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

1.1. Product identifier

Tampa® *Star* 1 L TPR 980

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

Use of the substance/preparation

Pad printing ink

Identified Uses

SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4	Chemical production where opportunity for exposure arises
PROC5	Mixing or blending in batch processes
PROC8a	Transfer of substance or mixture (charging and discharging) at nondedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC13	Treatment of articles by dipping and pouring
PROC19	Manual activities involving hand contact
ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8d	Wide dispersive outdoor use of processing aids in open systems

Uses advised against

SU21	Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Marabu GmbH & Co. KG
Asperger Strasse 4
71732 Tamm
Germany

Telephone no.	+49-7141/691-0
Information provided by / telephone	Department product safety
E-mail address of person responsible for this SDS	PRSI@marabu.com

1.4. Emergency telephone number

(+49) (0)621-60-43333

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Acute Tox. 4	H332
Eye Dam. 1	H318
Aquatic Chronic 3	H412

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms ***

Signal word

Danger

Hazard statements ***

H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H318	Causes serious eye damage.
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.
P261.9	Avoid breathing vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains *** Cyclohexanone; 2-Butoxyethyl acetate

2.3. Other hazards

No special hazards have to be mentioned.

SECTION 3: Composition/information on ingredients ***

3.2. Mixtures

Chemical characterization

Pad printing ink based on acrylic resins and on solvents

Hazardous ingredients ***

2-Butoxyethyl acetate

CAS No.	112-07-2			
EINECS no.	203-933-3			
Registration no.	01-2119475112-47			
Concentration	>=	29	<	38 %

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H332
Acute Tox. 4	H312
Acute Tox. 4	H302

2-Ethoxy-1-methylethyl acetate

CAS No.	54839-24-6				
EINECS no.	259-370-9				
Registration no.	01-2119475116-39				
Concentration	>=	1	<	10	%

Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
STOT SE 3	H336

Cyclohexanone

CAS No.	108-94-1				
EINECS no.	203-631-1				
Registration no.	01-2119453616-35				
Concentration	>=	3	<	9,5	%

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H332
Flam. Liq. 3	H226
Acute Tox. 4	H302
Acute Tox. 4	H312
Eye Dam. 1	H318
Skin Irrit. 2	H315

2-Methoxy-1-methylethyl acetate

CAS No.	108-65-6				
EINECS no.	203-603-9				
Registration no.	01-2119475791-29				
Concentration	>=	1	<	10	%

Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
STOT SE 3	H336

Solvent naphtha (petroleum), light arom.

CAS No.	64742-95-6				
EINECS no.	265-199-0				
Registration no.	01-2119455851-35 (LIST NUMBER 918-668-5)				
Concentration	>=	2,5	<	10	%

Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
STOT SE 3	H336
STOT SE 3	H335
Asp. Tox. 1	H304
Aquatic Chronic 2	H411

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious place in recovery position and seek medical advice.

After inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

After skin contact

Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

After eye contact

Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

Until now no symptoms known so far.

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

Hints for the physician / treatment

Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Recommended: alcohol resistant foam, CO2, powders, water spray/mist, Not be used for safety reasons: water jet

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released: Carbon dioxide (CO2); Carbon monoxide (CO); dense black smoke; Hydrogen chloride (HCl)

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Exclude sources of ignition and ventilate the area. Avoid breathing vapours. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Do not allow to enter drains or waterways. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Clean preferably with a detergent - avoid use of solvents.

6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear anti-static footwear and clothing and floors should be of the conducting type. Isolate from sources of heat, sparks and open flame. No sparking tools should be used. Avoid skin and eye contact. Avoid the inhalation of particulates and spray mist arising from the application of this mixture. Smoking, eating and drinking shall be prohibited in application area. For personal protection see Section 8. Never use pressure to empty: container is not a pressure vessel. Always keep in containers of same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or water courses.

Advice on protection against fire and explosion

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

Classification of fires / temperature class / Ignition group / Dust explosion class

Classification of fires	B (Combustible liquid substances)
Temperature class	T3

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Electrical installations/working materials must comply with the local applied technological safety standards. Storage rooms in which filling operations take place must have a conducting floor. Store in accordance with national regulation

Hints on storage assembly

Store away from oxidising agents, from strongly alkaline and strongly acid materials.

Further information on storage conditions

Observe label precautions. Store between 15 and 30 °C in a dry, well ventilated place away from sources of heat and direct sunlight. Keep container tightly closed. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3. Specific end use(s)

Pad printing ink

SECTION 8: Exposure controls/personal protection ***

8.1. Control parameters

Exposure limit values

2-Methoxy-1-methylethyl acetate

List	EH40			
Type	WEL			
Value	274	mg/m³	50	ppm(V)
Short term exposure limit	548	mg/m³	100	ppm(V)

Skin resorption / sensibilisation: Sk: 2011

2-Methoxy-1-methylethyl acetate

List	EU			
Value	275	mg/m³	50	ppm(V)
Short term exposure limit	550	mg/m³	100	ppm(V)

Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG

2-Butoxyethyl acetate

List	EH40			
Type	WEL			
Value	133		20	ppm(V)
Short term exposure limit	332		50	ppm(V)
Skin resorption / sensibilisation: Sk: 2011				

2-Butoxyethyl acetate

List	EU			
Value	133	mg/m³	20	ppm(V)
Short term exposure limit	333	mg/m³	50	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

Cyclohexanone

List	EH40			
Type	WEL			
Value			10	ppm(V)
Short term exposure limit			20	ppm(V)
Skin resorption / sensibilisation: Sk: 2005				

Cyclohexanone

List	EU			
Value	40,8	mg/m³	10	ppm(V)
Short term exposure limit	81,6	mg/m³	20	ppm(V)
Skin resorption / sensibilisation: Skin; Remarks: 2000/39/EG				

1,2,4-Trimethylbenzene

List	EH40			
Type	WEL			
Value	125	mg/m³	25	ppm(V)
Status: 2011				

1,2,4-Trimethylbenzene

List	EU			
Value	100	mg/m³	20	ppm(V)
Remarks: 2000/39/EG				

Derived No/Minimal Effect Levels (DNEL/DMEL) ***

2-Methoxy-1-methylethyl acetate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	796	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	275	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	320	mg/kg/d

Type of value	Derived No Effect Level (DNEL)

Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	33	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	33	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	36	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Lifetime	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	550	mg/m³

2-Butoxyethyl acetate

Reference substance	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	133	mg/m³
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	333	mg/m³
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	169	mg/kg/d
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	dermal	

Mode of action	Systemic effects	
Concentration	120	mg/kg/d
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	80	mg/m³
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	200	mg/m³
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	102	mg/kg/d
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Short term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	72	mg/kg/d
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	8,6	mg/kg/d
	2-Butoxyethyl acetate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Short term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	36	mg/kg/d

Solvent naphtha (petroleum), light arom.

Type of value	Derived No Effect Level (DNEL)
Reference group	Consumer
Duration of exposure	Long term
Route of exposure	oral
Mode of action	Systemic effects

Concentration	11	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	11	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	32	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	150	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	25	mg/kg/d

Cyclohexanone

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	40	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	80	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	40	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	

Concentration	80	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	4	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	4	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	10	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	20	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	20	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	40	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	1	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Short term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	1	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	1,5	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Short term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	1,5	mg/kg/d

2-Ethoxy-1-methylethyl acetate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	608	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	103	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	302	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	365	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	62	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	181	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	13,1	mg/kg/d

Predicted No Effect Concentration (PNEC) ***

2-Methoxy-1-methylethyl acetate

Reference substance	2-Methoxy-1-methylethyl acetate	
Type of value	PNEC	
Type	Freshwater	
Concentration	0,635	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	3,29	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,29	mg/kg
Source	Literature value	
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	100	mg/l
Source	Literature value	
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,329	mg/kg
Source	Literature value	
Type of value	PNEC	
Type	Saltwater	
Concentration	0,0635	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	6,35	mg/l

2-Butoxyethyl acetate

Reference substance	2-Butoxyethyl acetate	
Type of value	PNEC	
Type	Water	
Concentration	0,304	mg/l
Source	Literature value	
	2-Butoxyethyl acetate	
Type of value	PNEC	
Type	Aquatic	
Concentration	0,0304	g/l
Source	Literature value	
	2-Butoxyethyl acetate	
Type of value	PNEC	
Type	Sediment	

Concentration	2,03	mg/kg
Source	Literature value	

2-Butoxyethyl acetate

Type of value	PNEC	
Type	Marine sediment	
Concentration	0,203	mg/kg
Source	Literature value	

2-Butoxyethyl acetate

Type of value	PNEC	
Type	Soil	
Concentration	0,68	mg/kg
Source	Literature value	

Cyclohexanone

Type of value	PNEC	
Type	Freshwater	
Concentration	0,033	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,003	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,249	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,025	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,03	mg/kg

2-Ethoxy-1-methylethyl acetate

Type of value	PNEC	
Type	Freshwater	
Concentration	1,3	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,13	mg/l
Type of value	PNEC	
Type	Sediment	
Concentration	6,4	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,64	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	1,34	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	62,5	mg/l

8.2. Exposure controls

Exposure controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

Respiratory protection

If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators. Full mask, filter A

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness	>	0,5	mm
Breakthrough time	<	30	min

The breakthrough time must be greater than the end use time of the product.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Always ensure that gloves are free from defects and that they are stored and used correctly.
The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.
Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Eye protection

Use safety eyewear designed to protect against splash of liquids.

Body protection

Cotton or cotton/synthetic overalls or coveralls are normally suitable.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Pasty
Colour	coloured
Odour	solvent-like

Odour threshold

Remarks	No data available

pH value

Remarks	Not applicable

Melting point

Remarks	not determined

Freezing point

Remarks	not determined

Initial boiling point and boiling range

Value	appr.	148		°C
Pressure		1.013	hPa	
Source	Literature value			

Flash point

Value		57		°C
Method	ASTM D 6450 (CCCFP)			

Evaporation rate (ether = 1) :

Remarks	not determined			

Flammability (solid, gas)

Not applicable

Upper/lower flammability or explosive limits

Lower explosion limit	appr.	0,9		%(V)
Upper explosion limit	appr.	12,7		%(V)
Source	Literature value			

Vapour pressure

Value	appr.	3		hPa
Temperature		20	°C	
Method	calculated			

Vapour density

Remarks	not determined			

Density

Value		1,04		g/cm³
Temperature		20	°C	
Method	DIN EN ISO 2811			

Solubility in water

Remarks	partially miscible			

Partition coefficient: n-octanol/water

Remarks	Not applicable			

Ignition temperature

Value	appr.	280		°C
Source	Literature value			

Efflux time

Value	>	150		s
Method	DIN 53211 4 mm			

Explosive properties

evaluation	no			

Oxidising properties

evaluation	None known			

9.2. Other information

Other information

The physical specifications are approximate values and refer to the used safety relevant component(s).

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

Stable under recommended storage and handling conditions (see section 7).

10.3. Possibility of hazardous reactions

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.4. Conditions to avoid

When exposed to high temperatures may produce hazardous decomposition products.

10.5. Incompatible materials

No hazardous reactions when stored and handled according to prescribed instructions.

10.6. Hazardous decomposition products

See chapter 5.2 (Firefighting measures - Special hazards arising from the substance or mixture).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity

ATE	>	2.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		

Acute oral toxicity (Components)

2-Butoxyethyl acetate

Species	rat		
LD50		1880	mg/kg
Method	OECD 401		

Cyclohexanone

Species	rat		
LD50		1620	mg/kg

Acute dermal toxicity

ATE	>	2.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		

Acute dermal toxicity (Components)

2-Butoxyethyl acetate

Species	rabbit		
LD50		1480	mg/kg

Acute inhalational toxicity

ATE		3,7083	mg/l
Administration/Form	Dust/Mist		
Method	calculated value (Regulation (EC) No. 1272/2008)		
ATE	>	20	mg/l
Administration/Form	Vapors		
Method	calculated value (Regulation (EC) No. 1272/2008)		
Remarks	The classification criteria are met.		

Acute inhalative toxicity (Components)

2-Butoxyethyl acetate

Species	rat		
LD0		2,66	mg/l
Duration of exposure		4 h	
Administration/Form	Vapors		
Method	OECD 403		

Cyclohexanone

Species	rat		
LC50	>	6,2	mg/l
Duration of exposure		4 h	

Administration/Form	Vapors

Skin corrosion/irritation

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

Skin corrosion/irritation (Components)

2-Methoxy-1-methylethyl acetate

Species	rabbit
evaluation	non-irritant

Serious eye damage/irritation

evaluation	corrosive
Remarks	The classification criteria are met.

Sensitization

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

Mutagenicity

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

Reproductive toxicity

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

Carcinogenicity

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

Specific Target Organ Toxicity (STOT)

Single exposure

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

Repeated exposure

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

Aspiration hazard

Based on available data, the classification criteria are not met.

Experience in practice

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation. Causes serious eye damage. Ingestion may cause nausea, diarrhoea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Other information

There are no data available on the mixture itself.
The mixture has been assessed following the additivity method of the CLP Regulation (EC) No 1272/2008 and classified for toxicological hazards accordingly.

SECTION 12: Ecological information

12.1. Toxicity

General information

There are no data available on the mixture itself.Do not allow to enter drains or water courses.The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Fish toxicity (Components)

Solvent naphtha (petroleum), light arom.

Species	rainbow trout (Oncorhynchus mykiss)	
LL50	9,2	mg/l
Duration of exposure	96 h	

Cyclohexanone

Species	Fathead minnow (Pimephales promelas)	
LC50	630000	µg/l

Daphnia toxicity (Components)

Solvent naphtha (petroleum), light arom.

LL0	3,2	mg/l
Duration of exposure	48 h	

Algae toxicity (Components)

Solvent naphtha (petroleum), light arom.

Species	Desmodesmus	
ErC50	0,42	mg/l
Duration of exposure	72 h	

Solvent naphtha (petroleum), light arom.

Species	Pseudokirchneriella subcapitata	
EC50	0,29	mg/l
Duration of exposure	72 h	
Source	REACH registration dossier	

12.2. Persistence and degradability

General information

No data available

12.3. Bioaccumulative potential

General information

There are no data available on the mixture itself.

Partition coefficient: n-octanol/water

Remarks Not applicable

12.4. Mobility in soil

General information

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

General information

There are no data available on the mixture itself.

12.6. Other adverse effects

General information

There are no data available on the mixture itself.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Do not allow to enter drains or water courses.
Wastes and emptied containers should be classified in accordance with relevant national regulation.
The European Waste Catalogue classification of this product, when disposed of as waste is

EWC waste code	08 03 12*	waste ink containing dangerous substances

If this product is mixed with other wastes, the original waste product code may no longer apply and the

appropriate code should be assigned.
For further information contact your local waste authority.

Disposal recommendations for packaging

Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.
Empty containers must be scrapped or reconditioned.
Not emptied containers are hazardous waste (waste code number 150110).

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	D/E		
14.1. UN number	1263	1263	1263
14.2. UN proper shipping name	PAINT	PAINT	PAINT
14.3. Transport hazard class(es)	3	3	3
Label			
14.4. Packing group	III	III	III
Remarks	The product is viscous; non-dangerous good in Containers with not more than 450 ltrs.	Transport according to 2.3.2.5 of the IMDG Code	
Limited Quantity	5 l		
Transport category	3		
14.5. Environmental hazards	-	no	-

Information for all modes of transport

14.6. Special precautions for user

Transport within the user's premises:
Always transport in closed containers that are upright and secure.
Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Other information

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

no

SECTION 15: Regulatory information ***

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

VOC ***

VOC (EU)	64,67	%
VOC (EU)	672,6	g/l

Other information

All components are contained in the TSCA inventory or exempted.
All components are contained in the ECL inventory.
All components are contained in the AICS inventory.
All components are contained in the ENCS inventory.

15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.

SECTION 16: Other information

Hazard statements listed in Chapter 3

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

CLP categories listed in Chapter 3

Acute Tox. 4	Acute toxicity, Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage, Category 1
Flam. Liq. 3	Flammable liquid, Category 3
Skin Irrit. 2	Skin irritation, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.
The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.
It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.
The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.
As the specific conditions of use of the product are outside the supplier’s control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.
The information contained in this safety data sheet does not constitute the user’s own assessment of workplace risks, as required by other health and safety legislation.