

Linx Black Fast-Drying Ink 1240

Date of compilation: 05/04/2022




Revised: 09/11/2023

Version: 24 (Replaced 23)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** Linx Black Fast-Drying Ink 1240
Other means of identification:
UFI: XYG0-J03N-K007-6SWH
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
 Relevant uses: Printing ink
 Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**
 Linx Printing Technologies Ltd
 Linx House, 8 Stocks Bridge Way, Compass Point Business Park
 PE27 5JL St Ives - Cambridgeshire - UK
 Phone: +44 (0) 1480 302100
 sds@linx.co.uk
 www.linxglobal.com
- 1.4 Emergency telephone number:** 24HR: (+1)-352-323-3500
 USA: 1-800-535-5053

SECTION 2: HAZARDS IDENTIFICATION **

- 2.1 Classification of the substance or mixture:**
CLP Regulation (EC) No 1272/2008:
 Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
 Eye Dam. 1: Serious eye damage, Category 1, H318
 Flam. Liq. 2: Flammable liquids, Category 2, H225
 STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Danger
- 


- Hazard statements:**
 Eye Dam. 1: H318 - Causes serious eye damage.
 Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
 STOT SE 3: H336 - May cause drowsiness or dizziness.
- Precautionary statements:**
 P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
 P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 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 ABC powder extinguisher to extinguish.
 P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.
- Supplementary information:**
 EUH066: Repeated exposure may cause skin dryness or cracking.
- Substances that contribute to the classification**
 Butanone; Ethyl (S)-2-hydroxypropionate
UFI: XYG0-J03N-K007-6SWH
- 2.3 Other hazards:**
 Product does not meet PBT/vPvB criteria
 Endocrine-disrupting properties: The product does not meet the criteria.

** Changes with regards to the previous version



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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Mixture of substances

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 78-93-3 EC: 201-159-0 Index: 606-002-00-3 REACH: 01-2119457290-43-XXXX	Butanone⁽¹⁾ ATP CLP00 Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	80 - <99.9 %
CAS: 1029600-34-7 EC: 700-174-4 Index: Non-applicable REACH: Non-applicable	Dye (1:2 Chromium (III) Complex)⁽¹⁾ Self-classified Regulation 1272/2008 Aquatic Chronic 4: H413	5 - <10 %
CAS: 687-47-8 EC: 211-694-1 Index: 607-129-00-7 REACH: 01-2119457290-49-XXXX	Ethyl (S)-2-hydroxypropionate⁽¹⁾ ATP CLP00 Regulation 1272/2008 Eye Dam. 1: H318; Flam. Liq. 3: H226; STOT SE 3: H335 - Danger	1 - <5 %
CAS: 135-19-3 EC: 205-182-7 Index: 604-007-00-5 REACH: 01-2119493031-47-XXXX	2-naphthol⁽¹⁾ ATP CLP00 Regulation 1272/2008 Acute Tox. 4: H302+H332; Aquatic Acute 1: H400 - Warning	0.1 - <1 %
CAS: 108-88-3 EC: 203-625-9 Index: 601-021-00-3 REACH: 01-2119471310-51-XXXX	Toluene⁽²⁾ ATP CLP00 Regulation 1272/2008 Asp. Tox. 1: H304; Flam. Liq. 2: H225; Repr. 2: H361d; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H336 - Danger	<0.1 %

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

⁽²⁾ Substance with a Union workplace exposure limit

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.



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SECTION 4: FIRST AID MEASURES (continued)

4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

It is recommended to avoid environmental spillage of both the product and its container.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

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SECTION 7: HANDLING AND STORAGE (continued)

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137 / The Dangerous Substances and Explosive Atmospheres Regulations 2002, 2002 No. 2776). Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Store in a cool, dry, well-ventilated location

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace:

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

Identification	Occupational exposure limits		
	WEL (8h)	WEL (15 min)	WEL (8h)
Butanone CAS: 78-93-3 EC: 201-159-0	200 ppm	300 ppm	600 mg/m ³
Toluene CAS: 108-88-3 EC: 203-625-9	50 ppm	100 ppm	191 mg/m ³
			384 mg/m ³

NULL:

BIOLOGICAL MONITORING GUIDANCE VALUES (BMGVs) - EH40/2005

Identification	NULL	NULL	NULL
Butanone CAS: 78-93-3 EC: 201-159-0	5 mg/L	Butan-2-one in urine	Post shift

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1161 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	600 mg/m ³	Non-applicable
Toluene CAS: 108-88-3 EC: 203-625-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	384 mg/kg	Non-applicable
	Inhalation	384 mg/m ³	384 mg/m ³	192 mg/m ³	192 mg/m ³

DNEL (General population):

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Non-applicable	Non-applicable	31 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	412 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	106 mg/m ³	Non-applicable
Toluene CAS: 108-88-3 EC: 203-625-9	Oral	Non-applicable	Non-applicable	8.13 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	226 mg/kg	Non-applicable
	Inhalation	226 mg/m ³	226 mg/m ³	56.5 mg/m ³	56.5 mg/m ³

PNEC:



Identification				
Butanone CAS: 78-93-3 EC: 201-159-0	STP	709 mg/L	Fresh water	55.8 mg/L
	Soil	22.5 mg/kg	Marine water	55.8 mg/L
	Intermittent	55.8 mg/L	Sediment (Fresh water)	284.74 mg/kg
	Oral	1 g/kg	Sediment (Marine water)	284.7 mg/kg
Ethyl (S)-2-hydroxypropionate CAS: 687-47-8 EC: 211-694-1	STP	Non-applicable	Fresh water	0.32 mg/L
	Soil	0.145 mg/kg	Marine water	0.032 mg/L
	Intermittent	3.2 mg/L	Sediment (Fresh water)	1.66 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.166 mg/kg
Toluene CAS: 108-88-3 EC: 203-625-9	STP	13.61 mg/L	Fresh water	0.68 mg/L
	Soil	2.89 mg/kg	Marine water	0.68 mg/L
	Intermittent	0.68 mg/L	Sediment (Fresh water)	16.39 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	16.39 mg/kg

8.2 Exposure controls:



A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)		EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield		EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection





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

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:

Physical state at 20 °C: Liquid
Appearance: Fluid
Colour: Black
Odour: Characteristic
Odour threshold: Non-applicable *

Volatility:

Boiling point at atmospheric pressure: 81 °C
Vapour pressure at 25 °C: 11900 Pa
Vapour pressure at 50 °C: 34605.33 Pa (34.61 kPa)
Evaporation rate at 25 °C: >1

Product description:

Density at 25 °C: 842.7 kg/m³
Relative density at 25 °C: 0.773 - 0.913
Dynamic viscosity at 25 °C: 2 - 5 cP
Kinematic viscosity at 25 °C: Non-applicable *
Kinematic viscosity at 40 °C: Non-applicable *
Concentration: Non-applicable *
pH: Non-applicable *
Vapour density at 25 °C: 2.4 kg/m³
Partition coefficient n-octanol/water 25 °C: ca. 0.3
Solubility in water at 25 °C: Non-applicable *
Solubility properties: Slightly soluble in cold water

*Not relevant due to the nature of the product, not providing information property of its hazards.



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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Decomposition temperature: Non-applicable *

Melting point/freezing point: -86 °C

Flammability:

Flash Point: -4 °C

Flammability (solid, gas): Non-applicable *

Autoignition temperature: >430 °C

Lower flammability limit: 1.8 % Volume

Upper flammability limit: 11.5 % Volume

Particle characteristics:

Median equivalent diameter: Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties: Non-applicable *

Oxidising properties: Non-applicable *

Corrosive to metals: Non-applicable *

Heat of combustion: Non-applicable *

Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

Surface tension at 25 °C: Non-applicable *

Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

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

The experimental information related to the toxicological properties of the product itself is not available

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
IARC: Toluene (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.
- Skin: Repeated exposure may cause skin dryness or cracking

H- Aspiration hazard:

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Butanone CAS: 78-93-3 EC: 201-159-0	LD50 oral	4000 mg/kg	Rat
	LD50 dermal	6400 mg/kg	Rabbit
	LC50 inhalation	23.5 mg/L (4 h)	Rat
2-naphthol CAS: 135-19-3 EC: 205-182-7	LD50 oral	500 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Toluene	5580 mg/kg		Rat
CAS: 108-88-3	12124 mg/kg		Rat
EC: 203-625-9	28.1 mg/L (4 h)		Rat

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	Non-applicable
Dermal	>2000 mg/kg (Calculation method)	Non-applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

Other information

Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
	LC50	EC50		
Butanone CAS: 78-93-3 EC: 201-159-0	LC50	3220 mg/L (96 h)	Pimephales promelas	Fish
	EC50	5091 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	4300 mg/L (168 h)	Scenedesmus quadricauda	Algae
Dye (1:2 Chromium (III) Complex) CAS: 1029600-34-7 EC: 700-174-4	LC50	Non-applicable		
	EC50	>1000 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
2-naphthol CAS: 135-19-3 EC: 205-182-7	LC50	>0.1 - 1 mg/L (96 h)		Fish
	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
	EC50	>0.1 - 1 mg/L (72 h)		Algae
Toluene CAS: 108-88-3 EC: 203-625-9	LC50	5.5 mg/L (96 h)	Oncorhynchus kisutch	Fish
	EC50	3.78 mg/L (48 h)	Ceriodaphnia dubia	Crustacean
	EC50	Non-applicable		

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Butanone CAS: 78-93-3 EC: 201-159-0	BOD5	2.03 g O2/g	Concentration	Non-applicable
	COD	2.31 g O2/g	Period	20 days
	BOD5/COD	0.88	% Biodegradable	89 %
2-naphthol CAS: 135-19-3 EC: 205-182-7	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	68.4 %
Toluene CAS: 108-88-3 EC: 203-625-9	BOD5	2.5 g O2/g	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %

12.3 Bioaccumulative potential:

Substance-specific information:



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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
	BCF	Pow Log
Butanone CAS: 78-93-3 EC: 201-159-0	3	0.29
	Low	
2-naphthol CAS: 135-19-3 EC: 205-182-7	0.26	2.7
	Low	
Toluene CAS: 108-88-3 EC: 203-625-9	90	2.73
	Moderate	

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Koc	Surface tension	Henry	Henry
Butanone CAS: 78-93-3 EC: 201-159-0	30	2.396E-2 N/m (25 °C)	5.77 Pa·m ³ /mol	Yes
	Very High		Dry soil	Yes
			Moist soil	Yes
2-naphthol CAS: 135-19-3 EC: 205-182-7	0.45	Non-applicable	4.661E-3 Pa·m ³ /mol	No
	Very High		Dry soil	No
			Moist soil	No
Toluene CAS: 108-88-3 EC: 203-625-9	178	2.793E-2 N/m (25 °C)	672.8 Pa·m ³ /mol	Yes
	Moderate		Dry soil	Yes
			Moist soil	Yes

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 03 12*	waste ink containing hazardous substances	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC, The Waste Regulations 2011, 2011 No. 988). As under 15 01 (2014/955/EU) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:

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SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number or ID number:** UN1210
- 14.2 UN proper shipping name:** PRINTING INK
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** II
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Special regulations: 163, 367, 640D
Tunnel restriction code: D/E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



- 14.1 UN number or ID number:** UN1210
- 14.2 UN proper shipping name:** PRINTING INK
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** II
- 14.5 Marine pollutant:** No
- 14.6 Special precautions for user**
Special regulations: 367, 163
EmS Codes: F-E, S-D
Physico-Chemical properties: see section 9
Limited quantities: 5 L
Segregation group: Non-applicable
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- 14.1 UN number or ID number:** UN1210
- 14.2 UN proper shipping name:** PRINTING INK
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** II
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Physico-Chemical properties: see section 9
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
Article 95, REGULATION (EU) No 528/2012: Non-applicable



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SECTION 15: REGULATORY INFORMATION (continued)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885
Control of Substances Hazardous to Health Regulations 2002 (as amended)
EH40/2005 Workplace exposure limits
The Waste Regulations 2011, 2011 No. 988

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

- Precautionary statements

Texts of the legislative phrases mentioned in section 2:

H318: Causes serious eye damage.
H336: May cause drowsiness or dizziness.
H225: Highly flammable liquid and vapour.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 4: H413 - May cause long lasting harmful effects to aquatic life.
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
Eye Dam. 1: H318 - Causes serious eye damage.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
Flam. Liq. 3: H226 - Flammable liquid and vapour.
Repr. 2: H361d - Suspected to damage the foetus.
Skin Irrit. 2: H315 - Causes skin irritation.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.
STOT SE 3: H335 - May cause respiratory irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

Eye Dam. 1: Calculation method
STOT SE 3: Calculation method
Flam. Liq. 2: Calculation method (2.6.4.3)

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:



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SECTION 16: OTHER INFORMATION (continued)

<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

LogPOW: Octanolwater partition coefficient

Koc: Partition coefficient of organic carbon

UFI: unique formula identifier

IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -