

IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND THE COMPANY / UNDERTAKING

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SAFETY DATA SHEET

PRODUCT: TTR Ink (silver) (1842)

2 COMPOSITION / INFORMATION ON INGREDIENTS

	Ingredients	CAS No.	EC No.	Weight %	Symbols	R-Phrases
###	Ethanol	64-17-5	200-578-6	35-40	F	11
###	Ethyl acetate	141-78-6	205-500-4	40-45	F,Xi	11,36,66,67
###	Methanol	67-56-1	200-659-6	< 2	F,T	11,23/24/25, 39/23/24/25
###	Cellulose nitrate	9004-70-0	---	< 5	F	11

3 HAZARDS IDENTIFICATION

- ###
- Highly Flammable
 - Irritating to eyes
 - Repeated exposure may cause skin dryness or cracking
 - Vapours may cause drowsiness and dizziness
 - See Section 16.1 for ingredient R-Phrases

4 FIRST-AID MEASURES**CONTACT WITH SKIN**

- Wash affected area with plenty of soap and water
- Seek medical attention if irritation persists

CONTACT WITH EYES

- If substance has got into eyes, immediately wash out with plenty of water
- Seek medical attention if irritation persists

INGESTION

- Give water or milk to drink
- Seek immediate medical attention

INHALATION

- Remove patient to fresh air
- Keep warm and at rest

OTHER INFORMATION

- See Section 11 - Toxicological Information
- NOTE TO PHYSICIANS: Treat by observation and supportive measures as indicated by the patient's condition

5 FIRE-FIGHTING MEASURES

- Consider evacuation
 - Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback
 - In case of fire use carbon dioxide or dry agent (S43)
 - Do not use water jets
 - Nitrogen and carbon oxides may be formed
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6 ACCIDENTAL RELEASE MEASURES

- Shut off all ignition sources
 - Dyke to prevent entry to sewer or waterway. Transfer liquid to a holding container
 - Absorb spillage in suitable inert material
 - Ventilate the area and wash spill site after material pick-up is complete
 - See Section 13
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7 HANDLING AND STORAGE**7.1 HANDLING**

- The usual precautions for handling chemicals should be observed
 - Keep away from heat and sources of ignition
 - Use only in well ventilated areas (S51)
 - Avoid contact with skin & eyes
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7.2 STORAGE

- Keep away from sources of ignition - No Smoking (S16)
 - Keep container in a well ventilated place (S9)
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8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**8.1 GENERAL**

- Wear suitable protective clothing, including eye/face protection and gloves (neoprene are recommended)
 - Engineering controls should be provided which maintain airborne concentrations below the relevant guidelines
 - Wear approved respirator if exposure likely to exceed MEL/OES
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8.2 EXPOSURE LIMITS

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- Ethanol

Constituent Exposure Limit:

OES / LTEL 1000 ppm 1920 mg/m3

OES / STEL --- ppm --- mg/m3

(Germany) MAK 500 ppm 960 mg/m3

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- Ethyl acetate

OES / LTEL 200 ppm --- mg/m3

OES / STEL 400 ppm --- mg/m3

(Germany) MAK 400 ppm 1500 mg/m3

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- Methanol

OES / LTEL 200 ppm 266 mg/m3

OES / STEL 250 ppm 333 mg/m3

(Germany) MAK 200 ppm 270 mg/m3

9 PHYSICAL AND CHEMICAL PROPERTIES

- Liquid - pearlised, off-white, volatile, partly miscible with water
- Unpleasant odour
- Highly flammable (R11)
- Lower explosive limit ca 2.0 % (in air)
- Upper explosive limit ca 15.0 % (in air) Boiling point ca 75 deg C
- Flash point ca -4 deg C (CC)
- Melting point - not applicable Auto-ignition point > 400 deg C
- pH - not applicable
- Density ca 1 g/cm³ at 25 deg C
- Vapour pressure ca 60 mbar
- Fat solubility - not known
- Partition coefficient : n-Octanol/water - not known

10 STABILITY AND REACTIVITY

- Stable
- Keep away from heat
- Keep away from strong oxidizing substances
- Decomposition products may include nitrogen and carbon oxides

11 TOXICOLOGICAL INFORMATION

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- Inhalation of solvent vapours may give rise to nausea, headaches and dizziness
- Vapours or aerosols may cause irritation of eyes, nose and respiratory tract
- Prolonged skin contact will result in defatting of the skin, leading to irritation, and in some cases, dermatitis
- May cause gastrointestinal disturbances

12 ECOLOGICAL INFORMATION

- No information available

13 DISPOSAL CONSIDERATIONS

- Disposal should be in accordance with local, state or national legislation
 - Disposal can be a hazardous operation, seek specialist advice
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14 TRANSPORT INFORMATION**14.1 REGULATIONS**

- Proper Shipping Name: Printing Ink

UN

UN No	:	1210	Hazard Class	:	3
Packing Group	:	II			

Road / Rail (ADR / RID)

ADR UN No	:	1210	ADR Hazard Class	:	3
ADR Item No	:	5(b)	ADR/RID No	:	HZ33
Tremcard	:	ND			

Sea (IMDG)

IMDG UN No	:	1210	IMDG Hazard Class	:	3
IMDG Page No	:	3272-1	IMDG Pack. Group	:	II
IMDG EmS	:	-	IMDG MFAG	:	-

Air (ICAO / IATA)

ICAO UN No	:	1210	ICAO Hazard Class	:	3
ICAO Packing Group	:	II			

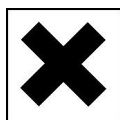
14.2 GENERAL

- Transport Regulations apply as indicated in previous section

15 REGULATORY INFORMATION

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- This product is covered by Dangerous Preparations Directive (1999/45/EC) as amended
- Refer to current CHIP Regulations
- Refer to current Gefährliche Stoffe Verordnung
- Refer to current VbF
- This Safety Data Sheet is provided in compliance with the Safety Data Sheets Directive (91/155/EC)

SYMBOL(S)HIGHLY
FLAMMABLE

IRRITANT

15.1 RISK PHRASES

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- Highly Flammable (R11)
- Irritating to eyes (R36)
- Repeated exposure may cause skin dryness or cracking (R66)
- Vapours may cause drowsiness and dizziness (R67)

15.2 SAFETY PHRASES

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- Keep container in a well ventilated place (S9)
- Keep away from sources of ignition - No Smoking (S16)
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S26)
- Wear suitable gloves (S37)
- Use only in well ventilated areas (S51)
- This material and its container must be disposed of as hazardous waste (S60)

16 OTHER INFORMATION**16.1 INGREDIENT R-PHRASES**

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- R11: Highly Flammable
- R23/24/25: Toxic by inhalation, in contact with skin and if swallowed
- R36: Irritating to eyes
- R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
- R66: Repeated exposure may cause skin dryness or cracking
- R67: Vapours may cause drowsiness and dizziness

16.2

- The precise composition of this product is proprietary information. More details will be supplied in confidence to qualified medical personnel if specific treatment is necessary.
 - This product conforms to all known European chemicals safety legislation.
 - Water Hazard Class: 1 = slight, 2 = medium, 3 = severe hazard.
 - NA = not applicable; NC = not classified; ND = no data; TWA = time-weighted average.
 - LTEL = 8hr TWA; STEL = 15min TWA; ppm = parts per million.
 - ### = changes to section since last revision.
 - The above information relates only to the safety of the product designated, based on our current state of knowledge. No responsibility is accepted for any errors or omissions.
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