

Safety Data Sheet

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According to Regulation (EC) No. 1907/2006 and (EG) 453/2010

Marking fluid

Date: 2012-04-30

Revision 1

1. Identification of the substance/preparation and of the company/undertaking

Trade name	Marking fluid
Use of the preparation	Marking fluid for plastic and varnished / painted surface.
Supplier	Secure & Safe Techprint
Address	Karbingatan 12, SE-25467 Helsingborg, Sweden
Telephone	+46(0)42 299940.
Contact	www.secureandsafe.se per.jonsson@secureandsafe.se
Emergency telephone	+46 (0)8-331231 Poison information

2. Hazards identification

Classification

Classification (1999/45/EC)

F; R11, Repr. Kat. 2; R61, Xn; R48/20, R65, Xi; R38, R67.

Label elements:

Symbols



Repr Cat 2



Highly flammable

Substance name

Toluene, 1-methyl-2-pyrrolidone.

Risk phrases

R11 Highly flammable.

R38 Irritating to skin.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R61 May cause harm to the unborn child.

R65 Harmful: may cause lung damage if swallowed.

R67 Vapours may cause drowsiness and dizziness.

Safety phrases

S7/9 Keep container tightly closed and in a well-ventilated place.

S28 After contact with skin, wash immediately with plenty of soap and water

S36/37 Wear suitable protective clothing and gloves.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S53 Avoid exposure - obtain special instructions before use.

Other information

For professional use only.

Other hazards

This product is not considered to contain any substances that meet the criteria for classification as PBT or vPvB substances.

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3. Composition/information on ingredients

Chemical composition: mixture

Components	CAS-No EC-No	Reg- No	Conc. %	Symbol & R-phrases *	Hazard Class & Category Code	Hazard statement Code(s)*
Toluene	108-88-3 203-625-9	-	40-60	F; R11 Repr. Cat. 3; R63 Xn; R48/20, R65 Xi; R38, R67	Flam. Liq. 2 Repr. 2 Asp. Tox. 1 STOT RE 2 * Skin Irrit. 2 STOT SE 3	H225 H361d H304 H373 H315 H336
1-methyl-2-pyrrolidone	872-50-4 212-828-1	-	< 20	Repr. Cat. 2; R61 Xi; R36/37/38	Repr. 1B Eye Irrit. 2 STOT SE 3 Skin Irrit. 2	H360D H319 H335 H315
α - Butyrolactone	96-48-0 202-509-5	-	1-5	Xn; R22 Xi; R36	Acute Tox. 4 Eye Irrit. 2	H302 H319

* The full text of Risk phrases and Hazard statement Codes are listed under heading 16.

The classification is based on data from the chemical supplier and www.ecb.europa.eu (databases)

Explanation of symbols

T= Toxic; T+= Very toxic; C= Corrosive; Xn= Harmful; Xi= Irritant; O= Oxidizing; E= Explosive;

F= Highly flammable; F+= Extremely flammable; N= Dangerous to the environment

Carc. = Carcinogens, Mut. = Mutagens, Repr. = Toxic for reproduction

4. First aid measures

Description of first aid measures:

General information

Never give fluids or induce vomiting if patient is unconscious. Keep person warm and calm.

In all cases of doubt, or when symptoms persist, seek medical advice.

Inhalation

Fresh air. Contact a doctor if the complaints persist. Give artificial respiration if necessary.

Skin contact

Immediately, take off all contaminated clothing/shoes. Wash with soap and water and rinse the skin thoroughly.

Contact a doctor if the complaints persist.

Eye contact

Rinse immediately with water for several minutes. Hold eyelids apart. Contact a doctor if the complaints persist.

Ingestion

Seek medical attention.. Do not provoke vomiting. Risk of aspiration

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4. First aid measures (...)

Most important symptoms and effects, both acute and delayed:

- Inhalation:** The vapours could be irritating to the respiratory system.(In large doses, headache,drowsiness, dizziness, nausea)
- Skin contact:** Irritating to skin. (redness, pain), Contains toxic substances that can be absorbed by the skin.
- Eye contact:** May be irritating to eyes.(Pain, redness, tearing)
- Ingestion:** Ingestion can cause nausea, pain, dizziness, pain, breathing disorders and in large doses, unconsciousness. Risk of aspiration.

Indication of any immediate medical attention and special treatment needed

-

5. Fire-fighting measures

Extinguishing media

Water spray, fog or mist, foam, powder.

Special hazards arising from the substance or mixture

Do not breathe fumes. During fire, gases hazardous to health may be formed.

Highly flammable.

May make explosive mixtures with air.

Special protective equipment

Appropriate breathing apparatus may be required.

Additional information

Cool endangered containers with water in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Flammable. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ensure adequate ventilation.

Wear necessary protective equipment.

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Small quantities may be wiped up with a cloth. Use protective gloves.

Contain and absorb larger spillage with non-combustible materials e.g. sand, earth, vermiculite.

Place in container for disposal according to local regulations.

Reference to other sections

See Section 7 for proper handling and storage.

For personal protection see section 8.

For disposal of spillage, see section 13.

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7. Handling and storage

Precautions for safe handling

Avoid contact with skin and clothes. Ensure adequate ventilation - Do not breathe vapour.
 Comply with the health and safety at work laws. Avoid exposure - obtain special instructions before use.
 Keep away from sources of ignition - No smoking.
 Keep container tightly closed.

Normal precautions taken when handling chemicals should be observed.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well ventilated area.
 Keep container tightly closed in original container and protected from heat sources.

Specific end use(s)

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8. Exposure controls/personal protection

Ventilation requirements

Ensure good exhaust ventilation at the workplace.

Exposure limits:

Swedish limit values or limit values according to the European commission

Substance	CAS-No	Level limit value	Ceiling limit value	Short time value	Note
Toluene	108-88-3	50 ppm, 192 mg/m ³	-	100 ppm, 384 mg/m ³	B, H
1-methyl-2-pyrrolidone	872-50-4	50 ppm, 200 mg/m ³	-	75 ppm, 300 mg/m ³	-

Exposure controls:**General protective and hygiene measures**

Wash hands before breaks and after work.
 Avoid inhalation and contact with the skin.
 The usual precautionary measures for the handling of chemicals have to be observed.

Individual protection measures, such as personal protective equipment

Always consult a competent person/supplier when selecting personal protective equipment.

Respiratory protection

In inadequately ventilated places or if workplace limits are exceeded, a gasmask approved for this purpose must be worn. (Gas filter A)

Hand protection

Use protective gloves made of PVA, Viton.
 When selecting gloves, several parameters should be taken into account, use, handling, breakthrough time.

Eye protection

Protective gloves must be used if there is a risk of direct contact or splash.

Body protection

Wear suitable protective clothing.

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9. Physical and chemical properties

Information on basic physical and chemical properties:

Form:	Liquid
Colour:	Red
Odour:	Solvent
Boiling point (°C):	>100
Flash point (°C):	< 21
Auto-ignition temperature:	Not determined
Explosive properties:	Product is not explosive.
Density (20 °C):	Not determined
Solubility in water:	Partially miscible

Other information: No specific

10. Stability and reactivity

Reactivity

Stable under recommended storage and handling conditions.

Chemical stability

Stable under recommended handling conditions.

Possibility of hazardous reactions

Stable under recommended storage and handling conditions.

Conditions to avoid

Keep away from heat, sparks and open flame. Keep away from strong oxidizing agents.

Incompatible materials

Plastic, Rubber.

Hazardous decomposition products

When exposed to high temperatures may produce hazardous decomposition products.

11. Toxicological information

Information on toxicological effects

See section 4. (Most important symptoms and effects, both acute and delayed)

Acute toxicity

Information about this preparation is not available.

Toxicology data for the containing components (in concentrate)

Toluene (108-88-3)	LD ₅₀ Oral Rat: >2600 mg/kg body weight
	LD ₅₀ rat: 15 mg/kg
	LD ₅₀ Dermal Rat: 12124 mg/kg body weight
1-methyl-2-pyrrolidone (872-50-4)	LD ₅₀ Dermal Rabbit: 12300 mg/kg body weight
	LD ₅₀ Oral Rat: 3914 mg/kg body weight
	LD ₅₀ rat: >5,1 mg/kg
α-Butyrolactone (96-48-0)	LD ₅₀ Dermal Rat: 7000 mg/kg body weight
	LD ₅₀ Dermal Rabbit: 8000 mg/kg body weight
	LD ₅₀ Oral Rat: 800 mg/kg body weight
	LD ₅₀ Inh. rat: >2,68 mg/kg

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11. Toxicological information (...)**Effects of chronic exposure**

Danger of serious damage to health by prolonged exposure through inhalation.

Routes of exposure

Eyes and skin ,ingestion. inhalation.

Allergenic potential

The product is not classified as allergenic by inhalation or skin contact.

Carcinogenicity, mutagenicity and toxicity for reproduction

This product is classified as toxic for reproduction.

12. Ecological information

This product is not classified as dangerous for the environment.

Do not flush into surface water or sanitary sewer system.

Toxicity

Information about this preparation is not available.

The information below is for containing substances in concentrate:**Toluene (108-88-3)**

LC₅₀ Fish 96h: 6,4 mg/l Sp: Oncorhynchus kisutch

EC₅₀ Daphnia 48h: 11,5 mg/l Sp: D. magna

IC₅₀ Algae 72h: 12,5 mg/l Sp: Selenastrum capricornutum

1-methyl-2-pyrrolidone (872-50-4)

LC₅₀ Fish 96h: 832 mg/l Sp: Lepomis macrochirus

EC₅₀ Daphnia 48h: 4897 mg/l Sp: D. magna

IC₅₀ Algae 72h: >500 mg/l Sp: Scenedesmus sp.

α -Butyrolactone (96-48-0)

LC₅₀ Fish 96h: 220-460 mg/l Sp: Leuciscus idus

EC₅₀ Daphnia 48h: >500 mg/l Sp: D. magna

IC₅₀ Algae 72h: 79 mg/l Sp: Scenedesmus subspicatus

Persistence and degradability

Toluene (108-88-3) - BOD5/COD: 0 - 0,65, >60%% degraded in 14 days OECD 301C

1-methyl-2-pyrrolidone (872-50-4) - BOD5/COD: 0,69, >90% degraded in 28 days OECD 301C

Bioaccumulative potential

BCF: 10 – 90, Log Pow: 2,75, Toluene (108-88-3)

Log Pow: -0,73- -0,46., 1-methyl-2-pyrrolidone (872-50-4)

Log Pow: 0,10., α -Butyrolactone (96-48-0)

Mobility in soil

Partially miscible in water.

Results of PBT and vPvB assessment

This product is not considered to contain any substances that meet the criteria for classification as PBT or vPvB substances.

Other adverse effects

No known

Predicted No Effect Concentration**Toluene (108-88-3):**

74 µg/L aquatic environment, 8,4 mg/L microorganisms nitrification, 1,1 mg/L microorganisms respiration

, 0,26 mg/kg wet weight, soil

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13. Disposal considerations

Waste treatment methods

This product or residues of this product are classified as hazardous waste. Dispose of in accordance with local authority requirements.

EWC code: Depends on line of business and use.

07 01 04*

Disposal of Packaging

Well cleaned packaging could be left for recycling

14. Transport information

UN number

1993

UN proper shipping name

FLAMMABLE LIQUID N.O.S. (Toluene)

Transport hazard class(es)

3

Packing group

II

Environmental hazards

Marine Pollutant: No

Special precautions for user

Flash point < 21°C

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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LQ:1 Lit.

15. Regulatory information

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

Classification according to (67/548/EEC, 1999/45/EC)

Chemical safety assessment

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16. Other information

The full text of Risk phrases and Hazard statement Codes are listed under heading 3:

R11 Highly flammable.

R22 Harmful if swallowed.

R36 Irritating to eyes.

R36/37/38 Irritating to eyes, respiratory system and skin.

R38 Irritating to skin.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R61 May cause harm to the unborn child.

R63 Possible risk of harm to the unborn child.

R65 Harmful: may cause lung damage if swallowed.

R67 Vapours may cause drowsiness and dizziness.

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H360 May damage fertility or the unborn child .

H361 Suspected of damaging fertility or the unborn child .

H373 May cause damage to organs through prolonged or repeated exposure .

Sources

Safety data sheet provided by the manufacturer. CLP-regulation, www.kemi.se, www.ecb.europa.eu (databases)

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Abbreviations explanations

ADR: :International Carriage of Dangerous Goods by Road

BCF: Bio Concentration Factor

CAS-nr: Chemical Abstracts Service number

EC₅₀: Effect Concentration

EG-nr: A substance number i EINECS, ELINCS or in No-Longer Polymers List.

IMDG: International Maritime Dangerous Goods Code.

LC₅₀: Lethal Concentration

LD₅₀: Lethal Dose

IC₅₀: Median Inhibition Concentration

NOEC: No Observed Effect Concentration

PBT-substance: Persistent, Bio accumulative and Toxic substances.

vPvB-substance; Very persistent and Very Bio accumulative substances.