



## COLOR INK PP PAM+ADD.

### SAFETY DATA SHEET

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

1.1. Product identifier: COLOR INK PP PAM+ADD.

UFI: D770-F0QD-A00D-722M

1.2. Relevant identified uses of the substance or mixture and uses advised against: Printing ink.  
ERC: 11a, 2, 5, 8c  
PROC: 19, 2, 3, 5, 8a, 8b, 9  
PC: 18

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.
Skin Irrit. 2;H315	Causes skin irritation.
Eye Dam. 1;H318	Causes serious eye damage.
STOT SE 3;H336	May cause drowsiness or dizziness.
Repr. 2;H361d	Suspected of damaging the unborn child.
STOT RE 2;H373	May cause damage to organs through prolonged or repeated exposure.
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

**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

Signal word:	Danger
Hazard statements:	<p>H225 Highly flammable liquid and vapour.</p> <p>H315 Causes skin irritation.</p> <p>H318 Causes serious eye damage.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p> <p>H400 Very toxic to aquatic life.</p> <p>H410 Very toxic to aquatic life with long lasting effects.</p>
Precautionary statements:	<p>H361d Suspected of damaging the unborn child.</p> <p>P201 Obtain special instructions before use.</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P370+P378 In case of fire: Use suitable media (see MSDS for instruction) for extinction.</p>
Contains:	Isobutyl-alcohol - Heptane [and isomers] - Octane [and isomers] - Toluene - Xylene (benzene < 0.01%) - 2-Propanol
2.3. Other hazards:	<p>On the basis of available data, the product does not contain PBT or vPvB substances in quantities <math>\geq 0.1\%</math>.</p> <p>The product does not contain substances having properties of interference with the endocrine system in a concentration <math>\geq 0.1\%</math>.</p>

## 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(*)
108-88-3	203-625-9	01-2119471310-51	Toluene	20 - 25%	<p>Aquatic Chronic 3; H412</p> <p>Asp. Tox. 1; H304</p> <p>Flam. Liq. 2; H225</p> <p>Repr. 2; H361d</p> <p>Skin Irrit. 2; H315</p> <p>STOT RE 2; H373</p> <p>STOT SE 3; H336</p>
1330-20-7	215-535-7	01-2119488216-32	<p>Xylene (benzene &lt; 0.01%)</p> <p>UVCB substance, valid also these products indicators:</p> <p>Ethylbenzene and xylene mass reaction; CE N. : 905-588-0; Nr. REACH: 01-2119486136-34/ 01-2119488216-32;</p> <p>Mass reaction of ethylbenzene and m-xylene and p-xylene; CE N: 905-562-9; Nr. REACH: 01-2119488216-32/01-2119555267-33.</p>	19 - 24%	<p>Acute Tox. 4; H312</p> <p>Acute Tox. 4; H332</p> <p>Aquatic Chronic 3; H412</p> <p>Asp. Tox. 1; H304</p> <p>Eye Irrit. 2; H319</p> <p>Flam. Liq. 3; H226</p> <p>Skin Irrit. 2; H315</p> <p>STOT RE 2; H373</p> <p>UVCB substance, for which the following identifiers are also valid:</p> <p>CE 905-588-0 REACH 01-2119486136 / 01-2119488216-32 Mass reaction of ethylbenzene and xylene</p> <p>CE 905-562-9 REACH 01-2119488216-32 / 01-2119555267-33</p> <p>Reaction mass of ethylbenzene and M-xylene and P-xylene</p>

CAS	EINECS	Registration n.	Denomination	Content	Classification(*)
142-82-5	205-563-8	01-2119457603-38	Heptane [and isomers]	10 - 15%	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 - 15%	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 - 6%	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]	2 - 2.5%	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 advice.

**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 contaminated 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:** n. a.

## SECTION 5: Firefighting measures

**5.1. Extinguishing media:** Foam, dry chemical powder, carbon dioxide (CO<sub>2</sub>).

**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.

Storage class TRGS 510 (Germany): 3

**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 <sup>3</sup>	ppm	mg/m <sup>3</sup>
Isobutyl-alcohol	50	152		
Heptane [and isomers]	400	1640	500	2050
Octane [and isomers]	300	1401	375	2331
Toluene	50	192	100	384
Xylene (benzene < 0.01%)	50	221	100	442
2-Propanol	200	492	400	983

2-Propanol: AGW (Germany) TWA/8h: 500 mg/m<sup>3</sup>; 200 ppm – STEL/15 min: 1000 mg/m<sup>3</sup>; 400 ppm  
 MAK (Germany) TWA/8h: 500 mg/m<sup>3</sup>; 200 ppm – STEL/15 min: 1000 mg/m<sup>3</sup>; 400 ppm  
 VLA (Spain) TWA/8h: 500 mg/m<sup>3</sup>; 200 ppm – STEL/15 min: 1000 mg/m<sup>3</sup>; 400 ppm  
 VLEP (France) STEL/15 min: 980 mg/m<sup>3</sup>; 400 ppm  
 WEL (UK) TWA/8h: 999 mg/m<sup>3</sup>; 400 ppm – STEL/15 min: 1250 mg/m<sup>3</sup>; 500 ppm  
 DNEL  
 Long term systemic effects/consumers/oral: 26 mg/kg; inhalation: 89 mg/m<sup>3</sup>;  
 dermal: 319 mg/kg – Workers/inhalation: 500 mg/m<sup>3</sup>; 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

Xylene (benzene < 0.01%): DNEL (EC)

Local effects/Short term/Inhalatory (Workers): 442 mg/kg

Systemic effects/Long term:

Dermal (Workers): 212 mg/kg; Inhalatory (Workers): 221 mg/m<sup>3</sup>; Dermal (People):  
 125 mg/kg; Inhalatory (People): 65.3 mg/m<sup>3</sup>; Oral (People): 12.5 mg/kg

PNEC STP (EC) Value: 6.58 mg/l

PNEC (EC): Sea water: 0.32 mg/l - Occasional emission: 0.32 mg/l - Sediment (soft  
 water): 12,46 mg/kg - Sediment (sea water): 12,46 mg/kg - Soil: 2.31 mg/kg - Soft  
 water: 0.32 mg/l

Toluene: DNEL Consumer(local): Long term exposure/Inhalation=56.5 mg/m<sup>3</sup>; Short term  
 exposure(acute)/Inhalation=226 mg/m<sup>3</sup>; Consumer (systemic): short term  
 exposure(acute)/Inhalation=226 mg/m<sup>3</sup>; long term exposure(repeated)/dermal=226  
 mg/kg bw/day; long term exposure (repeated)/Inhalation=56.5 mg/m<sup>3</sup>; long term  
 exposure(repeated)/oral=8.13 mg/kg bw/day; Worker (local); long term  
 exposure(repeated)/Inhalation=192 mg/m<sup>3</sup>; short term  
 exposure(acute)/inhalation=384 mg/m<sup>3</sup>; Worker(systemic): short term exposure  
 (acute)/Inhalation=384 mg/m<sup>3</sup>; Long term exposure(repeated)/Dermal= 384  
 mg/kg bw/day; Long term exposure(repeated)/Inhalation=192 mg/m<sup>3</sup>  
 PNEC: Wastewater treatment plant = 13.61 mg/l; Sediment (soft water) = 16.39  
 mg/kg; Sediment (sea water) = 16.39 mg/kg; Soil = 2.89 mg/kg; Soft water = 0.68  
 mg/l; Sea water = 0.68 mg/l; Occasional emission = 0.68 mg/l

Heptane [and isomers]: TWA/8h: 2100 mg/m<sup>3</sup> – 500 ppm MAK (Deu); 2085 mg/m<sup>3</sup>-500 ppm VLA (Esp);  
 1668 mg/m<sup>3</sup>-400 ppm VLEP (Fr); 2085 mg/m<sup>3</sup>-500 ppm WEL (GB); 2085 mg/m<sup>3</sup>-  
 500 ppm TLV (It); 2085 mg/m<sup>3</sup>-500 ppm OEL (EU)  
 STEL/15 min: 2100 mg/m<sup>3</sup> – 500 ppm MAK (Deu); 2085 mg/m<sup>3</sup>-500 ppm VLEP  
 (Fr)

DNEL Chronic systemic effects

people/oral >149 mg/kg; people/inhalation >447 mg/m<sup>3</sup>; people/dermal >149  
 mg/kg

workers/inhalation >2085 mg/m<sup>3</sup>; workers/dermal >300 mg/kg

Isobutyl-alcohol: TWA/8h: 310 mg/m<sup>3</sup> – 100 ppm AGW (Deu); 310 mg/m<sup>3</sup> – 100 ppm MAK (Deu); 154 mg/m<sup>3</sup>-50 ppm (VLA (Esp); 150 mg/m<sup>3</sup>-50 ppm VLEP (Fra); 154 mg/m<sup>3</sup>-50 ppm WEL (GB)  
 STEL/15 min: 310 mg/m<sup>3</sup> – 100 ppm AGW (Deu); 310 mg/m<sup>3</sup> – 100 ppm MAK (Deu); 231 mg/m<sup>3</sup>-75 ppm WEL (GB)  
 DNEL  
 Consumer, cronic systemic effects, oral exposure > 25 mg/kg; local cronic effects, inhalation > 55 mg/m<sup>3</sup>. Workers, local cronic effects, inhalation > 310 mg/m<sup>3</sup>  
 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/m<sup>3</sup>-300 ppm (VLA (Esp); 1450 mg/m<sup>3</sup>-300 ppm WEL (GB). STEL/15min: 1000 mg/m<sup>3</sup>-400 ppm MAK (Deu)  
 DNEL  
 Cronic systemic effects, people, oral >699 mg/kg; inhalation >608 mg/m<sup>3</sup>; 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:** > 35 °C

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

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

(h) **Flash point:** -4 °C

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

- (j) Decomposition temperature: n.a.  
 (k) pH: n.a.  
 (l) Kinematic viscosity: < 400 centiStokes mm<sup>2</sup>/s  
 (m) Solubility: n.a.  
 (n) Partition coefficient n-octanol/water (log value): n.a.  
 (o) Vapour pressure: n.a.  
 (p) Density and/or relative density: 0.7 - 1 g/cm<sup>3</sup>  
 (q) Relative vapour density: n.a.  
 (r) Particle characteristics: n.a.  
 COV: 71.4 (direttiva 2010/75/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.  
 TOLUENE: it degrades when exposed to sunlight.  
 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

**Toluene**

LD50/oral/rat(male): 5580 mg/kg dw (24h)

LD50/dermal/rabbit > 5000 mg/kg dw

LC50/inhalation/rat: 28.1 mg/l (4h) OECD 403

**Xylene (benzene < 0.01%)**

LD50/oral/mouse (male): 5627 mg/kg

LD50/dermal/rabbit > 5000 mg/kg

LC50/inhalation/rat (male): 6700 ppm (4 h)

**2-Propanol**

LD50/oral/rat = 5840 mg/kg bw

LD50/dermal/rabbit = 16.4 ml/kg bw

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

**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

**Toluene**

Skin irritation (OECD404): irritating (tested on rabbit)

**Xylene (benzene < 0.01%)**

It causes serious eye irritation.

It causes skin irritation.

**2-Propanol**

It causes serious eye irritation.

**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

**Toluene**

Non-sensitizing.

**Xylene (benzene < 0.01%)**

No sensitizing effect.

**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

**Toluene**

May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.

Subacute oral toxicity

NOAEL/oral/mouse: 625 mg/kg bw/day

Subacute inhalatory toxicity

NOAEL/inhalation/rat: 1131 mg/m3 (central nervous sysyem) OECD 453

**Xylene (benzene < 0.01%)**

It can cause respiratory irritation.

Subacute oral toxicity NOAEL/oral/rat: 250 mg/kg bw/day

**carcinogenicity: Toluene**

BMD10/rat: 1200 ppm (OECD453)

**2-Propanol**

NOAEC (carcinogenicity) : 5000 ppm (rat)

**mutagenicity: n. a.**



**toxicity for reproduction: Toluene**

Suspected of damaging the unborn child  
Essay on reproductive toxicity at 1 generation  
NOAEL/ratto: 2000 ppm

**Xylene (benzene < 0.01%)**

Essay on reproductive toxicity at one generation/rat  $\geq$  500 ppm

**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: The product does not contain substances having properties of interference with the endocrine system in a concentration  $> 0.1\%$ .

## 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 edilis/105 min = 24.6 mg/kg  
EL50/pseudokirchneriella subcapitata/72h = 2084 mg/l

**Toluene**

LC50/Oncorhynchus kisutch: 5.5 mg/l (96h)  
EC50/Ceriodaphnia dubia: 3.78 mg/l (2 days)  
EC50/Chlorella vulgaris: 134 mg/l (3h)

**Xylene (benzene < 0.01%)**

LC50/Oncorhynchus mykiss: 2.6 mg/l (96 h)  
NOEC/Oncorhynchus mykiss  $> 1.3$  mg/l (56 d)  
IC50/Daphnia magna: 1 mg/l (24 h)  
NOEC/Daphnia magna: 1.57 mg/l (21 d)  
EC0/Pseudokirchneriella subcapitata: 0.44 mg/l (73 h)  
Er50/Pseudokirchneriella subcapitata: 4.36 mg/l (73 h)

**2-Propanol**

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

**12.2. Persistence and degradability: Isobutyl-alcohol**

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

	<b>Toluene</b>
	Readily biodegradable
	<b>Xylene (benzene &lt; 0.01%)</b>
	Biodegradation > 70% (28 d)
	<b>2-Propanol</b>
	Easily biodegradable
	BOD = 53% (Regulation (EC) No 440/2008, Annex C.5)
12.3. Bioaccumulative potential:	<b>Isobutyl-alcohol</b>
	Partition coefficient: n-octanol/water = 1
	<b>Heptane [and isomers]</b>
	Log Kow = 3,78
	BCF = 552 (calculated)
	<b>2-Propanol</b>
	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%.
	<b>Xylene (benzene &lt; 0.01%)</b>
	The substance does not meet PBT and vPvB criteria.
12.6. Endocrine disrupting properties:	The product does not contain substances having properties of interference with the endocrine system in a concentration > = 0.1%.
12.7. Other adverse effects:	The product does not contain substances listed in Regulation (EC) 1005/2009 (substances that deplete the ozone layer)

## 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]
- 14.6. Special precautions for user: n. a.

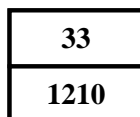
14.7. Transport in bulk according  
to Annex II of MARPOL73/78  
and the IBC Code:

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:** Restrictions related to the product or substances contained according to Annex XVII of Regulation (EC) 1907/2006 (REACH) and subsequent amendments:  
Restrictions related to the product: 3, 40, 75  
Restrictions related to the substances contained: Restriction 48

Directive 2012/18/EU: P5c, E1

WGK = 2

**15.2. Chemical safety assessment:** Not applicable

## SECTION 16: Other information

Classification and procedure used (calculation method)

Flam Liq 2 225

Repr 2 H361d

STOT RE2 H373

Eye Dam 1 H318

Skin Irr 2 H315

STOT SE3 H336

Aqua Acute 1 H400

Modified sections: 1,2,11,12,16

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.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H361d Suspected of damaging the unborn child.
- H373 May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
- H410 Very 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.