




Linx Black Oil-Penetrating Ink 1062

Date of compilation: 21/04/2022 Revised: 14/08/2024 Version: 7 (Replaced 6)

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

- 1.1 Product identifier:** Linx Black Oil-Penetrating Ink 1062
Other means of identification:
 Not relevant
- 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
 Supplier:
 ITW Marking and Coding
 1 Research Park Drive
 St. Charles, MO 63304-5685 USA
 800-526-2531 / 636-300-2000
- 1.4 Emergency telephone number:** 24HR: (+1)-352-323-3500
 USA: 1-800-535-5053
- UK NPIS For Healthcare Professionals Only: 0344 892 0111

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):
 Classification of this product has been carried out in accordance with GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567).
 Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412
 Eye Irrit. 2: Eye irritation, Category 2, H319
 Flam. Liq. 2: Flammable liquids, Category 2, H225
 Repr. 1B: Reproductive toxicity, Category 1B, H360
 STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336
- 2.2 Label elements:**
GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):
 Danger
- 


- Hazard statements:**
 Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
 Eye Irrit. 2: H319 - Causes serious eye irritation.
 Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
 Repr. 1B: H360 - May damage fertility or the unborn child.
 STOT SE 3: H336 - May cause drowsiness or dizziness.
- Precautionary statements:**
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
 P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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.
 P308+P313: IF exposed or concerned: Get medical advice/attention.
 P370+P378: In case of fire: Use Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC) to extinguish.
- Supplementary information:**
 EUH066: Repeated exposure may cause skin dryness or cracking.
- Substances that contribute to the classification**
 Butanone; Dye (1:2 Chromium (III) Complex); Solvent naphtha (petroleum), light aromatic



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SECTION 2: HAZARDS IDENTIFICATION (continued)

Additional Labelling:

Restricted to professional users

Acute Toxicity Estimate (ATE mix):

19.57 % (dermal) of the mixture consists of ingredient(s) of unknown toxicity

2.3 Other hazards:

Product does not meet PBT/vPvB criteria

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 The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 78-93-3	Butanone Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	60 - <80 %
CAS: 117527-94-3	Dye (1:2 Chromium (III) Complex) Aquatic Chronic 2: H411; Repr. 1B: H360 - Danger	1 - <5 %
CAS: 64742-95-6	Solvent naphtha (petroleum), light aromatic Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT SE 3: H336; EUH066 - Danger	1 - <5 %
CAS: 556-67-2	Octamethylcyclotetrasiloxane Aquatic Chronic 1: H410; Repr. 2: H361f - Warning	<0.1 %

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

Other information:

Identification	M-factor	
	Acute	Chronic
Octamethylcyclotetrasiloxane CAS: 556-67-2	1	10

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:

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SECTION 4: FIRST AID MEASURES (continued)

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.

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

Not relevant

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC)

Unsuitable extinguishing media:

Water jet

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,...).

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:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

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



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SECTION 7: HANDLING AND STORAGE (continued)

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

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 The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 and with the minimum requirements for protecting the security and health of workers under the selection criteria of 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

PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT. Transfer in designated areas that comply with the necessary safety conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to small amounts only. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

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)	200 ppm	600 mg/m ³
Butanone CAS: 78-93-3	WEL (15 min)	300 ppm	899 mg/m ³

Biological limit values:

BIOLOGICAL MONITORING GUIDANCE VALUES (BMGVs) - EH40/2005

Identification	NULL	NULL	NULL
Butanone CAS: 78-93-3	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	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	1161 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	600 mg/m ³	Not relevant
Dye (1:2 Chromium (III) Complex) CAS: 117527-94-3 EC: 938-781-3	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	0.13 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	0.94 mg/m ³	Not relevant

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Solvent naphtha (petroleum), light aromatic CAS: 64742-95-6 EC: 265-199-0	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	1286.4 mg/m ³	1066.67 mg/m ³	Not relevant	837.5 mg/m ³
Octamethylcyclotetrasiloxane CAS: 556-67-2 EC: 209-136-7	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	73 mg/m ³	73 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Not relevant	Not relevant	31 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	412 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	106 mg/m ³	Not relevant
Dye (1:2 Chromium (III) Complex) CAS: 117527-94-3 EC: 938-781-3	Oral	Not relevant	Not relevant	0.07 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	0.07 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	0.23 mg/m ³	Not relevant
Solvent naphtha (petroleum), light aromatic CAS: 64742-95-6 EC: 265-199-0	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	1152 mg/m ³	640 mg/m ³	Not relevant	178.57 mg/m ³
Octamethylcyclotetrasiloxane CAS: 556-67-2 EC: 209-136-7	Oral	Not relevant	Not relevant	3.7 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	13 mg/m ³	13 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	
Octamethylcyclotetrasiloxane CAS: 556-67-2 EC: 209-136-7	STP	10 mg/L	Fresh water	0.0015 mg/L	
	Soil	0.54 mg/kg	Marine water	0.00015 mg/L	
	Intermittent	Not relevant	Sediment (Fresh water)	3 mg/kg	
	Oral	0.041 g/kg	Sediment (Marine water)	0.3 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 <<UKCA marking>> or <<CE marking>>. 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	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	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


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Pictogram	PPE	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)	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	Remarks
 Mandatory face protection	Face shield	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties	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	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:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	81 °C
Vapour pressure at 25 °C:	12048 Pa
Vapour pressure at 50 °C:	35035.38 Pa (35.04 kPa)
Evaporation rate at 25 °C:	>1

*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)

Product description:

Density at 25 °C:	850.1 kg/m ³
Relative density at 25 °C:	0.78 - 0.92
Dynamic viscosity at 25 °C:	2 - 5 cP
Kinematic viscosity at 25 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	Not relevant *
Vapour density at 25 °C:	2.4 kg/m ³
Partition coefficient n-octanol/water 25 °C:	ca. 0.3
Solubility in water at 25 °C:	Not relevant *
Solubility properties:	Slightly soluble in cold water
Decomposition temperature:	Not relevant *
Melting point/freezing point:	-86 °C

Flammability:

Flash Point:	-5 °C
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	>210 °C
Lower flammability limit:	1.8 % Volume
Upper flammability limit:	11.5 % Volume

Particle characteristics:

Median equivalent diameter:	Non-applicable
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9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

Other safety characteristics:

Surface tension at 25 °C:	Not relevant *
Refraction index:	Not relevant *

*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:

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SECTION 10: STABILITY AND REACTIVITY (continued)

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 toxicological effects:

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

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, as it does not contain substances classified as hazardous 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, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: 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.

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 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: Xylene (3); Ethylbenzene (2B); Solvent naphtha (petroleum), light aromatic (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: May damage fertility or the unborn child

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, as it does not contain substances classified as hazardous for this effect. 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.

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	Route	Dose	
Solvent naphtha (petroleum), light aromatic CAS: 64742-95-6	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	2000 mg/kg	Rabbit
	LC50 inhalation		
Butanone CAS: 78-93-3	LD50 oral	4000 mg/kg	Rat
	LD50 dermal	6400 mg/kg	Rabbit
	LC50 inhalation	23.5 mg/L (4 h)	Rat
Dye (1:2 Chromium (III) Complex) CAS: 117527-94-3	LD50 oral	>5000 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation		
Octamethylcyclotetrasiloxane CAS: 556-67-2	LD50 oral	61440 mg/kg	Rat
	LD50 dermal	10000 mg/kg	Rabbit
	LC50 inhalation		

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	4142.69 mg/kg (Calculation method)	Non-applicable
Dermal	99910.73 mg/kg (Calculation method)	19.57 %
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

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

Harmful to aquatic life with long lasting effects.

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
	Route	Dose		
Butanone CAS: 78-93-3	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: 117527-94-3	LC50	>1 - 10 mg/L (96 h)		Fish
	EC50	>1 - 10 mg/L (48 h)		Crustacean
	EC50	>1 - 10 mg/L (72 h)		Algae
Solvent naphtha (petroleum), light aromatic CAS: 64742-95-6	LC50	>1 - 10 mg/L (96 h)		Fish
	EC50	>1 - 10 mg/L (48 h)		Crustacean
	EC50	>1 - 10 mg/L (72 h)		Algae
Octamethylcyclotetrasiloxane CAS: 556-67-2	LC50	500 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	Not relevant		
	EC50	Not relevant		

Chronic toxicity:

Identification	Concentration		Species	Genus
	Route	Dose		
Octamethylcyclotetrasiloxane CAS: 556-67-2	NOEC	0.0044 mg/L	Oncorhynchus mykiss	Fish
	NOEC	0.015 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:



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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Degradability		Biodegradability	
	Butanone CAS: 78-93-3	BOD5	2.03 g O2/g	Concentration
COD		2.31 g O2/g	Period	20 days
BOD5/COD		0.88	% Biodegradable	89 %
Dye (1:2 Chromium (III) Complex) CAS: 117527-94-3	BOD5	Not relevant	Concentration	20 mg/L
	COD	Not relevant	Period	28 days
	BOD5/COD	Not relevant	% Biodegradable	14.1 %
Solvent naphtha (petroleum), light aromatic CAS: 64742-95-6	BOD5	0.19 g O2/g	Concentration	Not relevant
	COD	0.44 g O2/g	Period	Not relevant
	BOD5/COD	0.43	% Biodegradable	Not relevant

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
	Butanone CAS: 78-93-3	BCF
Pow Log		0.29
Potential		Low
Dye (1:2 Chromium (III) Complex) CAS: 117527-94-3	BCF	
	Pow Log	2.29
	Potential	
Solvent naphtha (petroleum), light aromatic CAS: 64742-95-6	BCF	
	Pow Log	4
	Potential	
Octamethylcyclotetrasiloxane CAS: 556-67-2	BCF	12400
	Pow Log	4.45
	Potential	Very High

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Butanone CAS: 78-93-3	Koc	30	Henry
Conclusion		Very High	Dry soil	Yes
Surface tension		2.396E-2 N/m (25 °C)	Moist soil	Yes
Dye (1:2 Chromium (III) Complex) CAS: 117527-94-3	Koc	18	Henry	Not relevant
	Conclusion	Very High	Dry soil	Not relevant
	Surface tension	Not relevant	Moist soil	Not relevant
Octamethylcyclotetrasiloxane CAS: 556-67-2	Koc	Not relevant	Henry	Not relevant
	Conclusion	Not relevant	Dry soil	Not relevant
	Surface tension	1.819E-2 N/m (25 °C)	Moist soil	Not relevant

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class
08 03 12*	waste ink containing hazardous substances	Hazardous

Type of waste:

HP14 Ecotoxic, HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP10 Toxic for reproduction, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)


Consult the authorized waste service manager on the assessment and disposal operations in accordance The Waste (England & Wales) Regulations 2011, 2011 No. 988. As under 15 01 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-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of UK REACH the provisions related to waste management are stated:
UK legislation: The Waste (England & Wales) Regulations 2011.


SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:
With regard to ADR 2023 and RID 2023:

	14.1 UN 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	

Tunnel restriction code:	D/E
Physico-Chemical properties:	see section 9
Limited quantities:	5 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	Not relevant

Transport of dangerous goods by sea:
With regard to IMDG 41-22:

	14.1 UN 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:	Not relevant
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	Not relevant

Transport of dangerous goods by air:
With regard to IATA/ICAO 2024:

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SECTION 14: TRANSPORT INFORMATION (continued)



14.1 UN 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 Transport in bulk according to Annex II of Marpol and the IBC Code:	Not relevant

SECTION 15: REGULATORY INFORMATION

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

- Substances listed in UK candidate list of substances of very high concern (SVHCs): *Octamethylcyclotetrasiloxane (556-67-2)*
- Substances listed in UK REACH Authorisation List (Annex 14): Not relevant

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

Product classified hazardous under the CMR. Sale and distribution to the general public is prohibited. Due to its CMR category, it is essential to apply the specific measures for workplace hazard prevention covered in articles 4 and 5 of the 2004/37/EC Directive and later modifications.

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.

Contains Octamethylcyclotetrasiloxane, Decamethylcyclopentasiloxane. 1. | Shall not be placed on the market in wash-off cosmetic products in a concentration equal to or greater than 0,1 % by weight of either substance, after 31 January 2020. | 2. | For the purposes of this entry, "wash-off cosmetic products" means cosmetic products as defined in Article 2(1)(a) of Regulation (EC) No 1223/2009 that, under normal conditions of use, are washed off with water after application.'

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 REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.
Control of Substances Hazardous to Health Regulations 2002 (as amended)
EH40/2005 Workplace exposure limits.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

Texts of the legislative phrases mentioned in section 2:

H336: May cause drowsiness or dizziness.
H412: Harmful to aquatic life with long lasting effects.
H360: May damage fertility or the unborn child.
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.

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

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):



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SECTION 16: OTHER INFORMATION (continued)

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.

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. 1B: H360 - May damage fertility or the unborn child.

Repr. 2: H361f - Suspected of damaging fertility.

Skin Irrit. 2: H315 - Causes skin irritation.

STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

STOT SE 3: Calculation method

Aquatic Chronic 3: Calculation method

Repr. 1B: Calculation method

Flam. Liq. 2: Calculation method (2.6.4.3)

Eye Irrit. 2: Calculation method

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:

<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 UK, 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 -