Safety Data Sheet

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

1.1. Product identifier
Product name **BT 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.**
District and Country **Danvers, MA. 01923**
U.S.A.
Tel. 9786468980
Fax 9786468981
e-mail address of the competent person
responsible for the Safety Data Sheet **compliance@inkcups.com**
Product distribution by: **Inkcups**

1.4. Emergency telephone number
For urgent inquiries refer to **18004249300**

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 (EU) Regulation 2015/830.
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.
Eye irritation, category 2	H319	Causes serious eye irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory 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: Warning

Hazard statements:

H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains:, 2-(2H-benzotriazol-2-il)-p-cresolo May produce an allergic reaction.

Precautionary statements:

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.
P370+P378	In case of fire: use chemical powder, CO2 or dry send to extinguish.
P261	Avoid breathing dust, gas or vapours.
P312	Call a POISON CENTRE or a doctor if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Contains: 4-HYDROXY-4-METHYLPENTAN-2-ONE
AROMATIC HYDROCARBONS, C8-C10
XYLENE (MIXTURE OF ISOMERS)

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:

Identification	**x = Conc. %**	**Classification 1272/2008 (CLP)**
4-HYDROXY-4-METHYLPENTAN-2-ONE CAS 123-42-2 EC 204-626-7 INDEX 603-016-00-1 Reg. no. 01-2119473975-21xxxx	15 ≤ x < 16,5	Flam. Liq. 3 H226, Eye Irrit. 2 H319, STOT SE 3 H335

2-METHOXY-1-METHYLETHYL ACETATE		
CAS 108-65-6	7 ≤ x < 8	Flam. Liq. 3 H226, STOT SE 3 H336
EC 203-603-9		
INDEX 607-195-00-7		
Reg. no. 01-2119475791-29-xxxx		
AROMATIC HYDROCARBONS, C8-C10		
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, EUH066, Classification note according to Annex VI to the CLP Regulation: H P
EC 918-668-5		
INDEX 649-356-00-4		
Reg. no. 01-2119455851-35-xxxx		
2-(2H-benzotriazol-2-il)-p-cresolo		
CAS 2440-22-4	0,75 ≤ x < 0,85	Skin Sens. 1B H317, Aquatic Chronic 1 H410 M=1
EC 219-470-5		
INDEX -		
Reg. no. 01-2119583811-34-0000		
quaternary ammonium eto sulphate		
CAS 68308-64-5	0,7 ≤ x < 0,8	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Acute 1 H400 M=1
EC 269-662-8		
INDEX -		
Reg. no. auto classificazione		
XYLENE (MIXTURE OF ISOMERS)		
CAS 1330-20-7	0,6 ≤ x < 0,7	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: C
EC 215-535-7		
INDEX 601-022-00-9		
Reg. no. 01-2119488216-32-xxxx		
Amines, coco alkyldimethyl, N-oxides		
CAS 61788-90-7	0 ≤ x < 0,1	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Acute 1 H400 M=10
EC 263-016-9		
INDEX -		

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

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.

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. Use explosion-proof equipment. 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. 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. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. 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. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. 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	TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2017
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
NLD	Nederland	Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 7 czerwca 2017 r
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
ROU	România	Monitorul Oficial al României 44; 2012-01-19
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
TUR	Türkiye	2000/39/EC sayılı Direktifin ekidir
EU	TLV-ACGIH	ACGIH 2018
	RCP TLV	ACGIH TLVs and BEIs – Appendix H

4-HYDROXY-4-METHYLPENTAN-2-ONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	CZE	200		300	

AGW	DEU	96	20	192	40	SKIN	
MAK	DEU	96	20	192	40	SKIN	
TLV	DNK	240	50				
VLA	ESP	241	50				
VLEP	FRA	240	50				
WEL	GBR	241	50	362	75		
OEL	NLD	120				SKIN	
NDS	POL	240					
TLV	ROU	150	32	250	53		
MAK	SWE	120	25	240	50		
TLV-ACGIH		238	50				

Predicted no-effect concentration - PNEC		
Normal value in fresh water	2	mg/l
Normal value in marine water	0,2	mg/l
Normal value for fresh water sediment	9,06	mg/kg
Normal value for marine water sediment	0,91	mg/kg
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	82	mg/l
Normal value for the terrestrial compartment	0,63	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				3,4 mg/kg				
Inhalation				11,8 mg/m3				66,4 mg/m3
Skin				3,4 mg/kg				9,4 mg/kg

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min			
		mg/m3	ppm	mg/m3	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	550	100	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	
OEL	NLD	550					
NDS	POL	260		520			
VLE	PRT	275	50	550	100	SKIN	
TLV	ROU	275	50	550	100	SKIN	
MAK	SWE	250	50	400	75	SKIN	

ESD	TUR	275	50	550	100	SKIN
OEL	EU	275	50	550	100	
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

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,67 mg/kg				
Inhalation			33 mg/m3	33 mg/m3	550 mg/m3		VND	275 mg/m3
Skin			VND	54,8 mg/kg			VND	153,5 mg/kg

AROMATIC HYDROCARBONS, C8-C10

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	100	20			1,2,3 trimetilbenzene
OEL	EU	100	20			1,2,3 trimetilbenzene
TLV-ACGIH			25			1,2,3 trimetilbenzene

Health - Derived no-effect level - DNEL / DMEL

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

DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,018	mg/l
Normal value in marine water	0,002	mg/l
Normal value for fresh water sediment	0,16	mg/kg/d
Normal value for marine water sediment	0,016	mg/kg/d
Normal value for water, intermittent release	0,18	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,09	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic

Inhalation	5 mg/m3	VND	8,3 mg/m3	VND

2-(2H-benzotriazol-2-il)-p-cresolo

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,00026	mg/l
Normal value in marine water	0,000026	mg/l
Normal value for fresh water sediment	0,136	mg/kg
Normal value for marine water sediment	0,0136	mg/kg
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	1	mg/l
Normal value for the terrestrial compartment	11	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,2 mg/kg				
Inhalation							VND	1 mg/m3
Skin			VND	1,2 mg/kg			VND	2,5 mg/kg

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	221		442		SKIN
TLV	CZE	200		400		SKIN
AGW	DEU	440	100	880	200	SKIN
MAK	DEU	440	100	880	200	SKIN
TLV	DNK	109	25	218	50	
VLA	ESP	221	50	442	100	SKIN
VLEP	FRA	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	
VLEP	ITA	221	50	442	100	SKIN
OEL	NLD	210		442		SKIN
NDS	POL	100				
VLE	PRT	221	50	442	100	SKIN
TLV	ROU	221	50	442	100	SKIN
MAK	SWE	221	50	442	100	SKIN
ESD	TUR	221	50	442	100	SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH		221	50	442	100	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,327	mg/l
Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg
Normal value for marine water sediment	12,46	mg/kg

Normal value for water, intermittent release	0,327	mg/l
Normal value of STP microorganisms	6,58	mg/l
Normal value for the terrestrial compartment	2,31	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,6 mg/kg/d				
Inhalation	174 mg/m3	174 mg/m3	VND	14,8 mg/m3	289 mg/m3	289 mg/m3	77 mg/m3	77 mg/m3
Skin			VND	108 mg/kg/d	174 mg/m3	VND	VND	180 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	
VLEP	FRA			150	50	
WEL	GBR			154	50	SKIN
OEL	NLD			45		
NDS	POL	50		150		
TLV	ROU	100	33	200	66	
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

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

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Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0032	mg/l
Normal value in marine water	0,0032	mg/l

Normal value for fresh water sediment	15,6	mg/kg
Normal value for water, intermittent release	0,0032	mg/l
Normal value of STP microorganisms	35	mg/l
Normal value for the terrestrial compartment	0,865	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		1,3 mg/kg bw/d						
Inhalation				4,4 mg/m3				17,8 mg/m3
Skin				13 mg/kg bw/d				25,5 mg/kg bw/d

2,6-DIMETHYLHEPTAN-4-ONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	DNK	150	25		
VLA	ESP	148	25		
VLEP	FRA	250	25		
WEL	GBR	148	25		
OEL	NLD	150			
NDS	POL	150		300	
TLV	ROU	150	26	250	43
TLV-ACGIH		145	25		

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,03	mg/l
Normal value in marine water	0,003	mg/l
Normal value for fresh water sediment	0,46	mg/kg
Normal value for marine water sediment	0,046	mg/kg
Normal value for water, intermittent release	0,3	mg/l
Normal value of STP microorganisms	2,55	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			145 mg/kg	171 mg/kg			290 mg/m3	479 mg/m3
Skin			VND	28,5 mg/kg			VND	80 mg/kg

2 ethylanthraquinone

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
RCP TLV		10			

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.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
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 I 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 airtight protective 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.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	various
Odour	characteristic
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	> 130 °C
Boiling range	Not available
Flash point	50 °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	partialy soluble in water. Soluble in almost all organic 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

VOC (Directive 2010/75/EC) :	32,05 %
VOC (volatile carbon) :	21,37 %

SECTION 10. Stability and reactivity

10.1. Reactivity

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

4-HYDROXY-4-METHYLPENTAN-2-ONE
Decomposes at temperatures above 90°C/194°F.

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.

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.

4-HYDROXY-4-METHYLPENTAN-2-ONE
Risk of explosion on contact with: air,sources of heat.May react dangerously with: alkaline metals,amines,oxidising agents,acids.

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

XYLENE (MIXTURE OF ISOMERS)
Stable in normal conditions of use and storage.Reacts violently with: strong oxidants,strong acids,nitric acid,perchlorates.May form explosive mixtures with: air.

10.4. Conditions to avoid

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

4-HYDROXY-4-METHYLPENTAN-2-ONE
Avoid exposure to: light,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

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

2-METHOXY-1-METHYLETHYL ACETATE

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

4-HYDROXY-4-METHYLPENTAN-2-ONE

WORKERS: inhalation; contact with the skin.

2-METHOXY-1-METHYLETHYL ACETATE

WORKERS: inhalation; contact with the skin.

XYLENE (MIXTURE OF ISOMERS)

WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

4-HYDROXY-4-METHYLPENTAN-2-ONE

Acute toxicity causes irritation of the eyes, nose and throat in humans at 100 ppm (476 mg/kg) and pulmonary disorders at 400 ppm. No chronic effects on humans have been reported. The substance may have a depressive effect on the respiratory centres and cause death from respiratory failure.

2-METHOXY-1-METHYLETHYL ACETATE

Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

XYLENE (MIXTURE OF ISOMERS)

Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

Interactive effects

XYLENE (MIXTURE OF ISOMERS)

Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
Not classified (no significant component)
LD50 (Oral) of the mixture:
Not classified (no significant component)
LD50 (Dermal) of the mixture:
Not classified (no significant component)

Amines, coco alkyldimethyl, N-oxides

LD50 (Oral) > 2000 mg/kg Ratto / Rat

Cellulose acetate butyrate

LD50 (Oral) > 3200 mg/kg Rat

LD50 (Dermal) > 1000 mg/kg Cavia

AROMATIC HYDROCARBONS, C8-C10 - UVCB - CONTENT OF BENZENE <0.1% W / W

LD50 (Oral) 3492 mg/kg Ratto / Rat

LD50 (Dermal) > 3160 mg/kg Ratto / Rat

LC50 (Inhalation) > 6193 mg/l/4h Ratto / Rat

XYLENE (MIXTURE OF ISOMERS)

LD50 (Oral) 3523 mg/kg Rat

LD50 (Dermal) 4350 mg/kg Rabbit

LC50 (Inhalation) 11,58 mg/l/4h Rat

2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Oral) 8500 mg/kg Ratto / Rat

LD50 (Dermal) > 5000 mg/kg Coniglio / Rabbit

LC50 (Inhalation) 4345 ppm/6h Ratto / Rat

4-HYDROXY-4-METHYLPENTAN-2-ONE

LD50 (Oral) 3002 mg/kg Rat

LD50 (Dermal) > 1875 mg/kg Ratto / Rat

LC50 (Inhalation) > 7,6 mg/l Ratto / Rat

quaternary ammonium eto sulphate

LD50 (Oral) 940 mg/kg Topo / Mouse

2-(2H-benzotriazol-2-il)-p-cresolo

LD50 (Oral) > 10000 mg/kg (OECD-Linea guida 423)

LD50 (Dermal) > 2000 mg/kg ratto (OECD - linea guida 402) Analogismo: valutazione derivante da prodotti chimicamente simili.

LC50 (Inhalation) > 0,59 mg/l 4 h ratto (OCSE - linea guida 403) concentrazione a piu' alta testabilita'

DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS

LD50 (Oral) > 5000 mg/kg Rat

LD50 (Dermal) > 2000 mg/kg Rat

LC50 (Inhalation) > 11 mg/l Rat (4h)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.Contains:2-(2H-benzotriazol-2-il)-p-cresolo

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

XYLENE (MIXTURE OF ISOMERS)

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause respiratory irritation

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

quaternary ammonium eto sulphate
M-Factor
Quaternary ammonium compounds, coco alkylethyldimethyl, ethyl sulfates
Acute aquatic toxicity = 1
(according to the Globally Harmonized System (GHS) and Regulation (EC) No 1272/2008)
amines, coco alkyldimethyl
Acute aquatic toxicity = 1
(according to the Globally Harmonized System (GHS) and Regulation (EC) No 1272/2008).

Amines, coco alkyldimethyl, N-oxides	
LC50 - for Fish	12,6 mg/l/96h Salmo gairdneri
EC50 - for Crustacea	2,9 mg/l/48h Daphnia magna
AROMATIC HYDROCARBONS, C8-C10 -	
LC50 - for Fish	> 9,2 mg/l/96h Oncorhynchus mykiss

EC50 - for Crustacea	> 3,2 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 2,9 mg/l/72h Pseudokirchneriella subcapitata

XYLENE (MIXTURE OF ISOMERS)

LC50 - for Fish	2,6 mg/l/96h Fish
EC50 - for Crustacea	8,5 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	2,2 mg/l/72h Selenastrum capricornutum
Chronic NOEC for Fish	> 1,3 mg/l 56d / Oncorhynchus mykiss
Chronic NOEC for Crustacea	0,96 mg/l 7d / Daphnia
Chronic NOEC for Algae / Aquatic Plants	0,44 mg/l 72h / Pseudokirchneriella subcapitata

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

4-HYDROXY-4-METHYLPENTAN-2-ONE

LC50 - for Fish	> 100 mg/l/96h Oryzias latipes
EC50 - for Crustacea	> 1000 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	< 1000 mg/l/72h Pseudokirchneriella subcapitata

2-(2H-benzotriazol-2-il)-p-cresolo

LC50 - for Fish	> 0,17 mg/l/96h Oncorhynchus mykiss (OECD - linea guida 203, semistatico)
EC50 - for Crustacea	> 1000 mg/l/48h CE50 (24 h), Daphnia magna (OECD - linea guida 202, parte 1, statico)
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Desmodesmus subspicatus
Chronic NOEC for Crustacea	0,013 mg/l Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	33 mg/l/72h (biomassa) Desmodesmus subspicatus (OECD - linea guida 201)

DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS

LC50 - for Fish	0,018 mg/l/96h 0,018 - 0,024 / (Pimephales promelas) (72h)
EC50 - for Crustacea	0,112 mg/l/48h 0,112 - 0,15/Daphnia Magna
EC50 - for Algae / Aquatic Plants	> 85 mg/l/72h Pseudokirchneriella subcapitata

12.2. Persistence and degradability

2-(2H-benzotriazol-2-il)-p-cresolo
Not readily biodegradable.
quaternary ammonium eto sulphate
Ultimate aerobic biodegradability
Completely biodegradable 71% - 28 d
Method: According to ISO 14593
Unpublished internal reports.

AROMATIC HYDROCARBONS, C8-C10 - UVCB
Rapidly degradable

XYLENE (MIXTURE OF ISOMERS)

Solubility in water	60 mg/l @25°C
Rapidly degradable	

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water	> 10000 mg/l
Rapidly degradable	

4-HYDROXY-4-METHYLPENTAN-2-ONE

Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

quaternary ammonium eto sulphate

Entirely degradable

2-(2H-benzotriazol-2-il)-p-cresolo

Solubility in water	0,173 mg/l @20°C
NOT rapidly degradable	

DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS

Solubility in water	30000 mg/l 26000 - 40500 mg/l
Rapidly degradable	

12.3. Bioaccumulative potential

2-(2H-benzotriazol-2-il)-p-cresolo
Assessment of bioaccumulation potential: The product can accumulate in the body. Bioaccumulative potential: Bioconcentration factor: 548 - 895 (70 d), Cyprinus carpio (OECD - guideline 305 C) The product has not been tested. The statement has been derived from products of a similar structure and composition. Bioconcentration factor: 44 to 220 (56 d), Cyprinus carpio (OECD - guideline 305 C).

XYLENE (MIXTURE OF ISOMERS)

Partition coefficient: n-octanol/water	3,2
BCF	25,9 l/kg

2-METHOXY-1-METHYLETHYL ACETATE

Partition coefficient: n-octanol/water	1,2
BCF	100

4-HYDROXY-4-METHYLPENTAN-2-ONE

Partition coefficient: n-octanol/water	-0,09

2-(2H-benzotriazol-2-il)-p-cresolo

Partition coefficient: n-octanol/water	4,2 mg/l @25°C
BCF	548 548 - 895 / Cyprinus carpio - 70d

DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS	
Partition coefficient: n-octanol/water	1,4

12.4. Mobility in soil

XYLENE (MIXTURE OF ISOMERS)	
Partition coefficient: soil/water	2,73
2-METHOXY-1-METHYLETHYL ACETATE	
Partition coefficient: soil/water	1,7
2-(2H-benzotriazol-2-il)-p-cresolo	
Partition coefficient: soil/water	3,71

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: -		
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: P5c

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)

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

Substances subject to authorisation (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. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
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
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
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.
H373	May cause damage to organs through prolonged or repeated exposure.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
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 (EC) 1272/2008 (CLP) of the European Parliament
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4. Regulation (EU) 2015/830 of the European Parliament
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- The Merck Index. - 10th Edition
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- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
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- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

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.

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Changes to previous review:
The following sections were modified:
02 / 03 / 08 / 09 / 11 / 12 / 16.