

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

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

1.1 Product identifier

Trade name

79000-00104, ink, white

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

Relevant identified uses of the substance or mixture

printer's ink
Ink

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

Paul Leibinger GmbH & Co. KG
Daimlerstrasse 14
78532 Tuttlingen

Telephone no. +49 (0)7461 9286 0

Fax no. +49 (0)7461 9286 119

e-mail info@leibinger-group.com

Advice on Safety Data Sheet

sdb_info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Eye Irrit. 2; H319

Flam. Liq. 2; H225

STOT SE 3; H336

Classification information

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements

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

Hazard pictograms



GHS02



GHS07

Signal word

Danger

Hazardous component(s) to be indicated on label:

butanone

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Hazard statement(s)

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

Hazard statements (EU)

EUH066 Repeated exposure may cause skin dryness or cracking.
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/ equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P261 Avoid breathing mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378 In case of fire: Use sand, fire powder, carbon dioxide or foam to extinguish.

2.3 Other hazards

PBT assessment
No data available.

vPvB assessment
No data available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable. The product is not a substance.

3.2 Mixtures**Hazardous ingredients**

No	Substance name	Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration %
1	butanone		
	78-93-3 201-159-0 606-002-00-3 01-2119457290-43	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	>= 25.00 - < 50.00 wt%
2	ethanol		
	64-17-5 200-578-6 603-002-00-5 01-2119457610-43	Flam. Liq. 2; H225 Eye Irrit. 2; H319	>= 10.00 - < 25.00 wt%
3	titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]		
	13463-67-7 236-675-5 022-006-00-2 -	Carc. 2; H351i	>= 10.00 - < 15.00 wt%
4	ethyl-acetate		
	141-78-6 205-500-4 607-022-00-5 01-2119475103-46	EUH066 Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	>= 5.00 - < 10.00 wt%
5	1-methoxy-2-propanol		

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

	107-98-2 203-539-1 603-064-00-3 01-2119457435-35	Flam. Liq. 3; H226 STOT SE 3; H336	< 5.00	wt%
6	propan-2-ol			
	67-63-0 200-661-7 603-117-00-0 01-2119457558-25	Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	< 2.50	wt%
7	sodium perchlorate		pls. refer to footnote (2)	
	7601-89-0 231-511-9 017-010-00-6 01-2119540521-50	Ox. Sol. 1; H271 Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT RE 2; H373o	< 2.50	wt%

Full Text for all H-phrases and EUH-phrases: pls. see section 16

(2) According to the latest state of knowledge and applying the criteria set out in annex I to Regulation (EC) No 1272/2008, the aforementioned classification is required. This classification goes beyond the classification set out in table 3, Annex VI to Regulation (CE) No 1272/2008.

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
2	-	Eye Irrit. 2; H319: C >= 50%	-	-
3	V, W, 10	-	-	-

Full text for the notes: pls. see section 16 "Notes relating to the identification, classification and labelling of substances ((EC) No 1272/2008, Annex VI)".

No	Route, target organ, concrete effect
3	H351i inhalational; -; -
7	H373o oral; -; -

3.3 Other information

Sodium perchlorate can be found either anhydrous (CAS 7601-89-0, EG 231-511-9) or as monohydrate (CAS 7791-07-3).

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. In case of persisting adverse effects, consult a physician.

After inhalation

Remove affected persons from dangerous area by observing suitable respiratory protection measures. Ensure supply of fresh air.

After skin contact

In case of contact with skin wash off with water.

After eye contact

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Get medical attention if pain still persists.

After ingestion

Rinse the mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

Trade name: 79000-00104, ink, white**Current version :** 1.2.0, issued: 26.01.2022**Replaced version:** 1.1.0, issued: 07.12.2021**Region:** GB**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**Alcohol resistant foam, CO₂, powders, water spray**Unsuitable extinguishing media**

High power water jet

5.2 Special hazards arising from the substance or mixtureIn the event of fire, the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO); chlorine compounds**5.3 Advice for firefighters**

Use self-contained breathing apparatus. Wear protective clothing. Containers close to fire should be transferred to a safe place. Cool closed containers exposed to fire with water.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Keep away from ignition sources.

For emergency responders

Personal protective equipment (PPE) - see section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances.

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Do not inhale vapours. Avoid contact with eyes and skin. Wash hands before breaks and after work. Remove contaminated clothing and shoes and launder thoroughly before reusing.

Advice on protection against fire and explosion

Keep away from ignition sources and provide for good ventilation. Vapours can form an explosive mixture with air. Isolate from sources of heat, sparks and open flame. Take precautionary measures against electrostatic loading (earthing necessary during loading operations). Use explosion-proof equipment/fittings and non-sparking tools.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

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

Recommended storage temperature

Value 10 - 25 °C

Requirements for storage rooms and vessels

Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

of same material as the original.

Incompatible products

Substances to be avoided, see section 10.

7.3 Specific end use(s)

Recommendations

Ink for industrial CIJ printers

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
	2000/39/EC		
	Butanone		
	WEL short-term (15 min reference period)	900 mg/m ³	300 ppm
	WEL long-term (8-hr TWA reference period)	600 mg/m ³	200 ppm
	List of approved workplace exposure limits (WELs) / EH40		
	Butan-2-one		
	WEL short-term (15 min reference period)	899 mg/m ³	300 ppm
	WEL long-term (8-hr TWA reference period)	600 mg/m ³	200 ppm
	Comments	Sk, BMGV	
2	ethanol	64-17-5	200-578-6
	List of approved workplace exposure limits (WELs) / EH40		
	Ethanol		
	WEL long-term (8-hr TWA reference period)	1920 mg/m ³	1000 ppm
3	titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	13463-67-7	236-675-5
	List of approved workplace exposure limits (WELs) / EH40		
	Titanium dioxide		
	total inhalable dust		
	WEL long-term (8-hr TWA reference period)	10 mg/m ³	
	List of approved workplace exposure limits (WELs) / EH40		
	Titanium dioxide		
	respirable dust		
	WEL long-term (8-hr TWA reference period)	4 mg/m ³	
4	ethyl acetate	141-78-6	205-500-4
	2017/164/EU		
	Ethyl acetate		
	WEL short-term (15 min reference period)	1468 mg/m ³	400 ppm
	WEL long-term (8-hr TWA reference period)	734 mg/m ³	200 ppm
	List of approved workplace exposure limits (WELs) / EH40		
	Ethyl acetate		
	WEL short-term (15 min reference period)		400 ppm
	WEL long-term (8-hr TWA reference period)		200 ppm
5	1-methoxy-2-propanol	107-98-2	203-539-1
	2000/39/EC		
	1-Methoxypropanol-2		
	WEL short-term (15 min reference period)	568 mg/m ³	150 ppm
	WEL long-term (8-hr TWA reference period)	375 mg/m ³	100 ppm
	Skin resorption / sensibilisation	Skin	
	List of approved workplace exposure limits (WELs) / EH40		
	1-Methoxypropan-2-ol		
	WEL short-term (15 min reference period)	560 mg/m ³	150 ppm
	WEL long-term (8-hr TWA reference period)	375 mg/m ³	100 ppm

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Comments	Sk
6 propan-2-ol	67-63-0 200-661-7
List of approved workplace exposure limits (WELs) / EH40	
Propan-2-ol	
WEL short-term (15 min reference period)	1250 mg/m ³ 500 ppm
WEL long-term (8-hr TWA reference period)	999 mg/m ³ 400 ppm

DNEL, DMEL and PNEC values**DNEL values (worker)**

DNEL values (worker)				
No	Substance name		CAS / EC no	
	Route of exposure	Exposure time	Effect	Value
1	butanone			78-93-3 201-159-0
	dermal	Long term (chronic)	systemic	1161 mg/kg/day
	inhalative	Long term (chronic)	systemic	600.00 mg/m³
2	ethanol			64-17-5 200-578-6
	dermal	Long term (chronic)	systemic	343 mg/kg/day
	inhalative	Long term (chronic)	systemic	950 mg/m³
3	ethyl-acetate			141-78-6 205-500-4
	dermal	Long term (chronic)	systemic	63 mg/kg/day
	inhalative	Short term (acut)	systemic	1468 mg/m³
	inhalative	Long term (chronic)	local	734 mg/m³
	inhalative	Short term (acut)	local	1468 mg/m³
	inhalative	Long term (chronic)	systemic	734 mg/m³
4	1-methoxy-2-propanol			107-98-2 203-539-1
	dermal	Long term (chronic)	systemic	183 mg/kg/day
	inhalative	Long term (chronic)	systemic	369 mg/m³
	inhalative	Short term (acut)	local	553.5 mg/m³
5	propan-2-ol			67-63-0 200-661-7
	dermal	Long term (chronic)	systemic	888 mg/kg/day
	inhalative	Long term (chronic)	systemic	500 mg/m³
6	sodium perchlorate			7601-89-0 231-511-9
	dermal	Long term (chronic)	systemic	2.16 mg/kg/day
	inhalative	Long term (chronic)	svstemic	0.28 mg/m³

DNEL value (consumer)

DNEL Value (consumer)				CAS / EC no	
No	Substance name				
	Route of exposure	Exposure time	Effect	Value	
1	butanone			78-93-3 201-159-0	
	oral	Long term (chronic)	systemic	31	mg/kg/day
	dermal	Long term (chronic)	systemic	412	mg/kg/day
	inhalative	Long term (chronic)	systemic	106	mg/m³
2	ethanol			64-17-5 200-578-6	
	oral	Long term (chronic)	systemic	87	mg/kg/day
	dermal	Long term (chronic)	systemic	206	mg/kg/day
	inhalative	Long term (chronic)	systemic	114	mg/m³
3	ethyl-acetate			141-78-6 205-500-4	
	oral	Long term (chronic)	systemic	4.5	mg/kg/day
	dermal	Long term (chronic)	systemic	37	mg/kg/day
	inhalative	Short term (acut)	systemic	734	mg/m³

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

	inhalative	Long term (chronic)	local	367	mg/m ³
	inhalative	Short term (acut)	local	734	mg/m ³
	inhalative	Long term (chronic)	systemic	367	mg/m ³
4	1-methoxy-2-propanol			107-98-2 203-539-1	
	oral	Long term (chronic)	systemic	33	mg/kg/day
	dermal	Long term (chronic)	systemic	78	mg/kg/day
	inhalative	Long term (chronic)	systemic	43.9	mg/m ³
5	propan-2-ol			67-63-0 200-661-7	
	oral	Long term (chronic)	systemic	26	mg/kg/day
	dermal	Long term (chronic)	systemic	319	mg/kg/day
	inhalative	Long term (chronic)	systemic	89	mg/m ³
6	sodium perchlorate			7601-89-0 231-511-9	
	oral	Long term (chronic)	systemic	0.02	mg/kg/day

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	butanone		78-93-3 201-159-0	
	water	fresh water	55.8	mg/L
	water	marine water	55.8	mg/L
	water	Aqua intermittent	55.8	mg/L
	water	fresh water sediment	284.74	mg/kg
	with reference to: dry weight			
	water	marine water sediment	284.7	mg/kg
	with reference to: dry weight			
	soil	-	22.5	mg/kg
	with reference to: dry weight			
	sewage treatment plant	-	709	mg/L
	secondary poisoning	-	1000	mg/kg
	with reference to: food			
2	ethanol		64-17-5 200-578-6	
	water	fresh water	0.96	mg/L
	water	Aqua intermittent	2.75	mg/L
	water	marine water	0.79	mg/L
	water	fresh water sediment	3.6	mg/kg dry weight
	water	marine water sediment	2.9	mg/L
	soil	-	0.63	mg/kg dry weight
	sewage treatment plant	-	580	mg/L
	secondary poisoning	-	0.38	mg/kg food
3	ethyl-acetate		141-78-6 205-500-4	
	water	fresh water	0.24	mg/L
	water	marine water	0.024	mg/L
	water	Aqua intermittent	1.65	mg/L
	water	fresh water sediment	1.15	mg/kg dry weight
	water	marine water sediment	0.115	mg/kg dry weight
	soil	-	0.148	mg/kg dry weight
	sewage treatment plant	-	650	mg/L
	secondary poisoning	-	200	mg/kg

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

4	1-methoxy-2-propanol		107-98-2 203-539-1	
	water	fresh water	10	mg/L
	water	marine water	1	mg/L
	water	Aqua intermittent	100	mg/L
	water	fresh water sediment	52.3	mg/kg
	with reference to: dry weight			
	water	marine water sediment	5.2	mg/kg
	with reference to: dry weight			
	soil	-	4.59	mg/kg
	with reference to: dry weight			
	sewage treatment plant	-	100	mg/L
5	propan-2-ol		67-63-0 200-661-7	
	water	fresh water	140.9	mg/L
	water	Aqua intermittent	140.9	mg/L
	water	marine water	140.9	mg/L
	water	fresh water sediment	552	mg/L
	water	marine water sediment	552	mg/L
	soil	-	28	mg/kg
	sewage treatment plant	-	2251	mg/L
	secondary poisoning	-	160	mg/kg
	with reference to: food			
6	sodium perchlorate		7601-89-0 231-511-9	
	water	fresh water	0.021	mg/L
	water	marine water	0.002	mg/L
	water	fresh water sediment	4.67	mg/kg dry weight
	water	marine water sediment	0.467	mg/kg dry weight
	soil	-	2.55	mg/kg dry weight
	sewage treatment plant	-	7	mg/L

8.2 Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit), suitable respiratory protection must be worn.

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Respirator Filter: A2

Eye / face protection

Tightly fitting safety glasses (EN 166).

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material	butyl rubber		
Material thickness	>	0.5	mm
Breakthrough time	>=	60	min

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Other

Normal chemical work clothing.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

State of aggregation			
liquid			
Form/Colour			
white			
Odour			
ketone-like			
pH value			
No data available			
Boiling point / boiling range			
Value	>	78	°C
Source	supplier		
Melting point/freezing point			
No data available			
Decomposition temperature			
No data available			
Flash point			
Value		-3	°C
Source	supplier		
Ignition temperature			
Value	>=	270	°C
Source	supplier		
Flammability			
No data available			
Lower explosion limit			
Value		1.8	% vol
Source	supplier		
Upper explosion limit			
Value		15	% vol
Source	supplier		
Vapour pressure			
Value	<=	105	hPa
Source	supplier		
Relative vapour density			
No data available			
Relative density			
No data available			
Density			
Value		1.0	g/cm ³
Source	supplier		
Solubility in water			
Source	supplier		

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Comments	partially miscible
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Solubility

No data available

Partition coefficient n-octanol/water (log value)

No	Substance name	CAS no.	EC no.
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1	butanone	78-93-3	201-159-0
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log Pow	0.3	
Reference temperature	40	°C
Method	OECD 117	
Source	ECHA	

2	ethanol	64-17-5	200-578-6
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log Pow	-0.35	
Reference temperature	24	°C
with reference to	pH 7,4	
Method	OECD 107	
Source	ECHA	

3	ethyl-acetate	141-78-6	205-500-4
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log Pow	6.8	
Reference temperature	25	°C
Source	ECHA	

4	propan-2-ol	67-63-0	200-661-7
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log Pow	0.05	
Reference temperature	25	°C
Source	ECHA	

Viscosity

Value	appr. 7	mPa*s
Source	supplier	

Solvent content

Value	66	% (m)
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Solids content

Value	34	%
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Particle characteristics

No data available

9.2 Other information**Other information**

VOC: 534 g/l

SECTION 10: Stability and reactivity**10.1 Reactivity**

Dangerous reactions are not expected if the product is handled according to its intended use.

10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions

Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid

Heat, naked flames and other ignition sources.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

None, if handled according to intended use.

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

SECTION 11: Toxicological information

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

Acute oral toxicity (result of the ATE calculation for the mixture)	
No	Product Name
1	79000-00104, ink, white
Comments	The result of the applied calculation method according to the European Regulation (EC) 1272/2008 (CLP), Paragraph 3.1.3.6, Part 3 of Annex I is outside the values that imply a classification / labelling of this mixture according to table 3.1.1 defining the respective categories (ATE oral > 2000 mg/kg).

Acute oral toxicity			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
LD50		2054	mg/kg bodyweight
Species	rat		
Method	OECD 423		
Source	ECHA / Read across		
2	ethanol	64-17-5	200-578-6
LD50		10470	mg/kg bodyweight
Species	rat		
with reference to	95% ethanol in water		
Method	OECD 401		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
3	ethyl-acetate	141-78-6	205-500-4
LD50	>	5600	mg/kg bodyweight
Species	rat		
Source	ECHA		
4	1-methoxy-2-propanol	107-98-2	203-539-1
LD50		4016	mg/kg bodyweight
Species	rat		
Method	EC 440/2008, B.1		
Source	ECHA		
5	propan-2-ol	67-63-0	200-661-7
LD50		5840	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Acute dermal toxicity			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
LD50	>	20000	mg/kg bodyweight
Species	rabbit		
Source	ECHA		
2	1-methoxy-2-propanol	107-98-2	203-539-1
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	440/2008/EC B.3.		
Source	ECHA		
3	sodium perchlorate	7601-89-0	231-511-9
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 402		
Source	ECHA		

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Acute inhalational toxicity			
No	Substance name	CAS no.	EC no.
1	ethanol	64-17-5	200-578-6
LC50		124.7	mg/l
Duration of exposure		4	h
State of aggregation	Vapour		
Species	rat		
Method	OECD 403		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	propan-2-ol	67-63-0	200-661-7
LC50	>	10000	ppmV
Duration of exposure		6	h
State of aggregation	Vapour		
Species	rat		
Method	OECD 403		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Skin corrosion/irritation			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
Duration of exposure		4	h
Species	rabbit		
Method	OECD 404		
Source	ECHA / Read across		
Evaluation	non-irritant		
2	ethanol	64-17-5	200-578-6
Species	rabbit		
Method	OECD 404		
Source	ECHA		
Evaluation	non-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		
3	ethyl-acetate	141-78-6	205-500-4
Species	rabbit		
Method	OECD 404		
Source	ECHA		
Evaluation	low-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		
4	1-methoxy-2-propanol	107-98-2	203-539-1
Species	rabbit		
Method	EC 440/2008, B.4		
Source	ECHA		
Evaluation	non-irritant		
5	propan-2-ol	67-63-0	200-661-7
Species	rabbit		
Source	ECHA		
Evaluation	non-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		
6	sodium perchlorate	7601-89-0	231-511-9
Species	rabbit		
Method	OECD 404		
Source	ECHA		
Evaluation	low-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Serious eye damage/irritation			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
Species	rabbit		

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Method	OECD 405		
Source	ECHA		
Evaluation	irritant		
2	ethanol	64-17-5	200-578-6
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation	irritant		
Evaluation/classification	Based on available data, the classification criteria are met.		
3	ethyl-acetate	141-78-6	205-500-4
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation	low-irritant		
4	1-methoxy-2-propanol	107-98-2	203-539-1
Species	rabbit		
Method	2004/73/EEC, B.5		
Source	ECHA		
Evaluation	non-irritant		
5	propan-2-ol	67-63-0	200-661-7
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation	irritant		
Evaluation/classification	Based on available data, the classification criteria are met.		
6	sodium perchlorate	7601-89-0	231-511-9
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation	Irritating to eyes		

Respiratory or skin sensitisation

No		Substance name	CAS no.	EC no.
1		butanone	78-93-3	201-159-0
Route of exposure		Skin		
Species		guinea pig		
Method		OECD 406		
Source		ECHA		
Evaluation		non-sensitizing		
2		ethanol	64-17-5	200-578-6
Route of exposure		respiratory tract		
Source		ECHA		
Evaluation		non-sensitizing		
Evaluation/classification		Based on available data, the classification criteria are not met.		
Route of exposure		Skin		
Species		mouse		
Source		ECHA		
Evaluation		non-sensitizing		
Evaluation/classification		Based on available data, the classification criteria are not met.		
3		ethyl-acetate	141-78-6	205-500-4
Route of exposure		Skin		
Species		guinea pig		
Method		OECD 406		
Source		ECHA		
Evaluation		non-sensitizing		
4		1-methoxy-2-propanol	107-98-2	203-539-1
Route of exposure		Skin		
Species		guinea pig		
Method		440/2008/EC B.6		
Source		ECHA		

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Evaluation	non-sensitizing		
5	propan-2-ol	67-63-0	200-661-7
Route of exposure	Skin		
Species	guinea pig		
Method	OECD 406		
Source	ECHA		
Evaluation	non-sensitizing		
Evaluation/classification	Based on available data, the classification criteria are not met.		
6	sodium perchlorate	7601-89-0	231-511-9
Route of exposure	Skin		
Species	mouse		
Method	OECD 429		
Source	ECHA		
Evaluation	non-sensitizing		

Germ cell mutagenicity

No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
Type of examination	in vitro gene mutation study in bacteria		
Species	Salmonella typhimurium		
Method	OECD 471		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	In vitro Mammalian Chromosomal Aberration Test		
Species	rat		
Method	OECD 473		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	In vitro mammalian cell gene mutation test		
Species	Mouse lymphoma cells		
Method	OECD 476		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	In vivo mammalian somatic cell study: cytogenicity / erythrocyte micronucleus		
Species	mouse		
Method	OECD 474		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	ethanol	64-17-5	200-578-6
Type of examination	in vitro gene mutation study in bacteria		
Species	Salmonella typhimurium		
Method	OECD 471		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	in vitro gene mutation study in mammalian cells		
Species	mouse lymphoma cells		
Method	OECD 476		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	Genotoxicity in vivo		
Species	mouse		
Method	OECD 478		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
3	propan-2-ol	67-63-0	200-661-7
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
4	sodium perchlorate	7601-89-0	231-511-9
Source	ECHA		

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Evaluation/classification	Based on available data, the classification criteria are not met.
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Reproduction toxicity			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
Route of exposure		inhalational	
Type of examination		Prenatal Developmental Toxicity Study	
Species		rat	
Method		OECD 414	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
2	ethanol	64-17-5	200-578-6
Route of exposure		oral	
NOAEL			
Type of examination		2 generation study	
Species		mouse	
Method		OECD 416	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Route of exposure		inhalational	
NOAEL		>=	20000 ppm
Type of examination		Prenatal Developmental Toxicity Study	
Species		rat	
Method		OECD 414	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Carcinogenicity			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
2	ethanol	64-17-5	200-578-6
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

STOT - single exposure	
No data available	

STOT - repeated exposure			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
Route of exposure		inhalational	
Species		rat	
Method		OECD 413	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
2	ethanol	64-17-5	200-578-6
Route of exposure		oral	
Duration of exposure		14	week/s
Species		rat	
Target organ		kidneys	
Method		OECD 408	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
3	propan-2-ol	67-63-0	200-661-7
Route of exposure		inhalational	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Aspiration hazard	
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Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

No data available

11.2 Information on other hazards**Endocrine disrupting properties**

No data available.

Other information

No data available.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
LC50		2993	mg/l
Duration of exposure		96	h
Species	Pimephales promelas		
Method	OECD 203		
Source	ECHA		
2	ethanol	64-17-5	200-578-6
LC50		14200	mg/l
Duration of exposure		96	h
Species	Pimephales promelas		
Method	EPA		
Source	ECHA		
3	ethyl-acetate	141-78-6	205-500-4
LC50		230	mg/l
Duration of exposure		96	h
Species	Pimephales promelas		
Source	ECHA		
4	propan-2-ol	67-63-0	200-661-7
LC50		9640	mg/l
Duration of exposure		96	h
Species	Pimephales promelas		
Method	OECD 203		
Source	ECHA		
5	sodium perchlorate	7601-89-0	231-511-9
LC50	>	1000	mg/l
Duration of exposure		96	h
Species	Danio rerio		
Method	OECD 203		
Source	ECHA		

Toxicity to fish (chronic)

No data available

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
EC50		308	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		
2	ethanol	64-17-5	200-578-6
EC50		5012	mg/l
Duration of exposure		48	h
Species	Ceriodaphnia dubia		
Method	ASTM Standard E 729-80		

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Source	ECHA
3 ethyl-acetate	141-78-6 205-500-4
EC50	1350 mg/l
Duration of exposure	48 h
Species	Daphnia magna
Source	ECHA
4 propan-2-ol	67-63-0 200-661-7
EC50	> 10000 mg/l
Duration of exposure	24 h
Species	Daphnia magna
Method	OECD 202
Source	ECHA
5 sodium perchlorate	7601-89-0 231-511-9
EC50	> 100 mg/l
Duration of exposure	48 h
Species	Daphnia magna
Method	OECD 202
Source	ECHA

Toxicity to Daphnia (chronic)

No	Substance name	CAS no.	EC no.
1	ethanol	64-17-5	200-578-6
NOEC		9.6	mg/l
Duration of exposure		9	day(s)
Species	Daphnia magna		
Source	ECHA		
2	sodium perchlorate	7601-89-0	231-511-9
NOEC		10	mg/l
Duration of exposure		7	day(s)
Species	Ceriodaphnia dubia		
Method	EPA 600/4-91/002		
Source	ECHA		

Toxicity to algae (acute)

No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
EC50		2029	mg/l
Duration of exposure		96	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		
2	ethanol	64-17-5	200-578-6
EC50		275	mg/l
Duration of exposure		72	h
Species	Chlorella vulgaris		
Method	OECD 201		
Source	ECHA		
3	sodium perchlorate	7601-89-0	231-511-9
ErC50		> 435.7	mg/l
Duration of exposure		72	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		

Toxicity to algae (chronic)

No data available

Bacteria toxicity

No data available

12.2 Persistence and degradability

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

Biodegradability			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
Type	aerobic biodegradation		
Value		98	%
Duration		28	day(s)
Method	OECD 301 D		
Source	ECHA		
Evaluation	readily biodegradable		
2	ethanol	64-17-5	200-578-6
Type	aerobic biodegradation		
Value	appr.	84	%
Duration		20	day(s)
Source	ECHA		
Evaluation	readily biodegradable		
3	ethyl-acetate	141-78-6	205-500-4
Source	ECHA		
Evaluation	readily biodegradable		
4	1-methoxy-2-propanol	107-98-2	203-539-1
Type	aerobic biodegradation		
Value		96	%
Duration		28	day(s)
Method	OECD 301 E		
Source	ECHA		
Evaluation	readily biodegradable		
5	propan-2-ol	67-63-0	200-661-7
Type	BOD/COD		
Value		53	%
Duration		5	day(s)
Source	ECHA		
Evaluation	readily biodegradable		

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	butanone	78-93-3	201-159-0
log Pow		0.3	
Reference temperature		40	°C
Method	OECD 117		
Source	ECHA		
2	ethanol	64-17-5	200-578-6
log Pow		-0.35	
Reference temperature		24	°C
with reference to	pH 7,4		
Method	OECD 107		
Source	ECHA		
3	ethyl-acetate	141-78-6	205-500-4
log Pow		6.8	
Reference temperature		25	°C
Source	ECHA		
4	propan-2-ol	67-63-0	200-661-7
log Pow		0.05	
Reference temperature		25	°C
Source	ECHA		

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

Trade name: 79000-00104, ink, white**Current version :** 1.2.0, issued: 26.01.2022**Replaced version:** 1.1.0, issued: 07.12.2021**Region:** GB

PBT assessment	No data available.
vPvB assessment	No data available.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

12.8 Other information

Other information
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Used, completely emptied, packaging may be disposed of or passed to recovery systems in compliance with national and local provisions related to waste legislation. Like the unused product, the packaging that has not been emptied, may be disposed of or passed to recovery systems in compliance with national and local provisions related to waste legislation.

SECTION 14: Transport information**14.1 Transport ADR/RID/ADN**

Class	3
Classification code	F1
Packing group	II
Hazard identification no.	33
UN number	UN1210
Proper shipping name	PRINTING INK
Special Provision 640	640C
Tunnel restriction code	D/E
Label	3

14.2 Transport IMDG

Class	3
Packing group	II
UN number	UN1210
Proper shipping name	PRINTING INK
EmS	F-E, S-D
Label	3

14.3 Transport ICAO-TI / IATA

Class	3
Packing group	II
UN number	UN1210
Proper shipping name	Printing ink
Label	3

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

No data available.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations****Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.	No 3, 40
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The product contains following substance(s) that are considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No	Substance name	CAS no.	EC no.	No
1	butanone	78-93-3	201-159-0	75
2	ethyl-acetate	141-78-6	205-500-4	75
3	propan-2-ol	67-63-0	200-661-7	75
4	titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	13463-67-7	236-675-5	75

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This product is subject to Part I of Annex I, risk category:	P5b
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Other regulations

Adhere to the national sanitary and occupational safety regulations when using this product.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for one or more of the substances within this mixture.

SECTION 16: Other information**Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H226	Flammable liquid and vapour.
H271	May cause fire or explosion; strong oxidiser.
H302	Harmful if swallowed.
H351i	Suspected of causing cancer by inhalation.
H373o	May cause damage to organs through prolonged or repeated exposure if swallowed.

Notes relating to the identification, classification and labelling of substances and mixtures ((EC) No

Trade name: 79000-00104, ink, white

Current version : 1.2.0, issued: 26.01.2022

Replaced version: 1.1.0, issued: 07.12.2021

Region: GB

1272/2008, Annex VI)

- V If the substance is to be placed on the market as fibres (with diameter < 3 µm, length > 5 µm and aspect ratio ≥ 3:1) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of this Regulation, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied.
- W It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.
This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.
- 1 The concentration stated or, in the absence of such concentrations, the generic concentrations of this Regulation (Table 3.1) or the generic concentrations of Directive 1999/45/EC (Table 3.2), are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture.

Creation of the safety data sheet

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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