

SAFETY DATA SHEET Linx Red ink 1018

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

1.1. Product identifier

Product name Linx Red ink 1018

Product number 1018

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

Identified uses Printing ink.

1.3. Details of the supplier of the safety data sheet

Supplier Linx Printing Technologies Ltd

Linx House

8 Stocks Bridge Way

Compass Point Business Park

ST IVES

Cambridgeshire PE27 5JL

UK

T: +44 (0)1480 302100 Mon-Fri 9am-5pm

F: +44 (0)1480 302116

E-mail: SDS@Linx.co.uk Web: www.linxglobal.com

1.4. Emergency telephone number

Emergency telephone 24HR: (+1)-352-323-3500; USA 1-800-535-5053

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Flam. Liq. 2 - H225

Health hazards Eye Irrit. 2 - H319 STOT SE 3 - H336

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms





Signal word Danger

Hazard statements H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

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Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P271 Use only outdoors or in a well-ventilated area.

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.

P313 Get medical advice/ attention.

P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label

information

EUH066 Repeated exposure may cause skin dryness or cracking.

Contains butanone

Supplementary precautionary

P240 Ground and bond container and receiving equipment.

statements P241 Use explosion-proof electrical equipment.

P242 Use non-sparking tools.
P243 Take action to prevent static discharges.

P261 Avoid breathing vapour/ spray.

P264 Wash contaminated skin thoroughly after handling.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTRE/doctor if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice/ attention.

P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

BUTANONE 60-80%

CAS number: 78-93-3 EC number: 201-159-0

Classification

Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336

ETHANOL 5-10%

CAS number: 64-17-5 EC number: 200-578-6

Classification

Flam. Liq. 2 - H225 Eye Irrit. 2 - H319

PROPAN-2-OL

CAS number: 67-63-0

EC number: 200-661-7

Classification

Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336

ETHYL ACETATE 1-5%

CAS number: 141-78-6 EC number: 205-500-4

Classification

Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336

methanol <1%

CAS number: 67-56-1 EC number: 200-659-6

Classification

Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 STOT SE 1 - H370

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention if any discomfort continues. Never give anything by mouth to an

unconscious person.

Inhalation Move affected person to fresh air at once. If breathing stops, provide artificial respiration.

Keep affected person warm and at rest. Get medical attention immediately.

Ingestion Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink.

Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention

immediately.

Skin contact Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical

attention if irritation persists after washing.

Eye contact Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15

minutes and get medical attention.

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

General information The severity of the symptoms described will vary dependent on the concentration and the

length of exposure. See Section 11 for additional information on health hazards.

Inhalation Vapours may cause headache, fatigue, dizziness and nausea. Irritation of nose, throat and

airway.

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Ingestion May cause stomach pain or vomiting.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact May cause temporary eye irritation.

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

Notes for the doctor If in doubt, get medical attention promptly. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with the following media: Alcohol-resistant foam. Carbon dioxide (CO2). Water

spray, fog or mist. Powder.

Unsuitable extinguishing

media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards The product is highly flammable. Vapours may form explosive mixtures with air. Vapours are

heavier than air and may spread near ground and travel a considerable distance to a source

of ignition and flash back.

Hazardous combustion

products

Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during

firefighting

Control run-off water by containing and keeping it out of sewers and watercourses. Containers

close to fire should be removed or cooled with water.

Special protective equipment

for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective

clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation

of vapours. Provide adequate ventilation. Use suitable respiratory protection if ventilation is

inadequate.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Use appropriate

containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near

spillage. Provide adequate ventilation. Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Large Spillages: Contain and absorb spillage with sand, earth or other non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Collect and place in suitable waste

disposal containers and seal securely.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Usage precautions Keep away from heat, sparks and open flame. Static electricity and formation of sparks must

be prevented. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation.

Avoid inhalation of vapours. Use approved respirator if air contamination is above an

acceptable level. Vapours may accumulate on the floor and in low-lying areas. Contaminated

rags and cloths must be put in fireproof containers for disposal.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from oxidising materials, heat and flames. Store in tightly-closed, original

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

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

BUTANONE

Long-term exposure limit (8-hour TWA): WEL 200 ppm 600 mg/m³ Short-term exposure limit (15-minute): WEL 300 ppm 899 mg/m³ Sk

OIC

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³ Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

ETHYL ACETATE

Long-term exposure limit (8-hour TWA): WEL 200 ppm Short-term exposure limit (15-minute): WEL 400 ppm

methanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m $^{\rm 3}$ Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m $^{\rm 3}$

Sk

WEL = Workplace Exposure Limit. Sk = Can be absorbed through the skin.

BUTANONE (CAS: 78-93-3)

DNEL Workers - Dermal; Long term systemic effects: 1161 mg/kg/day

Workers - Inhalation; Long term systemic effects: 600 mg/m³

PNEC Fresh water; 55.8 mg/l

marine water; 55.8 mg/l Intermittent release; 55.8 mg/l Sediment (Freshwater); 284.7 mg/kg Sediment (Marinewater); 284.7 mg/kg

Soil; 22.5 mg/kg

STP; 709 mg/l

ETHANOL (CAS: 64-17-5)

DNEL Workers - Dermal; Long term : 343 mg/kg

Workers - Inhalation; Short term local effects: 1900 mg/m³

Workers - Inhalation; Long term: 950 mg/m3

PNEC Fresh water; 0.96 mg/l

marine water; 0.79 mg/l

Sediment (Freshwater); 3.6 mg/kg

Soil; 0.63 mg/kg

PROPAN-2-OL (CAS: 67-63-0)

DNEL Workers - Dermal; Long term : 888 mg/kg/day

Workers - Inhalation; Long term: 500 mg/m3

PNEC Fresh water; 140.9 mg/l

marine water; 140.9 mg/l

Sediment (Freshwater); 552 mg/kg Sediment (Marinewater); 552 mg/kg

Soil; 28 mg/kg

ETHYL ACETATE (CAS: 141-78-6)

DNEL Workers - Inhalation; Short term systemic effects: 1468 mg/m³

Workers - Inhalation; Short term local effects: 1468 mg/m³ Workers - Dermal; Long term systemic effects: 63 mg/kg/day Workers - Inhalation; Long term systemic effects: 734 mg/m³ Workers - Inhalation; Long term local effects: 734 mg/m³

PNEC Fresh water; 0.24 mg/l

marine water; 0.024 mg/l

Sediment (Freshwater); 1.15 mg/kg Sediment (Marinewater); 0.115 mg/kg

Soil; 0.148 mg/kg

Intermittent release; 1.65 mg/l

8.2. Exposure controls

Protective equipment





Appropriate engineering

controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, wear gloves that are proven to be impervious to the chemical and resist degradation. For exposure up to 4 hours, wear gloves made of the following material: Butyl rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

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Hygiene measures

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

Respiratory protection No specific recommendations. Respiratory protection must be used if the airborne

contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted

with the following cartridge: Gas filter, type AX.

Environmental exposure

controls

Emissions from ventilation or work process equipment should be checked to ensure they

comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

Colour Red.

Odour Characteristic.

Odour threshold Not available.

pH Not available.

Melting point -86°C

Initial boiling point and range 80°C @ 760 mm Hg

Flash point -6°C Closed cup.

Evaporation rate > BuAc (BuAc=1)

Flammability (solid, gas) Not available.

Upper/lower flammability or

explosive limits

Lower flammable/explosive limit: 1.8 (%v/v) Upper flammable/explosive limit: 11.5 (%v/v)

Vapour pressure 78 mmHg @ 20°C

Vapour density 2.4

Relative density 0.82 - 0.96 @ 25°C

Solubility(ies) Slightly soluble in water.

Partition coefficient log Pow: 0.3 Information given is applicable to the major ingredient.

Auto-ignition temperature 515°C

Decomposition Temperature Not available.

Viscosity 2 - 5 mPa s @ 25°C

Explosive properties Not considered to be explosive.

Oxidising properties Does not meet the criteria for classification as oxidising.

9.2. Other information

Volatility Volatile.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

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Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous

reactions

Will not polymerise.

Cachons

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong alkalis. Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products

Hazardous decomposition

products

Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 29,949.09

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 89,847.26

Acute toxicity - inhalation

Notes (inhalation LC50) Based on available data the classification criteria are not met.

ATE inhalation (vapours mg/l) 898.47

Skin corrosion/irritation

Skin corrosion/irritation Repeated exposure may cause skin dryness or cracking.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisationBased on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitroBased on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity -

Based on available data the classification criteria are not met.

development

Specific target organ toxicity - single exposure

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STOT - single exposure STOT SE 3 - H336

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the concentration and the

length of exposure.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following

overexposure may include the following: Headache. Fatigue. Nausea, vomiting. Drowsiness,

dizziness, disorientation, vertigo.

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

vomiting. Diarrhoea.

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.

Route of exposure Inhalation Skin and/or eye contact Ingestion

Toxicological information on ingredients.

BUTANONE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ 2,737.0

mg/kg)

Species Rat

ATE oral (mg/kg) 2,737.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 6,480.0

mg/kg)

Species Rabbit

ATE dermal (mg/kg) 6,480.0

Acute toxicity - inhalation

Acute toxicity inhalation 11,700.0

(LC₅₀ vapours mg/l)

Species Rat

ATE inhalation (vapours

mg/l)

ETHANOL

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

11,700.0

Acute toxicity - dermal

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Notes (dermal LD₅o) LC₅o >2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 51 mg/l, 4 hours, Vapour Rat

PROPAN-2-OL

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 51 mg/l, 8 hours, Vapour Rat

ETHYL ACETATE

Acute toxicity - oral

Acute toxicity oral (LD₅o

mg/kg)

4,934.0

Species Rabbit

ATE oral (mg/kg) 4,934.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >20000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ >22.5 mg/l, 6 hours, Vapour Rat

methanol

Acute toxicity - oral

ATE oral (mg/kg) 100.0

Acute toxicity - dermal

ATE dermal (mg/kg) 300.0

Acute toxicity - inhalation

Acute toxicity inhalation

. . . .

(LC50 vapours mg/l)

ATE inhalation (vapours 131.25

mg/l)

SECTION 12: Ecological information

Ecotoxicity The product contains a substance which may cause long-term adverse effects in the aquatic

environment.

12.1. Toxicity

Toxicity See the other subsections of this section for further details.

131.25

Ecological information on ingredients.

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BUTANONE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 2993 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic

invertebrates

EC₅₀, 48 hours: 308 mg/l, Daphnia magna

Acute toxicity - aquatic

plants

EC₅₀, 72 hours: >100 mg/l, Pseudokirchneriella subcapitata

ETHANOL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 14200 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic

invertebrates

EC₅o, 96 hours: >100 mg/l, Daphnia magna

Acute toxicity - aquatic

plants

EC₅₀, 72 hours: 275 mg/l, Freshwater algae

PROPAN-2-OL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 48 hours: >100 mg/l, Leuciscus idus (Golden orfe)

Acute toxicity - aquatic

invertebrates

EC₅o, 48 hours: >100 mg/l, Daphnia magna

Acute toxicity - aquatic

plants

EC₅o, 72 hours: >100 mg/l, Scenedesmus subspicatus

ETHYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 230 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic

invertebrates

EC₅o, 48 hours: 165 mg/l, Daphnia magna

Acute toxicity - aquatic

plants

 LC_{50} , 48 hours: 5600 mg/l, Desmodesmus subspicatus

12.2. Persistence and degradability

Persistence and degradability No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 0.3 Information given is applicable to the major ingredient.

12.4. Mobility in soil

Mobility The product contains organic solvents which will evaporate easily from all surfaces.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB

This product does not contain any substances classified as PBT or vPvB.

assessment

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be

considered. Materials such as cleaning rags and paper wipes that are contaminated with flammable liquids may self-ignite after use and should be stored in designated fireproof

containers with tight-fitting, self-closing lids.

Disposal methodsDispose of waste to licensed waste disposal site in accordance with the requirements of the

local Waste Disposal Authority. Dispose of waste via a licensed waste disposal contractor.

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

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1210 UN No. (IMDG) 1210 UN No. (ICAO) 1210

14.2. UN proper shipping name

Proper shipping name

(ADR/RID)

PRINTING INK RELATED MATERIAL

Proper shipping name (IMDG) PRINTING INK RELATED MATERIAL

Proper shipping name (ICAO) PRINTING INK RELATED MATERIAL

Proper shipping name (ADN) PRINTING INK RELATED MATERIAL

14.3. Transport hazard class(es)

ADR/RID class 3 - F1

ADR/RID label 3

IMDG class 3

ICAO class/division 3

Transport labels



14.4. Packing group

ADR/RID packing group II
IMDG packing group II
ICAO packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-E, S-D

Emergency Action Code 3YE

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

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

National regulations Control of Substances Hazardous to Health Regulations 2002 (as amended).

Guidance Workplace Exposure Limits EH40.

Introduction to Local Exhaust Ventilation HS(G)37.

Authorisations (SI 2020 No.

1577 Annex XIV)

No specific authorisations are known for this product.

Restrictions (SI 2020 No.

1577 Annex XVII)

No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate. CAS: Chemical Abstracts Service.

DNEL: Derived No Effect Level.

EC50: 50% of maximal Effective Concentration.

GHS: Globally Harmonized System.

LC50: Lethal Concentration to 50 % of a test population.

LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).

PBT: Persistent, Bioaccumulative and Toxic substance.

PNEC: Predicted No Effect Concentration.

REACH: The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577.

SVHC: Substances of Very High Concern. vPvB: Very Persistent and Very Bioaccumulative.

Revision date 19/01/2023

Revision 24

Supersedes date 18/07/2019

SDS number 10147

Hazard statements in full H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed. H311 Toxic in contact with skin. H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H336 May cause drowsiness or dizziness.

H370 Causes damage to organs.

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.