SAFETY DATA SHEET

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

1.1. Product identifier

Product name IC-1BK111 PRINTING INK

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 Inkminic Logo Technology (Guangzhou) Co., Ltd

1.4. Emergency telephone number 020-32954560

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 Repr. 1B - H360FD 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.
H360FD May damage fertility. May damage the unborn child.
H336 May cause drowsiness or dizziness.

Precautionary statements
P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308+P313 IF exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
Contains	Ethyl Acetate, reaction mass of: tert-alkyl(C12-C14)ammonium bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium bis[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium bis[1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium [[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphthalenolato(2-)]-[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]]-chromate(1-)tert-alkyl(C12-C14)ammonium [[1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenolato(2-)]-[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]]-chromate(1-)tert-alkyl(C12-C14)ammonium ((1-(4-nitro-2-oxidophenylazo)-2-naphtholato)(1-(3-nitro-2-oxido-5-(1,1-dimethylpropyl)phenylazo)-2-naphtholato))chromate(1-)
Supplementary precautionary statements	P202 Do not handle until all safety precautions have been read and understood. P240 Ground and bond container and receiving 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. P271 Use only outdoors or in a well-ventilated area. 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. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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.

2.3. Other hazards

None known.

Endocrine disrupting substances	This product does not contain any known or suspected endocrine disruptors over 0.1%
PBT and vPvB	The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ethanol	40-50%
CAS number: 64-17-5	EC number: 200-578-6
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319	

Ethyl Acetate	40-50%
CAS number: 141-78-6	EC number: 205-500-4
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	

reaction mass of: tert-alkyl(C12-C14)ammonium bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium bis[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium bis[1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium [[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphthalenolato(2-)]-[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]]-chromate(1-)tert-alkyl(C12-C14)ammonium [[1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenolato(2-)]-[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]]-chromate(1-)tert-alkyl(C12-C14)ammonium ((1-(4-nitro-2-oxidophenylazo)-2-naphtholato)(1-(3-nitro-2-oxido-5-(1,1-dimethylpropyl)phenylazo)-2-naphtholato))chromate(1-) — 5-10%

CAS number: 117527-94-3 EC number: 938-781-3

Classification
Repr. 1B - H360FD

Titanium Phosphate Complex — 0.9-5.0%

CAS number: 109037-78-7 EC number: 401-100-0

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2 - H319
Aquatic Chronic 2 - H411

Isopropyl Alcohol — 0.29-0.9%

CAS number: 67-63-0 EC number: 200-661-7

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

2-methylpropan-1-ol — <0.1%

CAS number: 78-83-1 EC number: 201-148-0

Classification
Flam. Liq. 3 - H226
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
STOT SE 3 - H335, H336

N-Propanol — <0.1%

CAS number: 71-23-8 EC number: 200-746-9

Classification
Flam. Liq. 2 - H225
Eye Dam. 1 - H318
STOT SE 3 - H336

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. Show this Safety Data Sheet to the medical personnel.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	IF SWALLOWED: Get medical attention. Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Skin contact	IF ON SKIN: Rinse immediately with plenty of water.
Eye contact	IF IN EYES: Rinse immediately with plenty of water. Get medical attention if irritation persists after washing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Drowsiness, dizziness, disorientation, vertigo. Headache. Nausea, vomiting.
Ingestion	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	Irritating to eyes.

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

Notes for the doctor	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
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	Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Containers can burst violently or explode when heated, due to excessive pressure build-up. Take precautionary measures against static discharges.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Carbon dioxide (CO_2). Carbon monoxide (CO).

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. No smoking, sparks, flames or other sources of ignition near spillage.

6.2. Environmental precautions

Environmental precautions	Contain spillage with sand, earth or other suitable non-combustible material. Use appropriate containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. 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. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Collect and dispose of spillage as indicated in Section 13.

6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Flammable/combustible materials. Do not handle until all safety precautions have been read and understood. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use only non-sparking tools. May damage fertility. May damage the unborn child.
Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Eliminate all sources of ignition. Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep containers upright. Take precautionary measures against static discharges.
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

ethanol

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

Ethyl Acetate

Long-term exposure limit (8-hour TWA): WEL 200 ppm

Short-term exposure limit (15-minute): WEL 400 ppm

Isopropyl Alcohol

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

2-methylpropan-1-ol

Long-term exposure limit (8-hour TWA): WEL 50 ppm 154 mg/m³
Short-term exposure limit (15-minute): WEL 75 ppm 231 mg/m³

N-Propanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 500 mg/m³
Short-term exposure limit (15-minute): WEL 250 ppm 625 mg/m³
Sk

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

ethanol (CAS: 64-17-5)

DNEL	Workers - Inhalation; Long term systemic effects: 950 mg/m³ Workers - Inhalation; Long term local effects: 1900 mg/m³ Workers - Dermal; Long term systemic effects: 343 mg/kg/day
PNEC	- Fresh water; 0.96 mg/l - marine water; 0.79 mg/l - Intermittent release; 2.75 mg/l - STP; 580 mg/l - Sediment (Freshwater); 3.6 mg/kg - Sediment (Marinewater); 2.9 - Soil; 0.63 mg/kg

Ethyl Acetate (CAS: 141-78-6)

DNEL	REACH dossier information. Workers - Inhalation; Long term systemic effects: 734 mg/m³ Workers - Inhalation; Short term systemic effects: 1468 mg/m³ Workers - Inhalation; Long term local effects: 734 mg/m³ Workers - Inhalation; Short term local effects: 1468 mg/m³ Workers - Dermal; Long term systemic effects: 63 mg/kg/day
PNEC	REACH dossier information. - 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 - STP; 650 mg/l

reaction mass of: tert-alkyl(C12-C14)ammonium bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium bis[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium bis[1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenolato(2-)]-chromate(1-)tert-alkyl(C12-C14)ammonium [[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphthalenolato(2-)]-[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]]-chromate(1-)tert-alkyl(C12-C14)ammonium [[1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenolato(2-)]-[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]]-chromate(1-)tert-alkyl(C12-C14)ammonium ((1-(4-nitro-2-oxidophenylazo)-2-naphtholato)(1-(3-nitro-2-oxido-5-(1,1-dimethylpropyl)phenylazo)-2-naphtholato))chromate(1-) (CAS: 117527-94-3)

DNEL	Workers - Dermal; Long term systemic effects: 0.13 mg/kg/day General population - Dermal; Long term systemic effects: 0.07 mg/kg/day General population - Oral; Long term systemic effects: 0.07 mg/kg/day

Titanium Phosphate Complex (CAS: 109037-78-7)

DNEL	REACH dossier information. Workers - Inhalation; Long term systemic effects: 2.4 mg/m³ Workers - Inhalation; Short term systemic effects: 17630 mg/m³ Workers - Dermal; Long term systemic effects: 0.67 mg/kg/day

PNEC	REACH dossier information. - Fresh water; 0.013 mg/l - marine water; 0.0001 mg/l - Intermittent release; 0.015 mg/l - STP; 100 mg/l

Isopropyl Alcohol (CAS: 67-63-0)

DNEL	Workers - Inhalation; Long term systemic effects: 500 mg/m³ Workers - Dermal; Long term systemic effects: 888 mg/kg/day
PNEC	- Fresh water; 140.9 mg/l - marine water; 140.9 mg/l - STP; 2251 mg/l - Sediment (Freshwater); 552 mg/kg - Sediment (Marinewater); 552 mg/kg - Soil; 28 mg/kg

2-methylpropan-1-ol (CAS: 78-83-1)

DNEL	REACH dossier information. Workers - Inhalation; Long term local effects: 310 mg/m³
PNEC	REACH dossier information. - Fresh water; 0.4 mg/l - marine water; 0.04 mg/l - STP; 10 mg/l - Sediment (Freshwater); 1.56 mg/kg - Sediment (Marinewater); 0.156 mg/kg - Soil; 0.076 mg/kg

N-Propanol (CAS: 71-23-8)

DNEL	Workers - Inhalation; Long term systemic effects: 268 mg/m³ Workers - Inhalation; Short term systemic effects: 1723 mg/m³ Workers - Dermal; Long term systemic effects: 136 mg/kg
PNEC	- Fresh water; 10 mg/l - marine water; 1 mg/l - Intermittent release; 10 mg/l - STP; 96 mg/l - Sediment (Freshwater); 22.8 mg/kg - Sediment (Marinewater); 2.28 mg/kg - Soil; 2.2 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls: As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Ensure control measures are regularly inspected and maintained. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits.

Eye/face protection: Wear tight-fitting, chemical splash goggles or face shield. Personal protective equipment that provides appropriate eye and face protection should be worn.

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: Nitrile rubber. The selected gloves should have a breakthrough time of at least 4 hours. For exposure up to 8 hours, wear gloves made of the following material: Butyl rubber. The selected gloves should have a breakthrough time of at least 8 hours. 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. It should be noted that liquid may penetrate the gloves.
Other skin and body protection	Wear anti-static protective clothing if there is a risk of ignition from static electricity. Wear appropriate clothing to prevent skin contamination.
Hygiene measures	Provide eyewash station and safety shower. Wash contaminated clothing before reuse. 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 requirements are anticipated under normal conditions of use. If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear self-contained breathing apparatus. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P2.
Environmental exposure controls	Keep container tightly sealed when not in use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Black.
Odour	Alcoholic.
Odour threshold	Lower 80 ppm Information given is applicable to the major ingredient.
pH	Not relevant. The product contains organic solvents. Technical impossibility to obtain the data.
Melting point	-114°C Information given is applicable to the major ingredient.
Initial boiling point and range	~78°C Information given is applicable to the major ingredient.
Flash point	-1.5°C Closed cup.
Evaporation rate	1.7 (butyl acetate = 1) Information given is applicable to the major ingredient.
Flammability (solid, gas)	Not relevant. Flammable liquid
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 3.3.% Upper flammable/explosive limit: 19% Information given is applicable to the major ingredient.
Vapour pressure	5.81 kPa @ 20°C Information given is applicable to the major ingredient.
Vapour density	> 1
Relative density	0.878 @ 25°C
Solubility(ies)	Miscible with water. Soluble in the following materials: Alcohols.
Partition coefficient	log Pow: -0.35 Information given is applicable to the major ingredient.
Auto-ignition temperature	365°C Information given is applicable to the major ingredient.
Viscosity	4.49 cP @ 25°C
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Volatile organic compound	This product contains a maximum VOC content of 84.3 %. This product contains a maximum VOC content of 0.71 kg/l.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	See Section 10.3 (Possibility of hazardous reactions) for further information.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	The following materials may react strongly with the product: Oxidising agents.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented. Do not pressurise, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition.

10.5. Incompatible materials

Materials to avoid	Oxidising materials. Acids - oxidising.

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Carbon dioxide (CO2). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral	
Notes (oral LD_{50})	Based on available data the classification criteria are not met.
Acute toxicity - dermal	
Notes (dermal LD_{50})	Based on available data the classification criteria are not met.
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.
Skin corrosion/irritation	
Animal data	Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation	
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory sensitisation	
Respiratory sensitisation	Based 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 vitro	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.
Reproductive toxicity	
Reproductive toxicity - fertility	May damage fertility.
Reproductive toxicity - development	May damage the unborn child.

Specific target organ toxicity - single exposure

STOT - single exposure	STOT SE 3 - H336 May cause drowsiness or dizziness.
Target organs	Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

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

General information	Avoid contact during pregnancy/while nursing. May damage fertility. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.
Ingestion	No specific symptoms known.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	Irritating to eyes.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	Central nervous system
Endocrine disrupting substances	This product does not contain any known or suspected endocrine disruptors over 0.1%

Toxicological information on ingredients.

ethanol

Acute toxicity - oral	
Notes (oral LD_{50})	REACH dossier information.
Acute toxicity - dermal	
Notes (dermal LD_{50})	REACH dossier information.
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	125.0
Notes (inhalation LC_{50})	REACH dossier information.
ATE inhalation (vapours mg/l)	125.0
Carcinogenicity	
IARC carcinogenicity	IARC Group 1 Carcinogenic to humans.

Ethyl Acetate

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	4,934.0
Species	Rabbit
ATE oral (mg/kg)	4,934.0
Acute toxicity - dermal	
Notes (dermal LD_{50})	LD_{50} >20000 mg/kg, Dermal, Rabbit
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	LC_{50} >22.5 mg/l, Inhalation, Rat

Reproductive toxicity

Reproductive toxicity - fertility	Two-generation study - NOAEL 26400 mg/kg/day, Oral, Mouse P, F1
Reproductive toxicity - development	Embryotoxicity: - NOAEL: >3500 mg/kg/day, Oral, Mouse

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	NOAEL 900 mg/kg/day, Oral, Rat NOAEC 350 ppm, Inhalation, Rat

Titanium Phosphate Complex

Acute toxicity - oral

Notes (oral LD_{50})	REACH dossier information. LD_{50} > 5000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD_{50})	REACH dossier information. LD_{50} > 2000 mg/kg, Dermal, Rat

Isopropyl Alcohol

Acute toxicity - oral

Notes (oral LD_{50})	Supplier's information. LD_{50} >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD_{50})	Supplier's information. LD_{50} >2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC_{50})	REACH dossier information. LC_{50} > 10000 ppm, Inhalation, Rat

Carcinogenicity

IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

SECTION 12: Ecological information

Ecotoxicity: Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity: Based on available data the classification criteria are not met.

Ecological information on ingredients.

ethanol

Acute aquatic toxicity

Acute toxicity - fish	REACH dossier information. EC_0, 200 hours: 3900 mg/l, Oryzias latipes (Red killifish)
Acute toxicity - aquatic invertebrates	EC_{50}, 24 hours: 20803 mg/l, Daphnia magna
Acute toxicity - aquatic plants	NOEC, 7 days: 467 mg/l, Freshwater plants
Acute toxicity - microorganisms	IC_{50}, 3 hours: >1000 mg/l, Activated sludge
Acute toxicity - terrestrial	LC_{50}, 48 hours: >1 mg/cm², Eisenia Fetida (Earthworm)

Chronic aquatic toxicity

Chronic toxicity - fish early life stage	NOEC, 42 hours: 500 mg/l, Brachydanio rerio (Zebra Fish)
Chronic toxicity - aquatic invertebrates	LC_{50}, 4 days: 12070 mg/l, Marinewater invertebrates

Ethyl Acetate

Acute aquatic toxicity	
Acute toxicity - fish	LC_{50}, 96 hours: 230 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	IC_{50}, 48 hours: 346 mg/l, Marinewater invertebrates
Acute toxicity - aquatic plants	LC_{50}, 48 hours: 5600 mg/l, Desmodesmus subspicatus NOEC, 48 hours: >1000 mg/l, Scenedesmus subspicatus
Chronic aquatic toxicity	
Chronic toxicity - fish early life stage	NOEC, 96 hours: <9.65 mg/l, Freshwater fish

Titanium Phosphate Complex

Acute aquatic toxicity	
Acute toxicity - fish	REACH dossier information. LC_{50}, 96 hours: > 10 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	REACH dossier information. EC_{50}, 48 hours: > 10 mg/l, Daphnia magna
Acute toxicity - aquatic plants	REACH dossier information. NOEC, 72 hours: 0.125 mg/l, Desmodesmus subspicatus

Isopropyl Alcohol

Acute aquatic toxicity	
Acute toxicity - fish	Supplier's information. LC_{50}, 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	Supplier's information. EC_{50}, 48 hours: > 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	Supplier's information. EC_{50}, 72 hours: > 100 mg/l, Scenedesmus subspicatus

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: -0.35 Information given is applicable to the major ingredient.

Ecological information on ingredients.

ethanol

Partition coefficient	log Pow: 0.32

Ethyl Acetate

Partition coefficient	log Pow: 0.68

Isopropyl Alcohol

Partition coefficient	log Pow: 0.05

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information on ingredients.

Ethyl Acetate

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

Other adverse effects	None known.
Endocrine disrupting substances	This product does not contain any known or suspected endocrine disruptors over 0.1%

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	The generation of waste should be minimised or avoided wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out.
Disposal methods	Dispose of waste product or used containers in accordance with local regulations Only store in correctly labelled containers. This material and its container must be disposed of as hazardous waste. Do not empty into drains. .

SECTION 14: Transport information

14.1. UN number

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

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	PRINTING INK
Proper shipping name (IMDG)	PRINTING INK
Proper shipping name (ICAO)	PRINTING INK
Proper shipping name (ADN)	PRINTING INK

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels

14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ADN 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
ADR transport category	2
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

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

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet	ATE: Acute Toxicity Estimate. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. EC_{50}: 50% of maximal Effective Concentration. GHS: Globally Harmonized System. IARC: International Agency for Research on Cancer. IATA: International Air Transport Association. Kow: Octanol-water partition coefficient. LC50: Lethal Concentration to 50 % of a test population. LD50: Lethal Dose to 50% of a test population (Median Lethal Dose). LOAEL: Lowest Observed Adverse Effect Level. NOAEL: No Observed Adverse Effect Level. 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.
Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/ Supplier's information.
Classification procedures according to SI 2019 No. 720	: Calculation method.
Training advice	Only trained personnel should use this material. No action shall be taken without appropriate training or involving any personal risk. Ensure operatives are trained to minimise exposure. Ensure procedures and training for emergency decontamination and disposal are in place.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	21/11/2024
Revision	4
Supersedes date	13/01/2023
SDS number	1465
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H360FD May damage fertility. May damage the unborn child. H411 Toxic to aquatic life with long lasting effects.