Safety Data Sheet

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

1.1. Product identifier.
Product name. **BA SERIES INK**

1.2. Relevant identified uses of the substance or mixture and uses advised against.
Intended use. **Pad printing ink.**

1.3. Details of the supplier of the safety data sheet.
Name. **INKCUPS NOW CORP**
Full address. **310 Andover St.**
Danvers, MA. 01923
District and Country. **USA**

Tel. 978-646-8980

Fax. 978-646-8981

e-mail address of the competent person.

responsible for the Safety Data Sheet. **compliance@inkcups.com**
Product distribution by: **Inkcups Now**

1.4. Emergency telephone number.
For urgent inquiries refer to Chemtrec. **1.800.424.9300**

SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Acute toxicity, category 4	H332	Harmful if inhaled.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P264	Wash the hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves / eye protection / face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
P310	Immediately call a POISON CENTER or a doctor.

Contains: 2-METHOXY-1-METHYLETHYL ACETATE
BUTANOL
CYCLOHEXANONE
BUTYLGLYCOL ACETATE

2.3. Other hazards.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

The full wording of hazard (H) phrases is given in section 16 of the sheet.

Identification.		**Classification 1272/2008 (CLP).**
CYCLOHEXANONE		
CAS. 108-94-1	16,5 ≤ x < 18	Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315
EC. 203-631-1		
INDEX. 606-010-00-7		
Reg. no. 01-2119453616-35-xxxx		
BUTYLGLYCOL ACETATE		
CAS. 112-07-2	13,5 ≤ x < 15	Acute Tox. 4 H312, Acute Tox. 4 H332

EC. 203-933-3		
INDEX. 607-038-00-2		
Reg. no. 01-2119475112-47xxxx		
2-METHOXY-1-METHYLETHYL ACETATE		
CAS. 108-65-6	10,5 ≤ x < 12	Flam. Liq. 3 H226
EC. 203-603-9		
INDEX. 607-195-00-7		
Reg. no. 01-2119475791-29-xxxx		
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM		
CAS. 64742-95-6	7 ≤ x < 8	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411
EC. 918-668-5		
INDEX. 649-356-00-4		
Reg. no. 01-2119486773-35-xxxx		
BUTANOL		
CAS. 71-36-3	3 ≤ x < 3,5	Flam. Liq. 3 H226, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336
EC. 200-751-6		
INDEX. 603-004-00-6		
Reg. no. 01-2119484630-38		

SECTION 4. First aid measures.

4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.
INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.
For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

SECTION 5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters.

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage.

7.1. Precautions for safe handling.

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities.

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

BGR	България	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г
CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diaro da Republica I 26; 2012-02-06
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
	TLV-ACGIH	ACGIH 2016

CYCLOHEXANONE

Threshold Limit Value.

Type	Country	TWA/8h	STEL/15min

		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	40,8		81,6		SKIN.
TLV	CZE	40		80		SKIN.
AGW	DEU	80	20	80	20	SKIN.
TLV	DNK	40	10			
VLA	ESP	41	10	82	20	SKIN.
VLEP	FRA	40,8	10	81,6	20	
WEL	GBR	41	10	82	20	SKIN.
VLEP	ITA	40,8	10	81,6	20	SKIN.
NDS	POL	40		80		
VLE	PRT	40,8	10	81,6	20	SKIN.
MAK	SWE	41	10	81	20	SKIN.
OEL	EU	40,8	10	81,6	20	SKIN.
TLV-ACGIH		80	20	201	50	

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	0,512	mg/kg
Normal value for marine water sediment	0,0512	mg/kg
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,0435	mg/Kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation.			VND	10 mg/m3			VND	40 mg/m3
Skin.			VND	1 mg/kg			VND	4 mg/kg/d

BUTYLGLYCOL ACETATE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	133		333		SKIN.
TLV	CZE	130		300		SKIN.
AGW	DEU	130	20	520	80	SKIN.
MAK	DEU	66	10	132	20	SKIN.
TLV	DNK	130	20			SKIN.
VLA	ESP	133	20	333	50	SKIN.
VLEP	FRA	66,5	10	333	50	SKIN.
WEL	GBR	133	20	332	50	SKIN.
VLEP	ITA	133	20	333	50	SKIN.
NDS	POL	100		300		
VLE	PRT	133	20	333	50	SKIN.
MAK	SWE	70	10	140	20	SKIN.
OEL	EU	133	20	333	50	SKIN.
TLV-ACGIH		131	20			

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,304	mg/l
Normal value in marine water	0,0304	mg/l
Normal value for fresh water sediment	2,03	mg/l
Normal value for marine water sediment	0,203	mg/l

Normal value for water, intermittent release	0,56	mg/l
Normal value of STP microorganisms	90	mg/l
Normal value for the food chain (secondary poisoning)	0,06	g/kg
Normal value for the terrestrial compartment	0,06	g/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.	VND	18 mg/kg/d	VND	4,3 mg/kg/d				
Inhalation.	166 mg/m3	499 mg/m3	VND	67 mg/m3	333 mg/m3	773 mg/m3	VND	133 mg/m3
Skin.			VND	36 mg/kg/d	102 mg/kg/d	27 mg/kg/d	VND	102 mg/kg/d

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value.

Type	Country	TWA/8h mg/m3	TWA/8h ppm	STEL/15min mg/m3	STEL/15min ppm	
TLV	BGR	275		550		SKIN.
TLV	CZE	270		550		SKIN.
AGW	DEU	270	50	270	50	
MAK	DEU	270	50	270	50	
TLV	DNK	275	50			SKIN.
VLA	ESP	275	50	550	100	SKIN.
VLEP	FRA	275	50	550	100	SKIN.
WEL	GBR	274	50	548	100	
VLEP	ITA	275	50	550	100	SKIN.
NDS	POL	260		520		
VLE	PRT	275	50	550	100	SKIN.
MAK	SWE	250	50	400	75	SKIN.
OEL	EU	275	50	550	100	SKIN.

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,635	mg/l
Normal value in marine water	0,0635	mg/l
Normal value for fresh water sediment	3,29	mg/kg
Normal value for marine water sediment	0,329	mg/l
Normal value for water, intermittent release	6,35	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,29	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	1,67 mg/kg				
Inhalation.			VND	33 mg/m3			VND	272 mg/m3
Skin.			VND	54,8 mg/kg			VND	153,5 mg/kg

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	11 mg/kg				
Inhalation.			VND	32 mg/m3			VND	150 mg/m3
Skin.			VND	11 mg/kg			VND	25 mg/kg

BUTANOL

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	300		600		SKIN.
AGW	DEU	310	100	310	100	
MAK	DEU	310	100	310	100	
TLV	DNK	150	50			SKIN.
VLA	ESP	61	20	154	50	SKIN.
VLEP	FRA			150	50	
WEL	GBR			154	50	SKIN.
NDS	POL	50		150		
MAK	SWE	45	15	90	30	SKIN.
TLV-ACGIH		61	20			

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,082	mg/l
Normal value in marine water	0,0082	mg/l
Normal value for fresh water sediment	0,178	mg/kg
Normal value for marine water sediment	0,0178	mg/kg
Normal value for water, intermittent release	2,25	mg/l
Normal value of STP microorganisms	2476	mg/l
Normal value for the terrestrial compartment	0,015	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	3125 mg/kg				
Inhalation.			55 mg/m3	VND			310 mg/m3	VND

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION
Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	liquid
Colour	various
Odour	typical of solvent
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	> 140 °C.
Boiling range.	Not available.
Flash point.	23 ≤ T ≤ 60 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	Not available.
Solubility	soluble in water and in polar solvents
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information.

Information not available.

SECTION 10. Stability and reactivity.

10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

CYCLOHEXANONE

Attacks various types of plastic materials.
May condense under the effect of heat to form resinous compounds.

2-METHOXY-1-METHYLETHYL ACETATE
Stable in normal conditions of use and storage.
With the air it may slowly develop peroxides that explode with an increase in temperature.

BUTANOL
Attacks various types of plastic materials.

10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

The vapours may also form explosive mixtures with the air.

CYCLOHEXANONE
Risk of explosion on contact with: hydrogen peroxide,nitric acid,heat,mineral acids.May react violently with: oxidising agents.Forms explosive mixtures with: air.

2-METHOXY-1-METHYLETHYL ACETATE
May react violently with: oxidising substances,strong acids,alkaline metals.

BUTANOL
Reacts violently developing heat on contact with: aluminium,strong oxidising agents,strong reducing agents,hydrochloric acid.Forms explosive mixtures with: air.

10.4. Conditions to avoid.

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

CYCLOHEXANONE
Avoid exposure to: sources of heat,naked flames.

BUTANOL
Avoid exposure to: sources of heat,naked flames.

10.5. Incompatible materials.

2-METHOXY-1-METHYLETHYL ACETATE
Incompatible with: oxidising substances,strong acids,alkaline metals.

10.6. Hazardous decomposition products.

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

2-METHOXY-1-METHYLETHYL ACETATEThe main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic effects have been reported in man.

ACUTE TOXICITY.

LC50 (Inhalation - vapours) of the mixture:134,444 mg/l
LC50 (Inhalation - mists / powders) of the mixture:Not classified (no significant component).
LD50 (Oral) of the mixture:25349,213 mg/kg
LD50 (Dermal) of the mixture:13444,445 mg/kg

2-METHOXY-1-METHYLETHYL ACETATE
LD50 (Oral).8530 mg/kg Rat
LD50 (Dermal).> 5000 mg/kg Rat
LC50 (Inhalation).> 4345 Ratto / Rat

BUTANOL
LD50 (Oral).790 mg/kg Rat
LD50 (Dermal).3400 mg/kg Rabbit
LC50 (Inhalation).8000 ppm/4h Rat

CYCLOHEXANONE
LD50 (Oral).1535 mg/kg Ratto / Rat
LD50 (Dermal).1100 mg/kg Coniglio / Rabbit
LC50 (Inhalation).11 mg/l/4h Ratto / Rat (4h)

BUTYLGLYCOL ACETATE
LD50 (Oral).2000 mg/kg Ratto / Rat
LD50 (Dermal).2000 mg/kg Coniglio / Rabbit

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM
LD50 (Oral).> 2000 mg/kg
LD50 (Dermal).> 2000 mg/kg
LC50 (Inhalation).> 5 mg/l

SKIN CORROSION / IRRITATION.
Causes skin irritation.
SERIOUS EYE DAMAGE / IRRITATION.
Causes serious eye damage.
RESPIRATORY OR SKIN SENSITISATION.
Does not meet the classification criteria for this hazard class.
GERM CELL MUTAGENICITY.
Does not meet the classification criteria for this hazard class.
CARCINOGENICITY.
Does not meet the classification criteria for this hazard class.
REPRODUCTIVE TOXICITY.
Does not meet the classification criteria for this hazard class.
STOT - SINGLE EXPOSURE.
Does not meet the classification criteria for this hazard class.

STOT - REPEATED EXPOSURE.
Does not meet the classification criteria for this hazard class.
ASPIRATION HAZARD.
Does not meet the classification criteria for this hazard class.

SECTION 12. Ecological information.

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity.

2-METHOXY-1-METHYLETHYL ACETATE	
LC50 - for Fish.	134 mg/l/96h Pesce, Oncorhynchus mykiss OECD 203
EC50 - for Crustacea.	> 500 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	> 1000 mg/l/72h Selenastrum capricornutum OECD 201
Chronic NOEC for Fish.	47,5 mg/l Oryzias latipes 14 gg OECD 204
Chronic NOEC for Crustacea.	100 mg/l Dapnia magna 21 gg OECD 202
BUTANOL	
LC50 - for Fish.	> 100 mg/l/96h Pimephales promelas
EC50 - for Crustacea.	> 100 mg/l/48h Daphnia magna
CYCLOHEXANONE	
EC50 - for Crustacea.	527 mg/l/96h Fish, Pimephales promelas (96h)
EC50 - for Algae / Aquatic Plants.	> 100 mg/l/72h Scenedesmus subspicatus
BUTYLGLYCOL ACETATE	
LC50 - for Fish.	> 10 mg/l/96h Fish 10-100 mg/kg (48h)
EC50 - for Crustacea.	> 100 mg/l/48h Daphnia Magna (24h)
EC50 - for Algae / Aquatic Plants.	> 100 mg/l/72h Scenedesmus subspicatus
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM	
LC50 - for Fish.	> 1 mg/l/96h ALGHE: TOSSICO: 1< LC/EC/IC50 ≤ 10 mg/l
EC50 - for Crustacea.	> 10 mg/l/48h INVERTEBRATI ACQUATICI: TOSSICO: 1 < LC/EC/IC50 ≤ 10 mg/l
EC50 - for Algae / Aquatic Plants.	> 100 mg/l/72h PESCE: TOSSICO: 1 < LC/EC/IC50 ≤ 10 mg/l

12.2. Persistence and degradability.

2-METHOXY-1-METHYLETHYL ACETATE	
Solubility in water.	> 10000 mg/l

Rapidly biodegradable.

BUTANOL	
Solubility in water.	1000 - 10000 mg/l

Rapidly biodegradable.

CYCLOHEXANONE

Solubility in water. 0,1 - 100 mg/l

Rapidly biodegradable.

BUTYLGLYCOL ACETATE

Rapidly biodegradable.

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM

Rapidly biodegradable.

12.3. Bioaccumulative potential.

2-METHOXY-1-METHYLETHYL ACETATE

Partition coefficient: n-octanol/water. 1,2

BUTANOL

Partition coefficient: n-octanol/water. 1

BCF. 3,16

CYCLOHEXANONE

Partition coefficient: n-octanol/water. 0,86

BUTYLGLYCOL ACETATE

Partition coefficient: n-octanol/water. 1,51

12.4. Mobility in soil.

BUTANOL

Partition coefficient: soil/water. 0,388

CYCLOHEXANONE

Partition coefficient: soil/water. 1,18

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM

Partition coefficient: soil/water. 1,78

12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects.

Information not available.

SECTION 13. Disposal considerations.

13.1. Waste treatment methods.

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information.

14.1. UN number.

ADR / RID, IMDG, IATA:	1210

14.2. UN proper shipping name.

ADR / RID:	PRINTING INK or PRINTING INK RELATED MATERIAL
IMDG:	PRINTING INK or PRINTING INK RELATED MATERIAL
IATA:	PRINTING INK or PRINTING INK RELATED MATERIAL

14.3. Transport hazard class(es).

ADR / RID:	Class: 3	Label: 3
IMDG:	Class: 3	Label: 3
IATA:	Class: 3	Label: 3

14.4. Packing group.

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards.

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user.

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special Provision: 640E		
IMDG:	EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special Instructions:	A3, A72, A192	

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

Information not relevant.

SECTION 15. Regulatory information.

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

Seveso Category - Directive 2012/18/EC:

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.
Point. 3 - 40

Substances in Candidate List (Art. 59 REACH).

Substances subject to authorisarion (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
Aquatic Chronic 4	Hazardous to the aquatic environment, chronic toxicity, category 4
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)

- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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2. Regulation (EU) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
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9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 04 / 06 / 10 / 11 / 12 / 15 / 16.