

# Material Safety Data Sheet

## According to 91/155 EC

Printing date 26.07.2001

Reviewed on 26.07.2001

### 1 Identification of substance:

- **Product details:**
- **Trade name:** IPP-Plus Silver Plate Etching Solution
- **Article number:** 38764
- **Manufacturer/Supplier:**  
A. B. Dick UK Limited  
Great West Trading Estate  
983 Great West Road  
Brentford, Middlesex  
TW8 9DN  
ENGLAND  
Tel.: +44 (0)20 8326 1200, Fax: +44 (0)20 8326 1201
- **Informing department:** Tel.: +44 (0)20 8326 1200

### 2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

64-17-5	ethanol	F; R 11	25-50%
107-21-1	ethane-1,2-diol	Xn; R 22	5.0-10%

### 3 Hazards identification

- **Hazard designation:** void
- **Information pertaining to particular dangers for man and environment**  
R 10 Flammable.
- **Classification system**  
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

### 4 First aid measures

- **After inhalation** Supply fresh air.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
In case of persistent symptoms consult doctor.

### 5 Fire fighting measures

- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:**  
Ensure adequate ventilation  
Keep away from ignition sources
- **Measures for environmental protection:** No special measures required.

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- **Measures for cleaning/collecting:**  
Dilute with much water.  
Dispose of contaminated material as waste according to item 13.

### 7 Handling and storage

- **Handling**
- **Information for safe handling:** No special precautions necessary if used correctly.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class**
- **Class according to regulation on inflammable liquids:** Void

### 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

#### 64-17-5 ethanol

OES	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
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#### 107-21-1 ethane-1,2-diol

OES	Short-term value: 125** mg/m <sup>3</sup> Long-term value: 10* 60** mg/m <sup>3</sup> *particulate **vapour
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- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to general rules for handling chemicals.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Eye protection:** Safety glasses

### 9 Physical and chemical properties:

- |   |   |
|---|---|
| · <b>Form:</b>                          | Fluid   |
| · <b>Colour:</b>                        | Colourless  |
| · <b>Odour:</b>                         | Alcohol-like  |
| · <b>Change in condition</b>            |   |
| <b>Melting point/Melting range:</b>     | Not determined  |
| <b>Boiling point/Boiling range:</b>     | > 85°C  |
| · <b>Flash point:</b>                   | 31°C  |
| · <b>Ignition temperature:</b>          | 410°C   |
| · <b>Self-inflammability:</b>           | Product is not selfigniting.  |
| · <b>Danger of explosion:</b>           | Product is not explosive. However, formation of explosive air/steam mixtures is possible. |
| · <b>Critical values for explosion:</b> |   |
| <b>Lower:</b>                           | 3.5 Vol %   |

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<b>Upper:</b>	15.0 Vol %
· <b>Vapour pressure at 20°C:</b>	59 hPa
· <b>Density at 20°C</b>	0.968 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible
· <b>pH-value at 20°C:</b>	5.3
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	29.0 %
<b>Water:</b>	61.7 %
· <b>Solids content:</b>	3.7 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

### 11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

#### 107-21-1 ethane-1,2-diol

Oral	LD50	4700 mg/kg (rat)
Dermal	LD50	9530 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effect known.

### 12 Ecological information:

- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**  
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

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### 14 Transport information

- Land transport ADR/RID (cross-border)
- ADR/RID-GGVS/E Class: 3 Flammable liquids.
- Number/Letter: 31c
- Kemler Number: 30
- UN-Number: 1170
- Label: 3
- Designation of goods: Ethanol solution (Ethyl alcohol solution)

- Maritime transport IMDG:
- IMDG Class: 3.3
- Page: 3337-1
- UN Number: 1170
- Packaging group: III
- EMS Number: 3-06
- MFAG: 305
- Marine pollutant: No
- Correct technical name: Ethanol solutions

- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: 3
- UN/ID Number: 1170
- Packaging group: III
- Correct technical name: Ethanol solutions

### 15 Regulatory information

- Designation according to EC guidelines:  
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)
- Risk phrases:  
10 Flammable.
- Safety phrases:  
7 Keep container tightly closed.  
16 Keep away from sources of ignition - No smoking.
- National regulations
- Classification according to VbF: Void
- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

### 16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.