2.2.3. Respiratory protection

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. [In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

Other information:
Do not eat, drink or smoke during use. Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless
Odour	:	Characteristic
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Non flammable.
Explosive limits	:	Not available

Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	≥ 67 °C
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	≈ 7.37
Viscosity, kinematic	:	Not available
Solubility	:	Water: No data available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Harmful in contact with skin.
Acute toxicity (inhalation)	:	Not classified

maleic acid (110-16-7)	
LD50 oral rat	2870 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2470 - 3250
LD50 oral	708 mg/kg bodyweight (Annex VI, Oral)
LD50 dermal rabbit	2620 mg/kg bodyweight Animal: rabbit, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

potassium hydroxide (1310-58-3)	
LD50 oral rat	333 – 388 mg/kg bodyweight (Equivalent or similar to OECD 425, Rat, Male, Experimental value, Oral, 14 day(s))

1H-imidazole (288-32-4)	
LD50 oral rat	≈ 970 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

formaldehyde (50-00-0)	
LD50 oral rat	800 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, 2% aqueous solution, Oral, 14 day(s))

methanol (67-56-1)	
LD50 oral rat	1187 – 2769 mg/kg bodyweight (BASF test, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s))
LD50 oral	101.01 mg/kg (Acute toxicity, Oral, Estimate)
LC50 Inhalation - Rat	3.03 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))

Skin corrosion/irritation : Causes severe skin burns.
pH: ≈ 7.37

Additional information : Based on available data, the classification criteria are not met

maleic acid (110-16-7)	
pH	1.5 (1.2 %)

potassium hydroxide (1310-58-3)	
pH	13.5 (0.56 %, 25 °C)

1H-imidazole (288-32-4)	
pH	10.5 (7 %)

formaldehyde (50-00-0)	
pH	2.8 – 4 (37 %)

methanol (67-56-1)	
pH	No data available in the literature

Serious eye damage/irritation : Assumed to cause serious eye damage
pH: ≈ 7.37

Additional information : Based on available data, the classification criteria are not met

maleic acid (110-16-7)	
pH	1.5 (1.2 %)

potassium hydroxide (1310-58-3)	
pH	13.5 (0.56 %, 25 °C)

1H-imidazole (288-32-4)	
pH	10.5 (7 %)

formaldehyde (50-00-0)	
pH	2.8 – 4 (37 %)

methanol (67-56-1)	
pH	No data available in the literature

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Suspected of causing cancer (if swallowed, if inhaled).

formaldehyde (50-00-0)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : May damage fertility or the unborn child (if inhaled, if swallowed).

methanol (67-56-1)	
NOAEL (animal/male, F0/P)	< 1000 mg/kg bodyweight Animal: mouse, Animal sex: male

STOT-single exposure : May cause damage to organs (oral, inhalation). May cause respiratory irritation.

maleic acid (110-16-7)	
STOT-single exposure	May cause respiratory irritation.

methanol (67-56-1)	
STOT-single exposure	Causes damage to organs.

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

1H-imidazole (288-32-4)	
NOAEL (oral, rat, 90 days)	60 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

maleic acid (110-16-7)	
Viscosity, kinematic	Not applicable (solid)

potassium hydroxide (1310-58-3)	
Viscosity, kinematic	Not applicable (solid)

1H-imidazole (288-32-4)	
Viscosity, kinematic	No data available in the literature

formaldehyde (50-00-0)	
Viscosity, kinematic	No data available in the literature

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Harmful if swallowed,Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified

maleic acid (110-16-7)	
EC50 - Crustacea [1]	42.81 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	≈ 93.8 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	74.35 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	17.17 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	74.35 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
NOEC (chronic)	10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

potassium hydroxide (1310-58-3)	
LC50 - Fish [1]	80 mg/l (96 h; Gambusia affinis)

1H-imidazole (288-32-4)	
LC50 - Fish [1]	283.6 mg/l (48 h, Leuciscus idus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	341.5 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	133 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	133 mg/l (DIN 38412: German standard methods for the examination of water, waste water and sludge, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

formaldehyde (50-00-0)	
LC50 - Fish [1]	6.7 mg/l (96 h, Morone saxatilis, Static system, Salt water, Experimental value, Lethal)
LC50 - Fish [2]	62 (62 – 109) mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 - Crustacea [1]	5.8 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value, Locomotor effect)

formaldehyde (50-00-0)	
EC50 72h - Algae [1]	3.48 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	4.89 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	4.89 – 6.61 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)
NOEC chronic fish	≥ 48 mg/l Test organisms (species): Oryzias latipes Duration: '28 d'

methanol (67-56-1)	
LC50 - Fish [1]	15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
EC50 96h - Algae [1]	22000 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
NOEC (chronic)	208 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Aerospray® Hematology Pro Reagent A, Buffer (pH 7.2) Concentrate	
Persistence and degradability	Not established.

maleic acid (110-16-7)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.38 g O_2/g substance
Chemical oxygen demand (COD)	0.83 g O_2/g substance
ThOD	0.83 g O_2/g substance

potassium hydroxide (1310-58-3)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

1H-imidazole (288-32-4)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.

formaldehyde (50-00-0)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.64 g O_2/g substance
Chemical oxygen demand (COD)	1.06 g O_2/g substance
ThOD	1.068 g O_2/g substance

methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.

methanol (67-56-1)	
Biochemical oxygen demand (BOD)	0.6 – 1.12 g O_2/g substance
Chemical oxygen demand (COD)	1.42 g O_2/g substance
ThOD	1.5 g O_2/g substance

12.3. Bioaccumulative potential

Aerospray® Hematology Pro Reagent A, Buffer (pH 7.2) Concentrate	
Bioaccumulative potential	Not established.

maleic acid (110-16-7)	
Partition coefficient n-octanol/water (Log Pow)	-1.3 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

potassium hydroxide (1310-58-3)	
Bioaccumulative potential	Not bioaccumulative.

1H-imidazole (288-32-4)	
Partition coefficient n-octanol/water (Log Pow)	-0.02 (Weight of evidence approach, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

formaldehyde (50-00-0)	
BCF - Fish [1]	< 1 (1 h, Flow-through system, Salt water, Weight of evidence)
Partition coefficient n-octanol/water (Log Pow)	0.35 (Calculated, KOWWIN, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

methanol (67-56-1)	
BCF - Fish [1]	1 – 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	-0.77 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

maleic acid (110-16-7)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.63 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

potassium hydroxide (1310-58-3)	
Surface tension	No data available in the literature
Ecology - soil	Low potential for adsorption in soil.

1H-imidazole (288-32-4)	
Surface tension	No data available in the literature

1H-imidazole (288-32-4)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.36 – 2.32 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

formaldehyde (50-00-0)	
Surface tension	73 mN/m (20 °C, Aqueous solution, 7.5 g/l)
Ecology - soil	Not applicable (gas). Toxic to flora.

methanol (67-56-1)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-0.89 – -0.21 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

Component	
maleic acid (110-16-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
potassium hydroxide (1310-58-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
1H-imidazole (288-32-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
formaldehyde (50-00-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
methanol (67-56-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR)	:	UN 3334
UN-No. (IMDG)	:	UN 3334
UN-No. (IATA)	:	UN 3334
UN-No. (ADN)	:	UN 3334
UN-No. (RID)	:	UN 3334

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	Aviation regulated liquid, n.o.s. (Formaldehyde solution)
Proper Shipping Name (IMDG)	:	AVIATION REGULATED LIQUID, N.O.S. (Formaldehyde solution)
Proper Shipping Name (IATA)	:	Aviation regulated liquid, n.o.s. (Formaldehyde solution)
Proper Shipping Name (ADN)	:	aviation regulated liquid, n.o.s. (Formaldehyde solution)
Proper Shipping Name (RID)	:	Aviation regulated liquid, n.o.s. (Formaldehyde solution)
Transport document description (ADR)	:	UN 3334 Aviation regulated liquid, n.o.s. (Formaldehyde solution), 9
Transport document description (IMDG)	:	UN 3334 AVIATION REGULATED LIQUID, N.O.S. (Formaldehyde solution), 9
Transport document description (IATA)	:	UN 3334 Aviation regulated liquid, n.o.s. (Formaldehyde solution), 9, III
Transport document description (ADN)	:	UN 3334 aviation regulated liquid, n.o.s. (Formaldehyde solution), 9
Transport document description (RID)	:	UN 3334 Aviation regulated liquid, n.o.s. (Formaldehyde solution), 9

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 9

IMDG

Transport hazard class(es) (IMDG) : 9

Danger labels (IMDG) : 9

:

IATA

Transport hazard class(es) (IATA) : 9

Danger labels (IATA) : 9

:

ADN

Transport hazard class(es) (ADN) : 9

RID

Transport hazard class(es) (RID) : 9

14.4. Packing group

Packing group (ADR)	:	Not applicable
Packing group (IMDG)	:	Not applicable
Packing group (IATA)	:	III
Packing group (ADN)	:	Not applicable
Packing group (RID)	:	Not applicable

14.5. Environmental hazards

Dangerous for the environment	:	No
Marine pollutant	:	No
Other information	:	No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	M11
EAC code	:	2Z

Transport by sea

Special provisions (IMDG)	:	960
Stowage category (IMDG)	:	None
Properties and observations (IMDG)	:	Not subject to the provisions of this Code but may be subject to provisions governing the transport of dangerous goods by other modes.

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y964
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	964
PCA max net quantity (IATA)	:	100L
CAO packing instructions (IATA)	:	964
CAO max net quantity (IATA)	:	220L
Special provisions (IATA)	:	A27
ERG code (IATA)	:	9A

Inland waterway transport

Classification code (ADN)	:	M11

Rail transport

Classification code (RID)	:	M11

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 43	Diseases caused by formaldehyde and its polymers
RG 43 BIS	Cancerous conditions caused by formaldehyde
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).

Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 1 Entry 1. Paragraph 1) Coated and uncoated wood-based materials (chipboard, blockboard, veneer panels, and fibreboard) may not be placed on the market if the equalizing concentration of formaldehyde in the air in a test room exceeds 0.1 ml / cbm (ppm). Paragraph 2) Furniture that contains wood-based materials that do not meet the requirements of Paragraph 1 may not be placed on the market. Paragraph 1 is also deemed to have been fulfilled if the furniture complies with the equalization concentration specified in paragraph 1 during a whole-body test. Paragraph 3) Detergents, cleaning agents and care products with a mass content of more than 0.2% formaldehyde may not be placed on the market.
This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW list of carcinogenic substances : formaldehyde is listed

SZW list of mutagens : None of the components are listed

SZW list of reprotoxic substances – Breastfeeding : None of the components are listed

SZW list of reprotoxic substances – Fertility : None of the components are listed

SZW list of reprotoxic substances – Development : 1H-imidazole is listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations	:	Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant

Abbreviations and acronyms:	
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

Full text of H- and EUH-statements:	
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H370	Causes damage to organs.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
Met. Corr. 1	Corrosive to metals, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 1	Specific target organ toxicity – single exposure, Category 1
STOT SE 2	Specific target organ toxicity – Single exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Reason for change: updating to latest format.