



**SAFETY DATA SHEET**  
**Linx Thermochromic black to blue ink 1290**

**1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

**PRODUCT NAME** Linx Thermochromic black to blue ink 1290  
**PRODUCT NO.** 1290  
**APPLICATION** Ink for Linx® inkjet printers  
**SUPPLIER** Linx Printing Technologies  
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**2 HAZARDS IDENTIFICATION**

Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

**CLASSIFICATION** Xi;R36. F;R11. R66, R67.

**3 COMPOSITION/INFORMATION ON INGREDIENTS**

Name	EC No.	CAS-No.	Content	Classification
BUTANONE	201-159-0	78-93-3	30-60%	F;R11 Xi;R36 R66 R67
ETHANOL	200-578-6	64-17-5	30-60%	F;R11
1-METHOXY-2-PROPANOL	203-539-1	107-98-2	10-30%	R10

The Full Text for all R-Phrases are Displayed in Section 16

**4 FIRST-AID MEASURES**

**GENERAL INFORMATION**

Get medical attention if any discomfort continues. Do not give victim anything to drink if they are unconscious.

**INHALATION**

Move the exposed person to fresh air at once. If breathing stops, provide artificial respiration. Keep the affected person warm and at rest. Get prompt medical attention.

**INGESTION**

DO NOT INDUCE VOMITING! Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Provide rest, warmth and fresh air. Get medical attention immediately!

**SKIN CONTACT**

Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if irritation persists after washing.

**EYE CONTACT**

Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes and get medical attention.

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### 5 FIRE-FIGHTING MEASURES

**EXTINGUISHING MEDIA**

Fire can be extinguished using: Alcohol resistant foam. Carbon dioxide (CO2). Water spray, fog or mist. Powder.

**SPECIAL FIRE FIGHTING PROCEDURES**

Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Containers close to fire should be removed or cooled with water.

**UNUSUAL FIRE & EXPLOSION HAZARDS**

HIGHLY FLAMMABLE! Vapours may form explosive mixture with air at room temperature. Vapours are heavier than air and may spread near ground to sources of ignition. May travel considerable distance to source of ignition and flash back.

### 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS**

Wear protective clothing as described in Section 8 of this safety data sheet. Do not breathe vapour. Provide adequate ventilation. In case of inadequate ventilation, use respiratory protection.

**ENVIRONMENTAL PRECAUTIONS**

Do not discharge into drains, water courses or onto the ground.

**SPILL CLEANUP METHODS**

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Provide ventilation and confine spill. Do not allow runoff to sewer. Clean-up personnel should use respiratory and/or liquid contact protection. Absorb spillage with suitable absorbent material.

### 7 HANDLING AND STORAGE

**USAGE PRECAUTIONS**

Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Risk of vapour concentration on the floor and in low-lying areas. Contaminated rags and cloths must be put in fireproof containers for disposal.

**STORAGE PRECAUTIONS**

Flammable/combustible - Keep away from oxidisers, heat and flames. Store in tightly closed original container in a dry, cool and well-ventilated place. May attack some plastics, rubber and coatings.

**STORAGE CLASS**

Flammable liquid storage.

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	TWA - 8 hrs		STEL - 15 min		Notes
1-METHOXY-2-PROPANOL	WEL	100 ppm(Sk)	375 mg/m3(Sk)	150 ppm(Sk)	560 mg/m3(Sk)	
BUTANONE	WEL	200 ppm(Sk)	600 mg/m3(Sk)	300 ppm(Sk)	899 mg/m3(Sk)	
ETHANOL	WEL	1000 ppm	1920 mg/m3			

WEL = Workplace Exposure Limit.

**INGREDIENT COMMENTS**

WEL = Workplace Exposure Limits

**PROTECTIVE EQUIPMENT**



**PROCESS CONDITIONS**

Use engineering controls to reduce air contamination to permissible exposure level.

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### RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit. Use respiratory equipment with gas filter, type AX.

### HAND PROTECTION

Protective gloves must be used if there is a risk of direct contact or splash. For exposure of 1 to 4 hours use gloves made of: Butyl rubber. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.

### EYE PROTECTION

Wear splash-proof eye goggles to prevent any possibility of eye contact.

### OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

### HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE</b>	Coloured liquid
<b>COLOUR</b>	Black
<b>ODOUR</b>	Characteristic of solvents
<b>VOLATILITY DESCRIPTION</b>	Volatile.
<b>SOLUBILITY</b>	Slightly soluble in water.
<b>BOILING POINT (°C)</b>	c. 80 @ 760 mm Hg
<b>MELTING POINT (°C)</b>	c. -86
<b>RELATIVE DENSITY</b>	0.85 - 0.95 @ 20°C
<b>VAPOUR DENSITY (air=1)</b>	c. 2.4
<b>VAPOUR PRESSURE</b>	c. 78 mmHg @ 20°C
<b>EVAPORATION RATE</b>	> BuAc (BuAc=1)
<b>VISCOSITY</b>	c. 2 - 5 mPas @ 20°C
<b>FLASH POINT (°C)</b>	c. -6 CC (Closed cup).
<b>AUTO IGNITION</b>	c. 515
<b>TEMPERATURE (°C)</b>	
<b>FLAMMABILITY LIMIT - LOWER(%)</b>	c. 1.8 (%v/v)
<b>FLAMMABILITY LIMIT - UPPER(%)</b>	c. 11.5 (%v/v)

## 10 STABILITY AND REACTIVITY

### STABILITY

No particular stability concerns.

### CONDITIONS TO AVOID

Avoid heat. Avoid contact with oxidisers or reducing agents. Avoid contact with acids and alkalies.

### HAZARDOUS POLYMERISATION

Will not polymerise.

### HAZARDOUS DECOMPOSITION PRODUCTS

Fire creates: Asphyxiating gases/vapours/fumes of: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO). Nitrous gases (NO<sub>x</sub>).

## 11 TOXICOLOGICAL INFORMATION

### INHALATION

High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting. Drowsiness, dizziness, disorientation, vertigo.

### INGESTION

Liquid irritates mucous membranes and may cause abdominal pain if swallowed. Nausea, vomiting. Diarrhoea.

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**SKIN CONTACT**

Product has a defatting effect on skin. Repeated exposure may cause skin dryness or cracking.

**EYE CONTACT**

Irritating to eyes. Vapour or spray may cause temporary (reversible) eye damage.

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**12 ECOLOGICAL INFORMATION**

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**ECOTOXICITY**

Not regarded as dangerous for the environment.

**WATER HAZARD CLASSIFICATION**

WGK 1

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**13 DISPOSAL CONSIDERATIONS**

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**GENERAL INFORMATION**

When handling waste, consideration should be made to the safety precautions applying to handling of the product.

**DISPOSAL METHODS**

Dispose of waste and residues in accordance with local authority requirements. Absorb in vermiculite or dry sand, dispose in licensed hazardous waste.

**WASTE CLASS**

European Waste Catalogue Number (2000/532/EC): 08 03 12

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**14 TRANSPORT INFORMATION**

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<b>PROPER SHIPPING NAME</b>	PRINTING INK RELATED MATERIAL
<b>UN NO. ROAD</b>	1210
<b>ADR CLASS NO.</b>	3 - F1
<b>ADR CLASS</b>	Class 3: Flammable liquids.
<b>ADR LABEL NO.</b>	3
<b>HAZCHEM CODE</b>	3YE
<b>RID CLASS NO.</b>	3
<b>UN NO. SEA</b>	1210
<b>IMDG CLASS</b>	3
<b>IMDG PACK GR.</b>	II
<b>EMS</b>	F-E, S-D
<b>MARINE POLLUTANT</b>	No.
<b>UN NO. AIR</b>	1210
<b>AIR CLASS</b>	3
<b>AIR PACK GR.</b>	II

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**15 REGULATORY INFORMATION**

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**LABELLING**



Irritant



Highly Flammable

**RISK PHRASES**

R11                      Highly flammable.

### Linx Thermochromic black to blue ink 1290

- R36 Irritating to eyes.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapours may cause drowsiness and dizziness.

**SAFETY PHRASES**

- S9 Keep container in a well-ventilated place.
- S16 Keep away from sources of ignition - No smoking.
- S25 Avoid contact with eyes.
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S37 Wear suitable gloves.
- S51 Use only in well-ventilated areas.
- S60 This material and its container must be disposed of as hazardous waste.

**UK REGULATORY REFERENCES**

The Control of Substances Hazardous to Health (COSHH) Regulations 2002 (S.I. 2002 No 2677). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (CHIP 4) (S.I. 2009 No. 716).

**EU DIRECTIVES**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC.

**APPROVED CODE OF PRACTICE**

The Approved Code of Practice on Safety Data Sheets L130 (3rd Edition). The Approved Classification and Labelling Guide (6th Edition).

**GUIDANCE NOTES**

Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone (HSG228).

**16 OTHER INFORMATION**

**REVISION COMMENTS**

Multiple language edition

**ISSUED BY**

Dr Richard Marsden; Chief Chemist

**REVISION DATE** 05/05/2009

**REV. NO./REPL. SDS** 10

**GENERATED**

**SDS NO.** MP80026

**SAFETY DATA SHEET STATUS**

Approved.

**RISK PHRASES IN FULL**

- R10 Flammable.
- R11 Highly flammable.
- R36 Irritating to eyes.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapours may cause drowsiness and dizziness.

**DISCLAIMER**

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.