

According to directive 1907/2006/EC,
Version 3.0 Review date: 25-01-2025
Trade name: Metal Patina Black on Aluminium

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

1.1 Product identification:

Product name: Metal Patina Black on Aluminium
UFI code: U1VE-T5MF-G20J-NRVY
Product form: Mixture
Product type: Paint
Product group: Commercial product

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

Main use category: Industrial use, Professional use
Spec. industrial/professional use: Paint
Use of the substance or mixture: Industrial
Uses advised against: Not to be used for private purposes (household).
Food, drinks and animal feed.

1.3 Details of the supplier of the safety data sheet:

Manufacturer : ASSYST bvba / A.S.O.W. bvba
Hellegatstraat 13a
2590 Berlaar
Belgium
Tel: +32 495 50 61 14 / +32 496 83 70 27
Website: www.assyst.org / www.artsuppliesonweb.com
Email: ao@assyst.org / vera.opsommer@assyst.org

1.4 Emergency phone number:

For Belgium: Call the **Poison Control Centre (070 245 245 - free)**, if not available: **02 264 96 30** (normal rate) or your doctor. In life-threatening situations, always call the European emergency number **112**.
NHS 24 Direct For help from a GP, visit your GP surgery's website, use an online service to contact your GP, or call the surgery. **For urgent medical help**, use the NHS 111 online service, or **call 111** if you are unable to get help online. **For life-threatening emergencies, call 999** for an ambulance. There is more information about getting medical help on the NHS website.

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture:

Classification according to directive (EC) No 1272/2008 and its amendments.

The product is classified according to current legislation.

Classification in accordance with Regulation (EC) No 1272/2008 as amended.

Health hazards

Acute toxicity (oral), Category 4 H302
Skin corrosion/irritation, Category 1, Subcategory 1B H314
Serious eye damage/eye irritation, Category 1 H318
Acute danger to the aquatic environment, Category 1 H400
Chronic danger to the aquatic environment, Category 1 H410
Full text of H phrases in section 16.

Adverse physicochemical, health and environmental effects

Causes severe burns and eye damage.
Harmful if swallowed.
Highly toxic to aquatic organisms, with long-term effects.

2.2 Labelling elements:

Labelling according to regulation (EC) No 1272/2008 [CLP/GHS]:

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Hazard pictograms

Signal word

Danger.

Hazardous ingredients to be declared on the label:

- copper (ii) nitrate 2,5-hydrate pure
- potassium permanganate

Hazard statements:

H302 - Harmful if swallowed.
H314 - Causes severe burns and eye damage.
H410 - Very toxic to aquatic organisms, with long-lasting effects.

Precautions

Prevention:

P273 - Avoid discharge into the environment.
P280 - Wear protective clothing, eye protection, face protection, protective gloves.

Action:

P303+P361+P353+P310 - IF ON SKIN (or hair): remove contaminated clothing immediately. Rinse/shower skin with water. Immediately consult a doctor, a POISON CENTER.
P305+P351+P338+P310 - IF CONTACT WITH EYES: Rinse cautiously with water for several minutes; remove contact lenses, if possible; continue rinsing. Immediately consult a doctor, a POISON CENTER.
P501 - Dispose of contents and packaging to a company authorised to handle hazardous waste or a centre authorised to hazardous waste, excluding cleaned empty packaging, which can be disposed of as ordinary waste.

2.3 Other hazards:

Results of PBT and vPvB assessment

The results of the assessment of the substance show that it is not a PBT or vPvB substance.

Endocrine-disrupting properties

Contains no endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

SECTION 3: Composition and information on ingredients

3.2 Mixtures:

Chemical Name	Cas no. EC No. Index number Registration number	Classification (Regulation (EC) No 1272/008)	Concentration (%)
copper (ii) nitrate 2,5-hydrate pure	(CAS No) 19004-19-4 (EC No) 221-838-5 (REACH No) 01-2119969290-34	Ox. Sol. 1, H271 With. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 ATE 940 mg/kg (oral)	2-5
potassium permanganate	(CAS No) 7722-64-7 (EC No) 231-760-3 (EU Identification-No) 025-002-00-9 (REACH No) 01-2119480139-34	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Aquatic Acute 1, H400 (Aquatic Chronic 1, H410 ATE 500 mg/kg (oral) M-Factor Aquatic Acute 1, (M=10) Aquatic Chronic 1, (M=10)	2-5
nitric acid ... %	(CAS No) 7697-37-2 (EC No) 231-714-2	Ox. Liq.3 - H272 Met. Corr.1 - H290	2-3.25

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substance with a Community workplace exposure limit	(EU Identification-No) 007-004-00-1 (REACH No) 01-2119487297-23	Acute Tox.3 Inhalation - H331 Skin Corr.1A - H314 Eye Dam.1 - H318 Specific concentration limits Skin Corr. 1A; H314 >= 20 % Skin Corr. 1B; H314 5 - < 20 % Ox. Liq. 3; H272 >= 65 % Acute toxicity estimates Acute toxicity by inhalation (vapours): 2.65 mg/l Note B GHS-HC IOELV	
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Note :

B: Some substances (such as acids and bases) are marketed as aqueous solutions of varying concentrations and these solutions must therefore be classified and labelled differently according to the hazard associated with each concentration. Where Note B is mentioned in Part 3, a general designation such as: "nitric acid ... %". In this case, the supplier must state on the label the concentration as a percentage. Unless otherwise stated, it is assumed that the concentration is calculated on the basis of the percentage by weight.

GHS-HC: Harmonised classification (the classification of the substance is according to the annotation in accordance with 1272/2008/EC, Annex VI)

IOELV: Substance with a common indicative occupational exposure limit value

For explanation of abbreviations, see section 16.

SECTION 4: First aid measures**4.1 Description of first-aid measures:****First aid general :**

Emergency workers: take care of your own protection too!

Remove contaminated clothing immediately.

At risk of unconsciousness, place and transport in stable lateral position.

First aid after inhalation :

Consult a doctor.

Breathing in fresh air.

It can be dangerous for those giving mouth-to-mouth resuscitation.

First aid after skin contact :

Consult doctor/medical service immediately.

After contact with skin, immediately remove all contaminated or soiled clothing and wash skin immediately with plenty of soap and water.

First aid after eye contact :

IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses, if possible; continue rinsing.

Protect undamaged eye.

Consult an ophthalmologist immediately.

First aid after ingestion by mouth :

Rinse mouth with water.

Consult doctor/medical service.

DO NOT induce vomiting.

Let the victim rest.

Never administer anything by mouth to an unconscious person.

4.2 Main acute and delayed symptoms and effects:

No additional information available

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4.3 Indication of immediate medical attention and special treatment required:

Treatment of symptoms (removal of contaminant, monitoring of vital signs), no specific antidote known.
Ensure adequate ventilation, especially in enclosed areas.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media:

Suitable extinguishing agents:

Dry powder. Carbon dioxide. Foam. Alcohol-resistant foam.

Unsuitable extinguishing media:

Do not use a strong water jet.

5.2 Special hazards arising from the substance or mixture:

Fire hazard:

Possible formation of hazardous fumes.

Explosion hazard:

Heat can cause pressure and the bursting of closed vessels, spreading the fire and increasing the risk of burns and injuries.

Reactivity in case of fire:

Smoking/fogging.

Possible formation of toxic gases.

Hazardous decomposition products in case of fire:

When heated: formation of harmful gases/vapours. Carbon oxides (CO, CO₂). Potassium oxides. Manganese. Formic acid.

5.3 Advice for firefighters:

Fire precautions:

Approaching with the wind.

Wear self-contained breathing apparatus.

Evacuate.

Extinguishing instructions:

Cool exposed vessels with a water spray or mist.

If possible, cool the containers/tanks/reservoirs by spraying water.

Consideration of environmentally contaminated firewater.

Protection during firefighting:

Approaching against the wind.

Autonomous breathing apparatus.

Full respirator.

Fully protective clothing.

Do not enter fire zone without suitable safety equipment, including respiratory protection.

Other information:

Do not inhale the vapours.

Avoid the product contaminating groundwater.

Do not pollute ground and surface water.

SECTION 6: Measures in case of accidental release of the substance or mixture

6.1 Personal precautions, protective equipment and emergency procedures:

General measures:

Evacuate personnel to a safe place.

Avoid contact with eyes and skin and do not inhale vapour or mist.

Ensure adequate ventilation.

Wear personal protective equipment.

Keeping upwind.

Use only after you have read and understood all safety instructions.

Plug the leak if it can be done safely.

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See chapter 8.

Contaminated work clothes must not leave the work area.

6.1.1. For persons other than emergency services

Protective equipment:

For material selection of protective clothing: see "Material-handling".

6.1.2. For the emergency services

Protective equipment:

For material selection of protective clothing: see "Material-handling".

6.2 Environmental precautions:

Environmental precautions:

Do not discharge into groundwater, surface water or the sewerage system.

For further information, see paragraph 13.

6.3 Methods and materials for containment and cleaning:

For containment:

Collect and dispose of all waste in suitable and labelled containers in accordance with locally applicable regulations.

Absorb in an absorbent product (e.g. sand, sawdust, universal binder, silica gel).

Cleaning methods:

Vacuum up large spills with a pump or Hoover.

Absorb spill liquid in absorbent including: sand, earth, vermiculite or lime.

Clean contaminated surfaces with plenty of water.

Other information:

The spilled product may be dangerously slippery.

Do not inhale the vapours.

6.4 Reference to other sections:

Reference to other sections (8, 13). SECTION 7.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling of the substance or mixture:

Additional hazards in processing:

Electrostatic charges can build up during handling.

Precautions for safe handling of the substance or mixture:

Avoid contact with eyes and skin and do not inhale vapour or mist.

Use only in well-ventilated areas.

Before using, consult the special instructions.

Use only after you have read and understood all safety instructions.

Avoid vapour formation.

Handle and open the container/packaging carefully.

Emergency eye showers and safety showers should be installed in close proximity to any place of potential exposure.

Provide a local exhaust or general ventilation of the room.

Wear personal protective equipment.

See section 8. In case of inadequate ventilation, wear respiratory protection.

Hygiene measures:

Wash hands and other exposed parts with mild soap and water before eating, drinking, smoking or leaving work.

Do not eat, drink or smoke while using this product.

Remove and wash contaminated clothing immediately before reuse.

Contaminated work clothes must not leave the work area.

Handle in accordance with good industrial hygiene and safety practices.

7.2 Conditions for safe storage, including incompatibilities:

Technical measures:

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Provide a local exhaust or general ventilation of the room.
Ensure suitable ventilation, especially in enclosed areas.
Emergency eye showers and safety showers should be installed in close proximity to any place of potential exposure.

Storage conditions:

Keep behind lock.
Store in a dry place.
Keep container tightly closed to avoid contamination and moisture absorption.
Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition.
No smoking.
All packaging should have a label warning against exposure.
Store in a safe manner in accordance with local/national regulations.

Non-combinable fabrics:

Keep away from: strong acids, strong bases and oxidising agents, water, reducing agents.

Incompatible materials:

Keep away from strong acids and strong oxidising agents.

Heat and ignition sources:

Protect from heat and direct sunlight.
No flames, no sparks.
Remove all ignition sources.

Information on mixed storage:

Separation of foodstuffs, combustible materials.

Storage:

Protect from direct sun rays.
Store in a well-ventilated place.

Special packaging requirements:

Keep only in the original packaging.
Correctly labelled.

7.3 Specific end use:

For the relevant identified use(s) in section 1, the advice in section 7 should be taken into account.

SECTION 8: Exposure controls/personal protection measures

8.1 Control parameters:

National limits

Occupational exposure limits (occupational exposure limits) - ingredient Nitric acid ... % CAS 7697-37-3

Country	Substance name	CAS No.	Identification	TGG 8h (ppm)	TGG 8h [mg/m ³]	TGG 15 min (ppm)	TGG 15 min [mg/m ³]	CW (ppm)	CW [mg/m ³]	Notation	Source
BE	nitric acid	7697-37-2	VLEP/GWBB			1	2.6				Belgian Official Journal
EU	nitric acid	7697-37-2	IOELV			1	2.6				2006/15/EC

Potassium permanganate CAS 7722-64-7

Country	Substance name	CAS No.	Identification	TGG 8 hours (mg/m ³)	TGG 15 min (mg/m ³)	CW (mg/m ³)	Notation	Source
BE	particles not elsewhere classified		VLEP/GWBB	10			i	Belgian Official Journal
EN	particles not elsewhere classified		VLEP/GWBB	3			r	Belgian Official Journal
	Manganese	7722-64-7	VLEP/GWBB	0.05			Mn, r	Belgian Official Journal
EU	manganese, inorganic compounds	7722-64-7	IOELV	0,2			Mn, i	2017/164/EU
EU	manganese, inorganic compounds	7722-64-7	IOELV	0,05			Mn, r	2017/164/EU

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Notation

CW: Ceiling value is a limit value that must not be exceeded (ceiling value)
i: Inhalable fraction
Mn: Calculated as Mn (manganese)
r: Respirable fraction
TGG 15 min: Short-time value (short-term exposure limit): limit that may not be exceeded and which applies, for a period of 15 minutes (unless otherwise stated)
TGG 8 hours: Time-weighted average (long-term exposure limit): measured or calculated from an eight-hour reference period (unless otherwise stated)

Human health values**Relevant DNEL and other threshold values - ingredient Potassium permanganate CAS 7722-64-7**

End point	Threshold	Protection objective, route of exposure	Used in	Exposure time
DNEL	0.2 mg/m ³	human, via inhalation	(industrial) employees	chronic - systemic effects

Relevant DNEL and other thresholds - ingredient Copper nitrate CAS 10031-43-3

End point	Threshold	Protection objective, route of exposure	Used in	Exposure time
DNEL	1 mg/m ³	human, via inhalation	(industrial) employees	chronic - systemic effects
DNEL	1 mg/m ³	human, via inhalation	(industrial) employees	chronic - local effects
DNEL	137 mg/kg bw/day	human, through the skin	(industrial) employees	chronic - systemic effects

Environmental values**Relevant PNEC and other thresholds - ingredient Potassium permanganate CAS 7722-64-7**

End point	Threshold	Organism	Environmental compartments	Exposure time
PNEC	0.06 µg/l	Aquatic organisms	Freshwater	short-term (one-off)
PNEC	1.64 mg/l	aquatic organisms	sewage treatment plants (STP)	short-term (one-off)

Relevant PNEC and other thresholds - component Copper nitrate CAS 10031-43-3

End point	Threshold	Organism	Environmental compartments	Exposure time
PNEC	7.8 µg/l	Aquatic organisms	Freshwater	short-term (one-off)
PNEC	5.2 µg/l	aquatic organisms	Seawater	short-term (one-off)
PNEC	230 µg/l	aquatic organisms	sewage treatment plants (STP)	short-term (one-off)
PNEC	87 mg/kg	aquatic organisms	Freshwater sediment	short-term (one-off)
PNEC	676 mg/kg	aquatic organisms	Sea water sediment	short-term (one-off)
PNEC	65 mg/kg	terrestrial organisms	Bottom	short-term (one-off)

8.2 Exposure control measures:**Individual protection measures (personal protective equipment)****Eye/face protection**

Wear safety goggles with side protection.

Skin protection**Hand protection**

Wear suitable gloves.

Suitable are EN 374-tested gloves against chemicals.

Determine leak tightness/impermeability before use.

It is recommended that, in case of special applications, the chemical resistance of the safety gloves mentioned above be checked together with the supplier of the gloves.

Times are estimated values from measurements at 22°C and permanent contact.

Increased temperatures due to heated fabrics, body heat, etc.

And a reduction in effective layer thickness due to stretching can lead to a significant reduction in breakthrough time.

If in doubt, contact the manufacturer.

For a layer thickness approximately 1.5 times larger / smaller, the respective breakthrough time is doubled / halved.

The data applies only to the pure substance.

When transferred to mixtures of substances, they should only be considered as guidelines.

Material : Natural rubber

Breakthrough time : > 480 min

Glove thickness : 0.5 mm

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Material : Polychloroprene

Breakthrough time : > 480 min

Glove thickness : 0.5 mm

Material : butyl rubber

Breakthrough time : > 480 min

Glove thickness : 0.5 mm

Material : Fluorinated rubber

Breakthrough time : > 480 min

Glove thickness : 0.4 mm

Material : Polyvinyl chloride

Breakthrough time : > 480 min

Glove thickness : 0.5 mm

Other protective equipment

Insert rest periods for skin regeneration.

Preventive skin protection (skin-protective creams) is recommended.

Protection of respiratory organs

Respiratory protection is necessary in case of: Dust generation.

Particle filter (EN 143).

P2 (filters at least 94% of air particles, colour code: white).

Managing environmental exposure

Avoid getting the product into drains, surface water or groundwater.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical state:	Liquid
Appearance:	Liquid.
Colour:	Light blue.
Smell:	Characteristic odour.
Odour threshold:	Not determined due to potential health hazard by inhalation
Melting point :	Not applicable
Freezing point :	not determined
Boiling point :	not determined
Flammability :	not determined
Explosive properties :	Non-flammable.
Oxidising properties :	Based on its structure, this product is classified as non-explosive.
Explosion limits :	Due to its structure, the product is classified as non-oxidising.
Lower explosion limit (OEL) :	not determined
Upper explosion limit (BEG) :	Not available
Flash point :	Not available
Self-ignition temperature :	Not applicable
Decomposition temperature :	Not applicable
SADT :	not determined
pH :	not established
pH solution :	not determined
Viscosity, kinematic :	not determined
Viscosity, dynamic :	not determined
Solubility : Water:	not determined
Partition coefficient n-octanol/water (Log Kow) :	Not available

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Partition coefficient n-octanol/water (Log Pow) :	not established
Vapour pressure :	not determined
Vapour pressure at 50°C :	not determined
Density :	not determined
Relative density :	not determined
Relative vapour density at 20°C :	not determined
Particle size :	Not applicable
Particle size distribution :	Not applicable
Form of particles :	Not applicable
Aspect ratio particles :	Not applicable
Particulate aggregation state :	Not applicable
Particle agglomeration state :	Not applicable
Specific particle surface size :	Not applicable
Particle dust formation :	Not applicable

9.2 Other information

Information on physical hazard classes

No additional information available

Other safety features

Relative evaporation rate (butyl acetate=1) :	not determined
VOC content:	not determined
Other properties	Where necessary, information on other physical and chemical parameters is given in this .
Additional information :	No further information available.

SECTION 10: Stability and reactivity

10.1 Reactivity:

Stable under normal conditions.

10.2 Chemical Stability:

Stable under normal conditions.

10.3 Potential Hazardous Reactions:

May decompose on exposure to high temperature, releasing toxic fumes.

Reacts with: Strong acid.

Reacts violently with bases. water.

10.4 Conditions to avoid:

Keep away from heat sources and direct sunlight.

No flames, no sparks.

Remove all ignition sources.

10.5 Chemically interacting Materials:

Acids and bases.

Strong oxidising agents.

10.6 Hazardous Decomposition Products:

No hazardous decomposition products if storage and handling instructions/indication are observed. zinc oxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Acute toxicity (oral):

Harmful if swallowed.

Acute toxicity (dermal):

Not classified (Based on available data; classification criteria not met)

Acute toxicity (inhalation):

Not classified (Based on available data; classification criteria not met)

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ATE CLP (oral) :
896,972 mg/kg body weight

Components

copper (ii) nitrate 2,5-hydrate pure (19004-19-4)

Acute toxicity

Harmful if swallowed.

Route of exposure	End point	Value	Species	Method	Source
Oral	LD50	940 mg/kg	Rat		TOXNET

nitric acid ... % (7697-37-2)

Acute toxicity

Toxic by inhalation.

Route of exposure	End point	Value	Species	Method	Source
inhalation: vapour	LC50	>2.65 mg/l/4h	Rat		

potassium permanganate (7722-64-7)

Acute toxicity

Harmful if swallowed.

Route of exposure	End point	Value	Species	Method	Source
Oral	LD50	>2,000 mg/kg	Rat		ECHA
Dermal	LD50	>2,000 mg/kg	Rat		ECHA

Skin corrosion/irritation:

Causes severe burns.

pH: not determined

Serious eye damage/eye irritation:

Causes serious eye damage.

pH: not determined

Respiratory/skin sensitisation:

Not classified (Based on available data; classification criteria not met)

Mutagenicity in gametes:

Not classified (Based on available data; classification criteria not met)

Carcinogenicity:

Not classified (Based on available data; classification criteria not met)

Reproductive toxicity:

Not classified (Based on available data; classification criteria not met)

potassium permanganate (7722-64-7)

Suspected of harming the unborn child.

CMR National regulations

List of carcinogenic, mutagenic, and reprotoxic substances (SZW list)

Name of substance	CAS No.	Carcinogenicity	Mutagenicity	Reproductive toxicity
Potassium permanganate	7722-64-7			repr D2
Potassium permanganate				repr F2 D2

Legend

D2: Category 2 development

F2: Fertility category 2

repr: Listed in "NON-limiting list of substances toxic for reproduction"

STOT on single exposure:

Not classified (Based on available data; classification criteria not met)

STOT on repeated exposure:

Not classified (Based on available data; classification criteria not met)

potassium permanganate (7722-64-7)

May cause organ (brain) damage with prolonged or repeated exposure (after inhalation).

Hazard category	Target organ	Route of exposure
2	Brain	After inhalation

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Aspiration hazard:

Not classified (Based on available data; classification criteria not met)

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Viscosity, kinematic :

not established

11.2 Additional information

Contains no endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

11.3 Information on other hazards

There is no further information.

SECTION 12: Ecological information**Potential adverse effects on human health and possible symptoms:**

Causes severe burns and eye damage, harmful if swallowed.

Other information :

The product has not been tested. The statement is derived from substance/products with similar structure or composition. No experimental studies on the are available. The information provided is based on our knowledge of the ingredients and the classification of the product was determined from calculations.

12.1 Toxicity:**Ecology - general:**

Highly toxic to aquatic organisms, with long-term effects.

Ecology - air:

Not hazardous to the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water:

Product must not enter the environment. Highly toxic to aquatic organisms, with long-lasting effects.

Short-term hazard to the aquatic environment (acute):

Highly toxic to aquatic organisms.

Aquatic hazard, long-term (chronic):

Highly toxic to aquatic organisms, with long-term effects.

Additional information:

No experimental studies on the product are available. The information provided is based on our knowledge of the ingredients and the classification of the product was determined by calculations.

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Additional information:

The product was not examined.

The information is derived from the properties of the individual components.

copper (ii) nitrate 2,5-hydrate pure (19004-19-4)

Highly toxic to aquatic organisms, with long-term effects.

Aquatic toxicity (acute)

End point	Value	Species	Source	Exposure time
LC50	193 µg/l	Fish	ECHA	96 h

potassium permanganate (7722-64-7)

Highly toxic to aquatic organisms, with long-term effects.

Aquatic toxicity (acute)

End point	Value	Species	Source	Exposure time
LC50	0.47 mg/l	Fish	ECHA	96 h
EC50	0.06 mg/l	aquatic invertebrates	ECHA	48 h
ErC50	0.8 mg/l	Alg	ECHA	72 h

Aquatic toxicity (chronic)

End point	Value	Species	Source	Exposure time
E50	164 mg/l	micro-organisms	ECHA	3 h

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Not established.

12.3 Bioaccumulation:

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Partition coefficient n-octanol/water (Log Pow):

not established

Bioaccumulation:

This product has not been tested for environmental impact.

potassium permanganate (7722-64-7)

Does not concentrate significantly in organisms.

BCF: -1.73 (Calc.)

12.4 Mobility in soil:

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Ecology - soil:

No specific data.

12.5 Results of PBT and vPvB assessment:

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Does not contain any PBT/vPvB substance at a concentration of $\geq 0.1\%$.

12.6 Endocrine disrupting properties

Contains no endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

12.7 Other adverse effects

Avoid discharge into the environment.

No experimental research on the product is available.

The information provided is based on our knowledge of the ingredients and the classification of the product is determined by calculations.

SECTION 13: Disposal instructions

13.1 Waste treatment methods:

Dispose of this substance and its packaging as hazardous waste.

Dispose of contents/packaging in accordance with local/regional/national/international regulations.

Information regarding wastewater discharge

Do not throw waste in the sink.

Avoid discharge into the environment.

Ask for special instructions/safety card.

Waste treatment of containers/packaging

It is hazardous waste; only approved packaging (e.g. in accordance with ADR) may be .

Contaminated packaging can be treated like the substance itself. Fully emptied packaging can be recycled.

Relevant provisions on waste prevention

The allocation of waste key numbers/waste markings should be industry- and process-specific in accordance with AVV.

Hazardous properties of waste

HP 4 irritant - skin irritation and eye damage

HP 6 acute toxicity

HP 14 ecotoxic

Comments

Waste is separated into the categories that can be treated separately by local or national waste management services.

Please note the relevant national or regional provisions.

Uncontaminated and completely empty containers can be used again.

SECTION 14: Information relating to transport

14.1 UN number

UN no (ADR) :

UN 1760

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UN No (IMDG) : UN 1760
UN No (IATA) : UN 1760
UN No (ADN) : UN 1760
UN No (RID) : UN 1760

14.2 Proper cargo name according to UN model regulations

Official shipping name (ADR) : CORROSIVE LIQUID, N.O.S.
Official transport name (IMDG) : CORROSIVE LIQUID, N.O.S.
Official transport name (IATA) : Corrosive liquid, n.o.s.
Official transport name (ADN) : CORROSIVE LIQUID, N.O.S.
Official transport name (RID) : CORROSIVE LIQUID, N.O.S.
Transport document description (ADR) : UN 1760 CORROSIVE LIQUID, N.O.S. (Containing potassium permanganate), 8, II, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG) : UN 1760 CORROSIVE LIQUID, N.O.S., 8, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA) : UN 1760 Corrosive liquid, n.o.s., 8, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN) : UN 1760 CORROSIVE LIQUID, N.O.S., 8, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID) : UN 1760 CORROSIVE LIQUID, N.O.S., 8, II, ENVIRONMENTALLY HAZARDOUS

14.3 Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8

IMDG

Transport hazard class(es) (IMDG) : 8

IATA

Transport hazard class(es) (IATA) : 8

ADN

Transport hazard class(es) (ADN) : 8

RID

Transport hazard class(es) (RID) : 8

14.4 Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5 Environmental hazards

Environmentally hazardous : Yes
Marine pollution : Yes
Other information : No additional information available

14.6 Special precautions for the user

Road transport

Classification code (ADR) : C9
Special provision (ADR) : 274
Limited quantities (ADR) : 1I
Exempt quantities (ADR) : E2
Packaging instructions (ADR) : P001, IBC02
Regulations on mixed packing (ADR) : MP15
Instructions for transport tanks and Bulk containers (ADR) : T11

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Special provisions for transport

tanks and bulk containers (ADR): TP2, TP27
Tank code (ADR): L4BN
Tank transport vehicle: AT
Transport category (ADR): 2
Hazard identification number (Kemler no.): 80

80
1760

Orange identification sign:

Code for restrictions in tunnels (ADR): E

Transport at sea

Special Provision (IMDG): 274
Limited quantities (IMDG): 1 L
Excepted quantities (IMDG): E2
Packing instructions (IMDG): P001
Packing instructions IBC (IMDG): IBC02
Instructions for tanks (IMDG): T11
Special provisions for tanks (IMDG): TP2, TP27
No NS (Fire): F-A
No NS (Waste): S-B
Stowage category (IMDG): B
Stowage and handling (IMDG): SW2
Measures and observations (IMDG): Causes burns to skin, eyes and mucous membranes.
MFAG-Nr: 127;128

Air transport

PCA Expected quantities (IATA): E2
PCA Limited quantities (IATA): Y840
PCA limited quantity max. net Quantity (IATA): 0.5L
PCA packaging requirements (IATA): 851
PCA max. net quantity (IATA): 1L
CLA packaging requirement (IATA): 855
CLA max. net quantity (IATA): 30L
Special provision (IATA): A3, A803
ERG (IATA) code: 8L

Transport on inland waters

Classification code (ADN): C9
Special provision (ADN): 274
Limited quantities (ADN): 1 L
Exceptional quantities (ADN): E2
Equipment required (ADN): PP, EP
Number of blue cones/lights (ADN): 0

Rail transport

Classification code (RID): C9
Special provision (RID): 274
Restricted quantities (RID): 1L
Exceptional quantities (RID): E2
Packaging instructions (RID): P001, IBC02
Special rules for joint packaging (RID): MP15
Instructions for transport tanks and bulk
Containers (RID): T11

Special provisions for transport tanks and

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bulk containers (RID): TP2, TP27
Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 2
Express pack (RID) : CE6
Hazard identification number (RID) : 80

14.7 Transport in bulk in accordance with Annex II to MARPOL 73/78 and the IBC Code

Not applicable for product, as delivered.

SECTION 15: Statutory information

15.1 Safety, health and environmental regulations and legislation specific to the substance or mixture:

Relevant European Union (EU) provisions

Restrictions in accordance with REACH, Annex XVII

Restricted hazardous substances (REACH, Annex XVII)

Name of substance	Name according to inventory	CAS No.	Restriction	No.
Nitric acid	This product meets the classification criteria of Regulation No 1272/2008/EC		R3	3
Nitric acid ...% [C ≤ 70 %].	substances in ink for tattoo or permanent make-up		R75	75
Potassium permanganate	substances in ink for tattoo or permanent make-up		R75	75
Copper (II) nitrate trihydrate	substances in ink for tattoo or permanent make-up		R75	75

Legend

R3

1. May not be used:

- ✓ in decorative objects intended to obtain light or colour effects by different phases, for example in mood lamps and ashtrays,
- ✓ in charades and fop articles,
- ✓ in games for one or more persons or in any object intended to be used as such, even if it acts as an ornamental object.

2. Articles not complying with point 1 shall not be placed on the market.

3. May not be placed on the market if they contain a dye, unless required for fiscal reasons, or a fragrance or both, and if they:

- ✓ can be used as fuel in decorative oil lamps intended for the general public, and
- ✓ are hazardous by inhalation and are labelled with H304.

4. Decorative oil lamps intended for the general public may be placed on the market only if they conform to the European standard on decorative oil lamps adopted by the European Committee for Standardisation (CEN) (EN 14059).

5. Without prejudice to the application of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure that products comply with the following requirements before they are placed on the market:

- a) lamp oils marked with H304 and intended for the general public shall visibly, legibly and indelibly bear the following statements: "Keep lamps filled with this liquid out of the reach of children"; and, no later than 1 December 2010, "A small sip of lamp oil - or even just sucking on the wick of lamps - can cause life-threatening lung damage";
- b) barbecue lighter fluids labelled with H304 and intended for the general public must be legibly and indelibly marked no later than 1 December 2010 with the following statement: "A small sip of lighter fluid may cause life-threatening lung damage";
- c) lamp oils and barbecue lighter fluids marked H304 and intended for the general public shall be packaged in black opaque containers of no more than 1 litre by 1 December 2010.

R75

1. Shall not be placed on the market in mixtures for tattooing purposes, and mixtures containing such substances shall not be used for tattooing purposes after 4 January 2022 if the substance(s) in question is/are present or if the following circumstances occur:

- a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogenic category 1A, 1B or 2, or as germ cell mutagenic category 1A, 1B or 2, the concentration of that substance in the mixture is equal to or greater than 0.00005 % by weight;
- b) in the case of a substance classified as toxic to reproduction category 1A, 1B or 2 in Part 3 of Annex VI to Regulation (EC) No 1272/2008, the concentration of that substance in the mixture is equal to or greater than 0.001 % by weight;
- c) in the case of a substance classified as a category 1, 1A or 1B skin allergen in Part 3 of Annex VI to Regulation (EC) No 1272/2008, the concentration of that substance in the mixture is equal to or greater than 0.001 % by weight;
- d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as corrosive to the skin, category 1, 1A, 1B or 1C, or irritant to the skin, category 2, or for serious eye damage, category 1 or irritant to the eyes, category 2, the concentration of that substance in the mixture is equal to or greater than:
 - i. 0.1 % by weight, if the substance is used solely as a pH regulator;
 - ii. 0.01% by weight, in all other cases;
- e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), a concentration in the mixture equal to or greater than 0,00005 % by weight; in the case of a substance for which column g (Product type, body parts) of the table in Annex IV to Regulation (EC) No 1223/2009 indicates one or more of the following types of conditions, the concentration of the substance in the mixture equal to or greater than 0,00005 % by weight:
 - i. "Products washed off, out or away";
 - ii. "Do not use in products applied to mucous membranes";

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- iii. "Do not use in eye products";
- f) in the case of a substance for which a condition is specified in column h (Maximum concentration in the product ready for use) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the concentration of the substance in the mixture does not meet the condition specified in that column, or the substance otherwise fails to meet it;
- g) in the case of a substance listed in Appendix 13 to this Annex, the concentration of the substance in the mixture is equal to or greater than the concentration limit specified for that substance in that Appendix.
2. For the purposes of this entry, the use of a mixture "for tattooing purposes" means the injection or insertion of the mixture into the skin, mucous membranes or eyeball of a person by means of a process or procedure (including procedures commonly referred to as "permanent make-up", cosmetic tattooing, "microblading" and "micropigmentation"), for the purpose of leaving a permanent mark(s) or drawing on that person's body.
3. Where a substance not listed in Appendix 13 falls under more than one of items (a) to (g) of paragraph 1, the most stringent of the concentration limits set out in those items shall apply to that substance. Where a substance listed in Appendix 13 also falls under one or more of items (a) to (g) of paragraph 1, the concentration limit set out in paragraph 1(h) shall apply to that substance.
4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
- Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
 - Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 and thereby classifies or reclassifies a substance in such a way that it falls under (a), (b), (c) or (d) of paragraph 1 of this entry, or under a different entry than before, and if the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall be treated, for the purposes of applying this entry to that substance, as applying on the date of application of that new or revised classification.
6. Where the entry of a substance in Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 such that the substance falls under (e), (f) or (g) of point 1 of this entry, or under a different point than before, and if the amendment takes effect after the date referred to in point 1 or, as the case may be, point 4 of this entry, that amendment shall be treated, for the purposes of applying this entry to that substance, as taking effect from the date falling 18 months after the entry into force of the act which adopted that amendment.
7. Suppliers placing a mixture on the market for tattooing purposes after 4 January 2022 shall ensure that the following information is indicated on the mixture:
- the text "Mixture for use in tattoos or permanent make-up";
 - a unique batch identification reference number;
 - the list of ingredients according to the nomenclature defined in the glossary of common ingredient names in accordance with Article 33 of Regulation (EC) No 1223/2009, or, in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC designation, the CAS and EC number. Ingredients shall be listed in descending order of weight or volume of ingredients at the time of formulation. Ingredient means any substance added during the formulation of the mixture for tattooing purposes and present therein. Impurities are not considered ingredients. Where the name of a substance used as an ingredient within the meaning of this entry must already be indicated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient need not be indicated in accordance with this Regulation;
 - the additional entry "pH regulator" for substances covered by paragraph 1(d)(ii);
 - the statement "Contains nickel. May cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;
 - the statement "Contains hexavalent chromium (VI). May cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;
 - safety precautions for use, if not already required to be indicated on the label in accordance with Regulation (EC) No 1272/2008. The information shall be clearly visible, easily legible and indelible. The information shall appear in the official language(s) of the Member State(s) where the mixture is marketed, unless otherwise specified by the Member State(s) concerned. If there is not enough space on the packaging for the information referred to in the first subparagraph, that information shall, except as regards point (a), be included in the instructions for use. The person administering the mixture shall provide the information specified on the packaging or in the instructions for use in accordance with this point to the person undergoing the procedure before the mixture is used for tattooing purposes.
8. Mixtures without the text "Mixture for use in tattoos or permanent make-up" shall not be used for tattooing purposes.
9. This entry does not apply to substances which are gases at a temperature of 20 °C and pressure of 101.3 kPa, or which generate a vapour pressure greater than 300 kPa at a temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).
10. This entry does not apply to the placing on the market or use of mixtures for tattooing purposes that are placed on the market or used exclusively as medical devices or accessories to a medical device within the meaning of Regulation (EU) 2017/745. Where a mixture has not been placed on the market or cannot be used exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and the requirements of this Regulation apply cumulatively.

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

not listed

Seveso Directive

2012/18/EU (Seveso III)

No.	Hazardous substance/hazard categories	Thresholds (tonnes) for application of requirements for lower and upper-tier establishments	Nuts
E1	environmental hazards (danger to the aquatic environment, cat.1)	100 - 200	56)

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H2	acutely toxic (cat. 2 + cat. 3. inhal.)	50 - 200	41)
P8	oxidising liquids and solids	50 - 200	55)

Notation

- 41) Category 2, all exposure routes
Category 3, inhalation exposure route
55) Oxidising liquids of category 1, 2 or 3, or oxidising solids of category 1, 2 or 3
56) Hazardous to the aquatic environment in category Acute 1 or Chronic 1

Decopaint Directive

VOC content: 0 %

Directive on industrial emissions (IE Directive)

VOC content: 0 %

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

Not stated.

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Not stated.

Water framework directive (WFD)

List of pollutants (WFD)

Name of substance	Name according to inventory	CAS No.	Included in	Comments
Copper sulphate pentahydrate	Substances and preparations, or their degradation products, which have been shown to possess carcinogenic or mutagenic properties or properties which may cause effects in or via the aquatic environment on steroidogenic functions, thyroid functions, reproduction or other hormonal functions		a)	
Copper sulphate pentahydrate	Metals and metal compounds		a)	
Potassium permanganate	Substances and preparations, or their degradation products, which have been shown to possess carcinogenic or mutagenic properties or properties which may cause effects in or via the aquatic environment on steroidogenic functions, thyroid functions, reproduction or other hormonal functions		a)	
Potassium permanganate	Metals and metal compounds		a)	
Copper (II) nitrate trihydrate	Substances contributing to eutrophication (especially nitrates and phosphates)		a)	
Copper (II) nitrate trihydrate	Substances and preparations, or their degradation products, which have been shown to possess carcinogenic or mutagenic properties or properties which may cause effects in or via the aquatic environment on steroidogenic functions, thyroid functions, reproduction or other hormonal functions		a)	
Copper (II) nitrate trihydrate	Metals and metal compounds		a)	

Legend

(a) Indicative list of the main pollutants

Regulation on marketing and use of explosives precursors

Restricted explosives precursors						
Name of substance	CAS No.	Weight. %	Registration Type	Comments	Limit value	Upper limit value for the purpose of authorisation Article 53)
Nitric acid ...% [C ≤ 70 %].	7697-37-2	69	Annex I		3 % w/w	10 % w/w
Potassium permanganate	7722-64-7	100	Classification Category 2b		100 kg	

Legend

Annex I Substances which shall not be made available to members of the general public on their own, or in mixtures or substances containing them, unless the concentration is equal to or lower than the limits given below

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If the product is passed on to third parties, in accordance with Article 7 "Supply chain notification" of Regulation EU 2019/1148, the information obligation is subject to the entire supply chain and all other provisions mentioned in Article 7 on restricted and controlled commodities.

Regulation on drug precursors

Not stated.

Regulation on ozone-depleting substances

Not stated.

Regulation on export and import of dangerous chemicals (PIC)

Not stated.

Regulation on persistent organic pollutants (POPs)

Not stated.

Other information

Directive 94/33/EC on the protection of young people at work. Observe work restrictions in accordance with the Pregnancy Directive (92/85/EEC) for expectant or nursing mothers.

United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances

Name of substance	CAS No.	Included in	HS code
Potassium permanganate	7722-64-7	Table I	2841.61

National inventories

Country	List	Status
AU	AIIC	substance is mentioned
CA	DSL	substance is mentioned
CN	IECSC	substance is mentioned
EU	ECSI	substance is mentioned
EU	REACH Reg.	substance is mentioned
JP	CSCL-ENCS	substance is mentioned
KR	KECI	substance is mentioned
MX	INSQ	substance is mentioned
NZ	NZIoC	substance is mentioned
PH	PICCS	substance is mentioned
TW	TCSI	substance is mentioned
US	TSCA	substance is listed (ACTIVE)
UN	NCI	substance is mentioned

Legend

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

15.2 Chemical safety assessment:

No chemical safety assessment has been carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Aligning with regulation: Regulation (EC) No 1907/2006 (REACH), amended by 2020/878/EU.

Section 2.3:

Endocrine-disrupting properties: Contains no endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

Heading 15.1:

National inventories: change in listing (table).

List of pollutants (WFD): change in the list (table).

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Other information: Directive 94/33/EC on the protection of young people at work. Observe work restrictions in accordance with the Pregnancy Directive (92/85/EEC) for expectant or nursing mothers.

Integral text of sentences H and EUH:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Acute hazard to the aquatic environment, Category 1
Aquatic Chronic 1	Chronic danger to the aquatic environment, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
With. Corr. 1	Corrosive to metals, Category 1
Ox. Liq. 2	Oxidising liquids, Category 2
Ox. Sol. 1	Oxidising solids, Category 1
Ox. Sol. 2	Oxidising solids, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Subcategory 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Subcategory 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Subcategory 1C
H271	May cause fire or explosion; highly oxidising.
H272	May promote fire; oxidising.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic organisms.
H410	Highly toxic to aquatic organisms, with long-lasting effects.

Abbreviations

ADN:	Accord européen relatif au transport internationale des marchandises Dangereuses par voies de navigation Intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR:	Accord relatif au transport internationale des marchandises Dangereuses par route (Agreement on the international carriage of dangerous goods by road)
ADR/RID/ADN:	Agreements on the international carriage of dangerous goods by road/rail/inland waterway (ADR/RID/ADN)
ATE:	Acute toxicity estimate
CAS:	Chemical Abstracts Service (database for chemicals and their unique number, the CAS registration number)
CLP:	Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging (CLP) of substances and mixtures.
CMR:	Carcinogenic, Mutagenic or Reproductive toxicity
DGR:	Dangerous Goods Regulations, regulations for the transport of dangerous goods, see IATA/DGR
DNEL:	Derived No-Effect Level.
EC No.:	the EC register (EINECS, ELINCS and the NLP register) is the source for the seven-digit EC number as a prefix for substances (European Union)
ED:	Endocrine disruptor
EINECS:	European Inventory of Existing Commercial Chemical Substances.
ELINCS:	European List of Notified Chemical Substances
EmS:	Emergency Schedule (contingency plan)
GHS:	"Globally Harmonised System of Classification and Labelling of Chemicals", developed by the United Nations

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IATA:	International Air Transport Association
IATA/DGR:	Dangerous Goods Regulations (DGR) for aviation (IATA)
ICAO:	International Civil Aviation Organisation.
ICAO-TI:	Technical instructions for the safe transport of dangerous goods by air.
IMDG:	International Maritime Dangerous Goods Code (IMDG code)
IMDG Code:	International Maritime Dangerous Goods Code
LC50:	Lethal concentration 50 %: is the concentration value in air of the material at which 50 % of the test objects die during a specified time interval
LD50:	Lethal dose 50 %: the LD50 corresponds to the dose of a tested substance at which 50 % of the test subjects die during a specified time interval
NLP:	No-Longer Polymer
PBT:	Persistent, Bioaccumulative and Toxic
PNEC:	Predicted no-effect concentration
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)
SVHC:	Substance of very high concern
VOCS:	Volatile organic compounds
vPvB:	Very persistent and very bioaccumulative

Further information

Training advice:
Provide proper information, instruction and training for users.

Data sources:

Manufacturer/supplier: ASSYST bvba
Formatting: Quick.MSDS Sprl - Belgium info@quickmsds.de +32 (0) 479 469 465.

Training advice:

Normal use of this product involves only use as described on the product packaging. Before using consult the special instructions. Only use after reading and understanding all safety instructions.

Other information:

No additional information available. This safety data sheet has been prepared in accordance with the applicable European Directives and is applicable in all countries that have transposed these directives into their own legislation.

MSDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the application of health, safety and environmental aspects. It should therefore not be construed as a guarantee of any specific property of the product.