

EC safety data sheet (91/155 EEC)

Trade name: TAMPAPUR TPU

Status: 01.11.2006

Product no.: 3805

Version : 7 / GB

Date of printing : 15.11.2006

1.) Identification of the substance/preparation and company

Product details

Trade name

TAMPAPUR TPU

Identification of the manufacturer / supplier

Address

Marabuwerke GmbH & Co KG
Asperger Straße 4
D-71732 Tamm

Telephone no. (++49)-7141/691-0

Fax no. (++49)-7141/691-117

Information provided by / telephone

Product safety +49 7141/691-116 or 232

Emergency telephone number

++49-621-60-43333

Use

Pad printing ink

2.) Composition / information on ingredients

Chemical characterization

Pad printing ink based on acrylic resins and on solvents

Hazardous ingredients

XYLENE

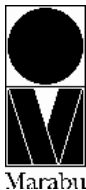
CAS no.	1330-20-7			
EINECS no.	215-535-7			
Concentration	>= 5	<	15	%-b.w.
Classification	R10			
	Xn;R20/21			
	Xi;R38			

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.

CAS no.	64742-95-6			
EINECS no.	265-199-0			
Concentration	>= 1	<	15	%-b.w.
Classification	Xn;R65			
	Xi;R37			
	N;R51/53			
	R10			
	R66			
	R67			

N-BUTYL ACETATE

CAS no.	123-86-4			
EINECS no.	204-658-1			
Concentration	>= 1	<	10	%-b.w.
Classification	R10			
	R66			
	R67			



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BUTYL GLYCOLATE

CAS no. 7397-62-8
EINECS no. 230-991-7
Concentration >= 1 < 10 %-b.w.
Classification Xi;R41

ETHYLBENZENE

CAS no. 100-41-4
EINECS no. 202-849-4
Concentration >= 1 < 5 %-b.w.
Classification F;R11
Xn;R20

Ink shades 130, 192-193, 920-922 and 930-962 contain additionally:

2-METHOXY-1-METHYLETHYL ACETATE

CAS no. 108-65-6
EINECS no. 203-603-9
Concentration >= 1 < 10 %-b.w.
Classification R10
Xi;R36

Ink shades 191-193 contain additionally:

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY

CAS no. 64742-48-9
EINECS no. 265-150-3
Concentration >= 1 < 5 %-b.w.
Classification Xn;R65
R10
R66
R67

Ink shade 162 contains additionally:

2-(2-BUTOXYETHOXY) ETHYL DIHYDROGEN PHOSPHATE, COMPOUND WITH N,N-DIMETHYL-CYCLOHEXYLAMINE

CAS no. 94200-24-5
Concentration >= 1 < 5 %-b.w.
Classification Xn;R22

Ink shade 193 contains additionally:

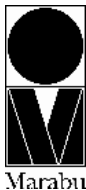
DEHYDROGENATED GUM ROSIN

CAS no. 1740-19-8
Concentration >= 1 < 5 %-b.w.
Classification Xn;R22

Ink shade 934 contains additionally:

ISOTRIDECANOL; ETHOXYLATED (> 5 - 7 EO)

CAS no. 9043-30-5
Concentration < 0,5 %-b.w.
Classification Xn;R22
Xi;R41



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3.) Hazards possibilities

Hazard symbols

Xn Harmful

R phrases

10	Flammable.
20/21	Harmful by inhalation and in contact with skin.
36	Irritating to eyes.
52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
67	Vapours may cause drowsiness and dizziness.

Particular information pertaining specific risk for human / environment

The product is water polluting.

4.) First aid measures

General information

Immediately remove all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical attention. Unconsciousness: lateral position - call a physician.

After inhalation

Take the casualty into the fresh air and keep warm. Irregular breathing/no breathing: artificial respiration. Call a physician.

After skin contact

Wash away with soap and water and rinse. Do NOT use solvents or thinners!

After eye contact

Flush with plenty of water (10 - 15 min.). Call a physician.

After ingestion

Call a physician. Keep at rest. Do not induce vomiting.

5.) Fire-fighting measures

Suitable extinguishing media

Carbon dioxide, foam, sand, dry extinguishing agent.

Extinguishing media that must not be used for safety reasons

Water jet should not be used because water is not mixable with a lot of organic solvents and such solvents will spread on the water surface.

Special exposure hazards arising from the substance or preparation itself, its combustion products or from resulting gases

In case of fire, dangerous smoke gases such as carbon dioxide, carbon monoxide, soot, nitrogen oxides, metal oxides and halogenated hydrogens can be produced. Therefore, take suitable precautionary measures for fire fighting. Residues remaining after a fire have to be disposed of appropriately.

Special protective equipment for fire-fighting

Breathing apparatus with an independent source of air may be required.

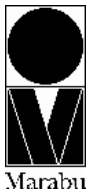
Other information

Cool endangered containers with water in case of fire.

6.) Accidental release measures

Personal precautions

Keep away from sources of ignition. Provide for good ventilation. Do not breathe vapours. Refer to protective measures listed in sections 7 and 8.



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Environmental precautions

Do not empty into drains. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

Methods for cleaning up/taking up

Remove by liquid absorbing material (e.g. kieselguhr) and process according to waste regulations. Clean preferably with a detergent; avoid use of solvents.

7.) Handling and storage

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 limit. Do not leave containers open. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Avoid contact with skin and eyes. Avoid inhalation of vapour and spray mist. When using do not eat, drink or smoke. Comply with the health and safety at work laws.

Advice on protection against fire and explosion

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing. No sparking tools should be used.

Classification of fires

B (Combustible liquid substances)

Temperature class

T2

Storage

Requirements for storage rooms and vessels

Recommended storage temperature: 15-20°C. Keep container tightly closed. Never use pressure to empty: container is not a pressure vessel. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hints on storage assembly

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.

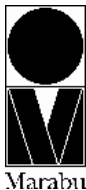
Further information on storage conditions

Always keep in containers of same material as the original one. See also instructions on the label. Avoid heating and direct sunlight. Keep away from sources of ignition. Keep containers dry and cool.

8.) Exposure controls / personal protection

Additional hints on technical system design.

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.



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Ingredients with occupational exposure limits to be monitored

XYLENE

2000/39/EC

Value	50	ml/m ³	221	mg/m ³
STEL	100	ml/m ³	442	mg/m ³

Skin resorption / sensibilisation	skin			
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WEL (EH40/2005)

Value	50	ml/m ³	220	mg/m ³
STEL	100	ml/m ³	441	mg/m ³

Skin resorption / sensibilisation	Sk			
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ETHYLBENZENE

2000/39/EC

Value	100	ml/m ³	442	mg/m ³
STEL	200	ml/m ³	884	mg/m ³

Skin resorption / sensibilisation	skin			
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WEL (EH40/2005)

Value	100	ml/m ³	441	mg/m ³
STEL	125	ml/m ³	552	mg/m ³

Skin resorption / sensibilisation	Sk			
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N-BUTYL ACETATE

WEL (EH40/2005)

Value	150	ml/m ³	724	mg/m ³
STEL	200	ml/m ³	966	mg/m ³

1,2,4-TRIMETHYLBENZENE

2000/39/EC

Value	20	ml/m ³	100	mg/m ³
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WEL (EH40/2005)

Value	25	ml/m ³	125	mg/m ³
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AROMATICS

WEL (EH40/2005)

Value	500	mg/m ³		
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Ink shades 130, 192-193, 920-922 and 930-962 contain additionally:

2-METHOXY-1-METHYLETHYL ACETATE

2000/39/EC

Value	50	ml/m ³	275	mg/m ³
STEL	100	ml/m ³	550	mg/m ³

Skin resorption / sensibilisation	skin			
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WEL (EH40/2005)

Value	50	ml/m ³	274	mg/m ³
STEL	100	ml/m ³	548	mg/m ³

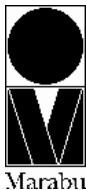
Skin resorption / sensibilisation	Sk			
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Ink shades 191-193 contain additionally:

NORMAL AND BRANCHED CHAIN ALKANES, >=C7

WEL (EH40/2005)

Value	1200	mg/m ³		
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Ink shade 191 contains additionally: MESITYLENE

WEL (EH40/2005)				
Value	25	ml/m ³	125	mg/m ³
2000/39/EC				
Value	20	ml/m ³	100	mg/m ³

CYCLOALKANES, >=C7

WEL (EH40/2005)				
Value	800	mg/m ³		

Personal protective equipment

Respiratory protection

Breathing protection equipment required in inadequately ventilated places and during spraying.

Respiratory filter (gas) : A
 Respiratory filter (part): P2

Hand protection

Chemical protection gloves are suitable, which are tested according to EN 374.

Recommendation for protection against components normally found in the products:

For short-term contact (e.g. spray protection) as well as for long-term contact (e.g. cleaning purposes):

Suitable material: LLDPE
 Material thickness: 0.06 mm
 Penetration time: >480 min.

Protective gloves must always be tested and confirmed with regard to suitability to each specific working environment (e.g. mechanical resistance, product compatibility, antistatic).

Follow the instructions and information from the glove manufacturer in reference to use, storage, care, and frequency of glove exchange.

Protective gloves should be immediately replaced upon being damaged or when showing first signs of wear. Preventive skin protection (skin protective cream) is recommended. Contaminated skin areas should immediately be washed (follow data sheet for skin protection ZH 1/132).

Working procedures are to be so arranged that the permanent wearing of gloves will not be necessary.

We recommend to set up a hand protection plan, which is adapted to the needs of the local business. Further information is provided in the publications of Bundesverband Handschutz (nos. 6 and 9) and BG Druck und Papierverarbeitung (528.1, 528.2, 531.X).

Eye protection

Use safety glasses.

Skin protection

Personal should wear antistatic clothing made of natural fibre or of high temperature resistant synthetic fibre. All parts of the body should be washed after contact. Use re-greasing skin cream.

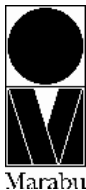
General protective and hygiene measures

The usual precautionary measures for the handling of chemicals have to be observed.

9.) Physical and chemical properties

Appearance

Form	pasty
Colour	see trade name
Odour	characteristic



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Safety data

Changes in physical state

Type	Starts to boil	
Value	124	°C

Flash point

Value	36	°C
Method	ASTM D 6450 (CCCFP)	

Ignition temperature

Value	315	°C
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Explosion limits

Upper explosion limit	10,8	% vol
Lower explosion limit	0,7	% vol

Vapour pressure

Value	7	hPa
Reference temperature	20	°C

Density

Value	1,0	- 1,8	g/cm ³
Reference temperature	20	°C	

Viscosity

Type	Flow time	
Value	> 150	sec
Method	DIN-cup 4 mm	
Reference temperature	20	°C

Solubility in water

Remarks parts of solvents

Other information

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

10.) Stability and reactivity

Conditions to avoid

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

Materials to avoid

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

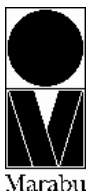
Hazardous decomposition products

When exposed to high temperatures, dangerous decomposition products such as carbon dioxide, carbon monoxide, soot, nitrogen oxides, metal oxides and halogenated hydrocarbons can be produced.

11.) Toxicological information

Experience in practice

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect 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 symptoms like described above by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Vapours and the liquid itself will irritate the eyes. If swallowed, stomach complaints and irritation of the digestive organs may result.



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Other information

There are no data available on the preparation itself.

The product was classified in toxicological terms on the basis of the results of the calculation procedure outlined within General Directive on Preparations (1999/45/EEC).

12.) Ecological information

General information / ecology

There are no data available on the preparation itself. Do not empty into waters or drains

13.) Disposal considerations

Product

Dispose of or incinerate in accordance with corresponding regulations.

Code of waste pursuant to European Council Directive on waste: 080312 (Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks - wastes from MFSU of printing inks - waste ink containing dangerous substances).

Uncleaned packaging

Dispose of only completely emptied containers!

Code of waste pursuant on European Council Directive on waste: 150104 (Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified - packaging (including separately collected municipal packaging waste) - metallic packaging).

14.) Transport information

Land transport ADR/RID

Class	3
Packaging group	III
Hazard id. no.	30
Label	3, -, -
UN number	1263
Technical name	Paint
Remarks	The product is viscous; non-dangerous good in Containers with a capacity <= 450 ltrs.

Marine transport IMDG/GGVSee

Class	3
Packaging group	III
UN number	1263
Proper shipping name	Paint
EmS	F-E, S-E
MARPOL	MP (Ink shade 191)
Label	3, -, -
Remarks	The product is viscous; non-dangerous good in Containers with a capacity <= 30 ltrs.

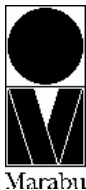
Air transport ICAO/IATA

Class	3
Packaging group	III
UN number	1263
Proper shipping name	Paint
Label	3, -, -

15.) Regulatory information

Labelling in accordance with EC directives

The product is classified and labelled in accordance with EC directives/GefStoff V



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Hazard symbols

Xn Harmful

Hazardous component(s) to be indicated on label

XYLENE

R phrases

10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
36 Irritating to eyes.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
67 Vapours may cause drowsiness and dizziness.

S phrases

20/21 When using do not eat, drink or smoke.
25 Avoid contact with eyes.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
29 Do not empty into drains.
51 Use only in well-ventilated areas.

16.) Other information

Other information

According to their chemical structure, the applied raw materials do not contain any antimony, arsenic, soluble barium, lead, cadmium, chromium, mercury and selenium.

XYLENE

10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
38 Irritating to skin.

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.

65 Harmful: may cause lung damage if swallowed.
10 Flammable.
37 Irritating to respiratory system.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

N-BUTYL ACETATE

10 Flammable.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

BUTYL GLYCOLATE

41 Risk of serious damage to eyes.

ETHYLBENZENE

11 Highly flammable.
20 Harmful by inhalation.

2-METHOXY-1-METHYLETHYL ACETATE

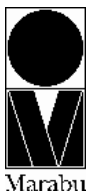
10 Flammable.
36 Irritating to eyes.

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY

10 Flammable.
65 Harmful: may cause lung damage if swallowed.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

2-(2-BUTOXYETHOXY) ETHYL DIHYDROGEN PHOSPHATE, COMPOUND WITH N,N-DIMETHYL-CYCLOHEXYLAMINE

22 Harmful if swallowed.



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DEHYDROGENATED GUM ROSIN

22 Harmful if swallowed.

ISOTRIDECANOL; ETHOXYLATED (> 5 - 7 EO)

22 Harmful if swallowed.

41 Risk of serious damage to eyes.

Department issuing safety data sheet

Laboratory/product safety.

Contact person

Dipl.-Chem. G. Heller or Dipl.-Ing. U. Voetter.

The instructions are based on today's information and knowledge. The safety data sheet describes products in relation to safety requirements. These instructions do not assure application technological properties of the product.