



ECO INK PAM RU

SAFETY DATA SHEET

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

1.1. Product identifier: ECO INK PAM RU

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

1.3. Details of the supplier of the safety data sheet: Ichemco srl
via 11 Settembre, 5
20012 Cuggiono (MI)
Italy

Email address of the competent person: safety@ichemco.it

1.4. Emergency telephone number: 24hrs, UK: 844 892 0111; EU: +32 3 575 55 55

Further information obtainable from: Product safety department

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification in accordance with Regulation (EC) No. 1272/2008 (CLP)

Flam. Liq. 2;H225	Highly flammable liquid and vapour.
Asp. Tox. 1;H304	May be fatal if swallowed and enters airways.
Skin Irrit. 2;H315	Causes skin irritation.
Eye Dam. 1;H318	Causes serious eye damage.
STOT SE 3;H336	May cause drowsiness or dizziness.
Aquatic Acute 1;H400	Very toxic to aquatic life.
Aquatic Chronic 1;H410	Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictograms:



GHS02

GHS05

GHS07

GHS08

GHS09

Signal word:

Danger

Hazard statements:

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

ICHEMCO srl

via 11 Settembre, 5

20012 Cuggiono (MI) - ITALY

Phone +39 02 97243.1 - Fax +39 02 97243.200 - email: info@ichemco.it - internet: www.ichemco.it

Precautionary statements: P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P264 Wash thoroughly with abundant water after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P370+P378 In case of fire: Use suitable media (see MSDS for instruction) for extinction.

Contains: Isobutyl-alcohol - Heptane [and isomers] - Octane [and isomers] - 2-Propanol - Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

2.3. Other hazards: n. a.

SECTION 3: Composition/information on ingredients

3.1. Substances

n. a.

3.2. Mixtures

Substances presenting a health or environmental hazard within the meaning of directives 67/548/EEC, 1999/45/EC and 1272/2008 (CLP):

CAS	EINECS	Registration n.	Denomination	Content	Classification(*)
	920-750-0	01-2119473851-33	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	25 - 30%	Aquatic Chronic 2; H411 Asp. Tox. 1; H304 Flam. Liq. 2; H225 STOT SE 3; H336
142-82-5	205-563-8	01-2119457603-38	Heptane [and isomers]	10 - 20%	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Asp. Tox. 1; H304 Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336
67-63-0	200-661-7	01-2119457558-25	2-Propanol	10 - 20%	Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336 LD50/dermal = 13900 mg/kg LD50/oral = 5840 mg/kg
78-83-1	201-148-0	01-2119484609-23	Isobutyl-alcohol 2-methylpropan-1-ol Isobutanol	5 - 10%	Eye Dam. 1; H318 Flam. Liq. 3; H226 Skin Irrit. 2; H315 STOT SE 3; H335 STOT SE 3; H336
111-65-9	203-892-1	01-2119463939-19	Octane [and isomers]	1 - 5%	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Asp. Tox. 1; H304 Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336

(*) For full text of the H- and EUH-phrases, see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures: If you feel unwell, seek medical advice. Take off immediately all contaminated clothing.

Inhalation: Move affected person to fresh air. Seek medical advise.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice.

Skin contact: Wash immediately with large amounts of water. Remove contenned clothing. If irritation persists, seek medical advice.

Ingestion: Consult physician or poison control center immediately. Do not induce vomiting if not asked by the physician. Do not give anything orally without medical authorization if subject is unconscious.

4.2. Most important symptoms and effects, both acute and delayed: n. a.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media: Foam, dry chemical powder, carbon dioxide (CO2).

Extinguishing media which must not be used: Water Fire Extinguishers.

5.2. Special hazards arising from the substance or mixture: Vapours are heavier than air and can travel along ground to remote ignition sources.

5.3. Advice for firefighters: Independent apparatus for respiratory protection.

Recommendations: Do not use water jets. If possible, take away any dangerous containers. Do not stay in the direction of the bottoms of containers. Cool the containers with spray water from a safe position. Fire-fighters must wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

Stop the outpouring, if possible without hazard. Circumscribe the loss and remove it by absorbing on dry sand or other inert materials. Remove any possible source of ignition. Control vapours with spray water. Do not smoke. Avoid contact. If the product has contaminated soil or waters, inform public authorities.

6.1. Personal precautions, protective equipment and emergency procedures: Wear gloves, protective clothing, safety goggles, boots, and protection for the respiratory (breathing apparatus). Eliminate all unguarded flames and possible sources of ignition. Do not smoke. Move out of danger unprotected and unauthorized persons.

6.2. Environmental precautions: If the product has contaminated soil or waters, inform public authorities.

6.3. Methods and material for containment and cleaning up: Stop the outpouring, if possible without hazard. Circumscribe the loss and remove it by absorbing on dry sand or other inert materials.

6.4. Reference to other sections: Please also refer to Sections 8 and 13.

SECTION 7: Handling and storage

Avoid flames and radiant heating. This product must be stored, handled and used in hygienic and safe way, according to current regulations.

7.1. Precautions for safe handling: General ventilation is required. Local ventilation is recommended. Do not breathe vapour. Avoid skin and eye contact.

Advice on general occupational hygiene: (a) not to eat, drink and smoke in work areas; (b) to wash hands after use; and (c) to remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities: Store the product in fresh, ventilated areas, separated from heating sources. Floor must not be flammable, must be impermeable and must prevent pouring to the outside. Electric plant must comply to current regulations.

7.3. Specific end use(s): Nothing special to note about specific uses.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters:

Substance:	TLW-TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Isobutyl-alcohol	50	152		
Heptane [and isomers]	400	1640	500	2050
Octane [and isomers]	300	1401	375	2331
2-Propanol	200	492	400	983
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	326	1400		

2-Propanol: AGW (Germany) TWA/8h: 500 mg/m³; 200 ppm – STEL/15 min: 1000 mg/m³; 400 ppm

MAK (Germany) TWA/8h: 500 mg/m³; 200 ppm – STEL/15 min: 1000 mg/m³; 400 ppm

VLA (Spain) TWA/8h: 500 mg/m³; 200 ppm – STEL/15 min: 1000 mg/m³; 400 ppm

VLEP (France) STEL/15 min: 980 mg/m³; 400 ppm

WEL (UK) TWA/8h: 999 mg/m³; 400 ppm – STEL/15 min: 1250 mg/m³; 500 ppm

DNEL

Long term systemic effects/consumers/oral: 26 mg/kg; inhalation: 89 mg/m³;

dermal: 319 mg/kg – Workers/inhalation: 500 mg/m³; dermal: 888 mg/kg

PNEC

Microorganisms STP: 2251 mg/kg; soft water: 140.9 mg/kg; sediment (soft water):

552 mg/kg; sea water: 140.9 mg/kg; sediment (sea water): 552 mg/kg; terrestrial

compartment: 28 mg/kg; nutritional chain (secondary poisoning): 160 mg/kg; water,

intermittent release: 140.9 mg/kg

Hydrocarbons, C7-C9, n-alkanes, DNEL - Long term systemic effects

isoalkanes, cyclics: Dermal Workers = 773 mg/kg bw/day; Inhalation Workers = 2035 mg/m³; Dermal people = 699 mg/kg bw/day; Inhalation People = 608 mg/m³; Oral People = 699 mg/kg bw/day

Heptane [and isomers]: TWA/8h: 2100 mg/m³ – 500 ppm MAK (Deu); 2085 mg/m³-500 ppm VLA (Esp); 1668 mg/m³-400 ppm VLEP (Fr); 2085 mg/m³-500 ppm WEL (GB); 2085 mg/m³-500 ppm TLV (It); 2085 mg/m³-500 ppm OEL (EU)

STEL/15 min: 2100 mg/m³ – 500 ppm MAK (Deu); 2085 mg/m³-500 ppm VLEP (Fr)

DNEL Chronic systemic effects

people/oral >149 mg/kg; people/inhalation >447 mg/m³; people/dermal >149 mg/kg

workers/inhalation >2085 mg/m³; workers/dermal >300 mg/kg

Isobutyl-alcohol: TWA/8h: 310 mg/m³ – 100 ppm AGW (Deu); 310 mg/m³ – 100 ppm MAK (Deu); 154 mg/m³-50 ppm (VLA (Esp); 150 mg/m³-50 ppm VLEP (Fra); 154 mg/m³-50 ppm WEL (GB)
 STEL/15 min: 310 mg/m³ – 100 ppm AGW (Deu); 310 mg/m³ – 100 ppm MAK (Deu); 231 mg/m³-75 ppm WEL (GB)
 DNEL
 Consumer, cronic systemic effects, oral exposure > 25 mg/kg; local cronic effects, inhalation > 55 mg/m³. Workers, local cronic effects, inhalation > 310 mg/m³
 PNEC Reference values for
 Microorganisms STP >10 mg/kg; soft water > 0,4 mg/kg; soft water sediments >1,52 mg/kg; sea water >0,04 mg/kg; sea water sediments >0,152 mg/kg; terrestrial compartment >0,0699; water, intermittent release > 11 mg/kg

Octane [and isomers]: TWA/8h: 500 ppm MAK (Deu); 1420 mg/m³-300 ppm (VLA (Esp); 1450 mg/m³-300 ppm WEL (GB). STEL/15min: 1000 mg/m³-400 ppm MAK (Deu)
 DNEL
 Cronic systemic effects, people, oral >699 mg/kg; inhalation >608 mg/m³; dermal > 699 mg/kg
 Cronic systemic effects, workers, dermal >773 mg/kg
 PNEC
 soft water: 0.00001 g/l; sea water: 0.00001 g/l; intermittent release (soft water): 0.00004 g/l; STP: 0.00016 g/l; sediment (soft water): 4 mg/kg; sediment (sea water): 4 mg/kg; soil: 1.6 mg/kg

8.2. Exposure controls: Ensure good ventilation and local exhaustion of the working area, to keep vapours concentration below the limits.

Appropriate engineering controls: Electric plant must comply to current regulations about use of flammable products.

Eye / face protection: Glasses with side protection ("cage" glasses) (EN166).
 Eye washing bottle with fresh water

Hand protection: PVC or neoprene gloves.

Skin protection: Use full protective clothing for chemicals (working-dress, apron).
 Protective shoes.

Respiratory protection: If the product is sprayed or if there is an high vapours concentration, use masks with filter for organic vapours (brown A serie).

Thermal hazards: n. a.

Environmental exposure controls: n. a.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

(a) **Appearance:** Coloured liquid.

(a) **Physical state:** Liquid.

(b) **Colour:** n. a.

(c) **Odour:** As solvent.

(c) **Odour threshold:** n.a.

(d) **Melting point:** n.a.

Freezing point: n.a.

(e) **Boiling point or initial boiling point and boiling range:** > 65 °C

(f) **Flammability:** n.a.

(g) **Lower and upper explosion limit:** n.a.

(h) **Flash point:** < 21 °C

(i) **Auto-ignition temperature:** n.a.

- (j) Decomposition temperature: n.a.
- (k) pH: n.a.
- (l) Kinematic viscosity: n.a.
- (m) Solubility: n.a.
- (n) Partition coefficient n-octanol/water (log value): n.a.
- (o) Vapour pressure: < 1100 (a 50°C) mbar
- (p) Density and/or relative density: 0.7 - 1 g/cm³
- (q) Relative vapour density: n.a.
- (r) Particle characteristics: n.a.
- COV: 40.44 (EC Directive 1999/13/CE) %
- 9.2. Other information: n. a.

SECTION 10: Stability and reactivity

No decomposition if correctly used.

- 10.1. Reactivity: There are no particular risks of reaction with other substances in normal conditions of use.
- 10.2. Chemical stability: The material is stable in normal use and stocking conditions.
- 10.3. Possibility of hazardous reactions: Keep away from oxidants and strong acids.
- 10.4. Conditions to avoid: Keep away from ignition source, heat, direct light.
- 10.5. Incompatible materials: n. a.
- 10.6. Hazardous decomposition products: Combustion can produce carbon oxides, toxic gases and fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects: In the absence of experimental toxicological data on the mixture, the potential health risks of the product have been evaluated considering the properties of the different composing substances. The concentration of each dangerous substance mentioned in section 3 is thus considered in assessing the toxicological effects resulting from exposure to the product.

The product causes serious damage to eyes and may cause corneal opacity, iris lesions, irreversible eye coloration.

Acute effects: contact with skin may cause irritation, erythema, edema, dryness and chapped skin. Inhalation of vapors may cause moderate irritation of the upper respiratory tract. Swallowing may cause health problems including stomach pain and sting, nausea and vomiting. The product contains highly volatile substances, which may cause serious depression of the central nervous system and effects such as drowsiness, dizziness, loss of reflexes, narcosis.

- acute toxicity: **Isobutyl-alcohol**
 LD50/oral/rat > 2830 mg/kg
 LD50/dermal/rabbit > 2000 mg/kg
 LC50/inhalation/rat: about 24.6 mg/l (4h)
- Heptane [and isomers]**
 LD50/oral/rat > 5000 mg/kg bw
 LC50/inhalation/rat/4h > 73.5 mg/l
 LD50/dermal/rabbit > 2000 mg/kg bw

Octane [and isomers]

LD50/oral/rat > 5000 mg/kg bw

LD50/dermal/rabbit > 2000 mg/kg bw

2-Propanol

LD50/oral/rat = 5840 mg/kg bw

LD50/dermal/rabbit = 16.4 ml/kg bw

LC50/inhalation/rat > 10000 ppm (6h)

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

LD50/oral/rat > 5000 mg/kg

LD50/dermal/rabbit > 2800 mg/kg

LC50/inhalation/rat > 23,3 mg/l (4h)

irritation: Isobutyl-alcohol

It causes serious eye damage.

It causes skin irritation.

Irritating to respiratory system.

Octane [and isomers]

Skin irritation test on rabbit: irritating

Eye irritation test on rabbit: not irritating

2-Propanol

It causes serious eye irritation.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

It can cause mild term eye problems (OCSE 405 or similar)

It can dry the skin, leading to discomfort and dermatitis (OCSE 404 or similar)

corrosivity: n. a.

sensitisation: Heptane [and isomers]

Guinea Pig Maximisation test (OECD 406): not sensitizing

Octane [and isomers]

OECD406 test on Guinea pig: not sensitising

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

No respiratory sensitizer

No skin sensitizer

repeated dose toxicity: Isobutyl-alcohol

Subacute oral toxicity

NOAEL/oral/rat > 1450 mg/kg bw day

Subacute inhalatory toxicity

NOAEL/inhalation/rat ≥ 7,5 mg/l

carcinogenicity: 2-Propanol

NOAEC (carcinogenicity) : 5000 ppm (rat)

mutagenicity: n. a.

toxicity for reproduction: 2-Propanol

NOAEL (C): 480 mg/kg bw/day (rabbit)

Information on likely routes of exposure: n. a.

Symptoms related to the physical, chemical and toxicological characteristics: n. a.

Delayed and immediate effects as well as chronic effects from short and long-term exposure: n. a.

Interactive effects: n. a.

11.2. Information on other hazards: n. a.

SECTION 12: Ecological information

Prevent contamination of soil and surface waters. Avoid dispersion of material into soil, drains or surface waters. Avoid dispersion of residues into drains.

12.1. Toxicity: **Isobutyl-alcohol**

LC50/Pimephales promelas = 1430 mg/l (96h)
 EC50/Daphnia pulex = 1100 mg/l (48h)
 EC50/pseudokirchneriella subcapitata = 1799 mg/l (72h)

Octane [and isomers]

NOELR/Oncorhynchus mykiss/28 d = 0.579 mg/l
 EL50/Mytilus edulis/105 min = 0.12 mg/l
 EC50/Mytilus edulis/105 min = 24.6 mg/kg
 EL50/pseudokirchneriella subcapitata/72h = 2084 mg/l

2-Propanol

LC50 (Pimephales promelas) : 9640 mg/l (96h)
 EC50 (Daphnia magna): >10000 mg/l (24h)
 EC50 (Scenedesmus quadricauda) : 1800 mg/l (7d)

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

EL50/Daphnia magna: 3 mg/l (48 h)
 EL50/Pseudokirchneriella subcapitata: 10-30 mg/l (72 h)
 NOELR/Pseudokirchneriella subcapitata: 10 mg/l (72 h)
 LL50/Oncorhynchus mykiss > 13.4 mg/l (96 h)
 LOEC/Daphnia magna: 0.32 mg/l (21 d)
 NOEC/Daphnia magna: 0.17 mg/l (21 d)

12.2. Persistence and **Isobutyl-alcohol**

degradability: Biodegradation: 90% 14 d

Heptane [and isomers]

LL50/Oncorhynchus Mykiss/96 h = 5378 mg/l
 NOEL/Oncorhynchus Mykiss/28 d = 1284 mg/l
 EC50/Daphnia magna/48h = 1.5 mg/l
 EL50/Daphnia magna/48 h = 3.9 mg/l
 EL50/Daphnia magna/21d = 1.6 mg/l (OECD 211)
 EL50/Tetrahymena pyriformis/48h = 22.6 mg/l
 EL50/Pseudokirchneriella subcapitata/72h = 4.3 mg/l

2-Propanol

Easily biodegradable
 BOD = 53% (Regulation (EC) No 440/2008, Annex C.5)

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Easily biodegradable, biodegradation = 98 % (28 d)

12.3. Bioaccumulative potential: **Isobutyl-alcohol**

Partition coefficient: n-octanol/water = 1

Heptane [and isomers]

Log Kow = 3,78
 BCF = 552 (calculated)

2-Propanol

Log Pow = 0.05

12.4. Mobility in soil: n. a.

12.5. Results of PBT and vPvB assessment: Based on available data, the product does not contain any PBT or vPvB substances in quantity higher than 0.1%.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

The substance does not meet the PBT and vPvB criteria.

12.6. Endocrine disrupting properties: n. a.

12.7. Other adverse effects: n. a.

SECTION 13: Disposal considerations

13.1. Waste treatment methods: Recover if possible. This material should be incinerated in authorized plants or under controlled conditions. Proceed in conformity with local and national regulation.

SECTION 14: Transport information

Transport only in accordance with ADR for road, RID for rail, IMDG for sea and ICAO for air transport.

14.1. UN number: 1210 - PRINTING INK, flammable (vapour pressure at 50 °C not more than 110 kPa)

14.2. UN proper shipping name: PRINTING INK

14.3. Transport hazard class(es): 3 - Flammable liquids

14.4. Packing group: II - Substances presenting medium danger

Classification Code (ADR 2.2): F1 - Flammable liquids having a flash-point of or below 60 °C

Mixed packing provisions (4.1.10): MP19 - May - in quantities not exceeding 5 litres per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:
 - with goods of the same class covered by other classification codes or with goods of other classes, when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR, provided they do not react dangerously with one another.

Transport category (1.1.3.6): 2

Hazard identification No. (5.3.2.3): 33 - highly flammable liquid (flash-point below 23 °C)

14.5. Environmental hazards: n. a.

Marine pollutant: Heptane [and isomers], Octane [and isomers], Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

14.6. Special precautions for user: n. a.

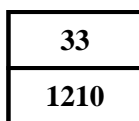
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

IMDG Page: 3272-1

IMDG EMS: F-E S-D

IMDG MFAG: 311

Danger labels:



SECTION 15: Regulatory information

Information contained in this SDS is based on the present state of our knowledge and on Regulation (EC) No 1907/2006 of the European Parliament and subsequent updates.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture: German Water Hazard Class WGK = 2

15.2. Chemical safety assessment: Not applicable

SECTION 16: Other information

Modified sections: 1,12, 14

STIR ACCURATELY BEFORE USE

Full text of H phrases listed in Section 3:

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- 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.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

Glossary / List of acronyms

(STOT) RE - Repeated Exposure

(STOT) SE - Single Exposure

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road

CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

CMR - Carcinogen, Mutagen, or Reproductive Toxicant

DNEL - Derived No Effect Level

ECHA - European Chemicals Agency

EINECS - European Inventory of Existing Commercial Substances

GHS - Globally Harmonized System

IATA - International Air Transport Association

ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air

IMDG - International Maritime Dangerous Goods

Kow - octanol-water partition coefficient

PBT - Persistent, Bioaccumulative and Toxic substance

REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006

RID - Regulations concerning the International Carriage of Dangerous Goods by Rail

SDS - Safety data sheet

STOT - Specific Target Organ Toxicity

SVHC - Substances of Very High Concern

UFI - Unique Formula Identifier

vPvB - Very Persistent and Very Bioaccumulative

Users' working conditions are beyond our knowledge and control. The product is not to be used for other purposes than those specified under section 1 without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this SDS is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products' properties.

The information in this Safety Data Sheet is provided in accordance with the requirements of the Chemicals (Hazard Information and Packaging) regulations.