

SAFETY DATA SHEET Ref. No. 57034

1. PRODUCT AND COMPANY IDENTIFICATION

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| Trade Name | ROCOL Layout Ink Fluid - Blue |
| Manufacturer/Supplier | ROCOL Limited |
| Address | ROCOL House, Swillington, Leeds, LS26 8BS, ENGLAND. |
| Phone Number | +44 (0) 113 2322700 |
| Fax Number | +44 (0) 113 2322760 |
| Emergency Phone Number | +44 (0) 113 2322600 |

2. COMPOSITION/INFORMATION ON THE COMPONENTS

Hazardous Components in Product for EC

| Component Name | Codes | Concentration | R Phrases | Classification |
|----------------|--|----------------|-------------|----------------|
| METHANOL | 67-56-1 | 60.00 - 100.00 | R11, R23/25 | F, T |
| R11 | R11 Highly flammable. | | | |
| R23/25 | R23/25 Toxic by inhalation and if swallowed. | | | |
| F | F - Highly flammable | | | |
| T | T - Toxic | | | |

3. HAZARD IDENTIFICATION

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| Main Hazards | Highly flammable. Toxic by inhalation and if swallowed. |
| Health Effects - Eyes | Liquid may cause slight transient irritation. |
| Health Effects - Skin | Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis. Liquid may be absorbed through the skin in toxicologically significant amounts if area of contact is large and exposure prolonged. |
| Health Effects - Ingestion | Doses of 10g or above may cause the following effects:- nausea, dizziness, headache, vomiting. A large dose may have the following effects:- temporary or permanent blindness. Doses of 60g or above may cause the following effects:- may prove suddenly fatal. |
| Health Effects - Inhalation | Exposure to vapour at high concentrations may have the following effects:- systemic effects similar to those resulting from ingestion. |

4. FIRST AID MEASURES

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| First Aid - Eyes | Immediately flood the eye with plenty of water for at least 10 minutes, holding the eye open. Obtain medical attention if soreness or redness persists. |
| First Aid - Skin | Immediately wash skin thoroughly with soap and water. Apply a reconditioning skin cream. Seek medical advice if you feel unwell. |
| First Aid - Ingestion | Wash out mouth with water. Do not induce vomiting. Keep warm and at rest. Obtain medical attention urgently. |
| First Aid - Inhalation | Remove from exposure. Keep warm and at rest. Obtain medical attention. |

5. FIRE FIGHTING MEASURES

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| Extinguishing Media | Use water spray, foam, dry chemical or carbon dioxide. |
| Unsuitable Extinguishing Media | Do not use water jet. |
| Special Hazards of Product | Burns with an almost invisible flame. Use "paper on rod" detector or salt water spray to detect flame boundary if necessary. This product may give rise to hazardous fumes in a fire. |
| Protective Equipment for Fire-Fighting | Wear self contained breathing apparatus. |

6. ACCIDENTAL RELEASE MEASURES

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| Personal Precautions | Eliminate all sources of ignition. Ventilate the area. Wear appropriate protective clothing. |
| Environmental Precautions | Try to prevent the material from entering drains or water courses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation. |
| Spillages | Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Spillages will create a fire hazard. |

7. HANDLING AND STORAGE

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| Handling | Keep container tightly closed when not in use. Use in well ventilated area. Avoid contact with eyes, skin and clothing. |
| Storage | Store away from sources of heat or ignition. Storage area should be: well ventilated. under cover. Storage and transfer equipment should be adequately earthed and bonded to prevent the accumulation of static charges. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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| Occupational Exposure Standards METHANOL | UK EH40: OES 200ppm 8h TWA. UK EH40: OES 250ppm 15min TWA. |
| Engineering Control Measures | Exposure to this material may be controlled in a number of ways. The measures appropriate for a particular worksite depend on how the material is used and on the potential for exposure. Use of the basic principles of Industrial Hygiene will enable this material to be used safely. |
| Respiratory Protection | Respiratory protection if there is a risk of exposure to high vapour concentrations. |
| Hand Protection | PVC or rubber gloves. |
| Eye Protection | Chemical goggles if there is a risk of splashing. |
| Body Protection | Normal work wear. |
| Protection During Application | During application, adequate ventilation must be provided. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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| Physical State | Liquid. |
| Colour | Blue. |
| Odour | Alcoholic. |
| Boiling Range/Point (°C) | 64 |
| Flash Point (PMCC) (°C) | 12 |
| Explosion Limits (%) | 5.3 to 36.5. |
| Solubility in Water (kg/m3) | Partially soluble. |
| Vapour Pressure (mm.Hg./20 °C) | 100 |
| Density (kg/m3) | 0.8. (measured as kg/litre) |
| Flammability | Classified as "Highly Flammable" in the EEC. |
| Auto-flammability (°C) | Above 200. |
| Viscosity (cSt) | Mobile liquid at ambient temperatures. |
| Vapour Density (Air = 1) | Heavier than air. |
| Evaporation Rate | 1.4 (referenced as n-butyl acetate = 1) |

10. STABILITY AND REACTIVITY

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| Stability | Stable under normal conditions. |
| Conditions to Avoid | High temperatures. Static discharge. |
| Materials to Avoid | Strong oxidising agents. Concentrated mineral acids. |
| Hazardous Decomposition Products | Combustion will generate: oxides of carbon. |

10. STABILITY AND REACTIVITY

Combustion may also generate: phenols, formaldehyde.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

The product contains components that are toxic by the following route of exposure: inhalation, ingestion.
Absorption of harmful amounts at ambient temperature is unlikely because of the low volatility.

12. ECOLOGICAL INFORMATION

Mobility

The product is poorly absorbed onto soils or sediments.

Persistence/Degradability

The product is resistant to biodegradation.

Bio-accumulation

Product is not expected to bioaccumulate.

13. DISPOSAL

Product Disposal

If recovery is not possible, allow the material to evaporate, provided it is safe to do so; if not then incinerate. Do not incinerate closed containers. Dispose of in accordance with all applicable local and national regulations.

Container Disposal

Empty containers may contain hazardous residues. Labels should not be removed from containers until they have been cleaned. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

14. TRANSPORT INFORMATION

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| UN Number | 1230 |
| UN Proper Shipping Name | Flammable liquids, toxic, n.o.s. (Methanol mixture) |
| UN Class | 3 |
| UN Packaging Group | II |
| ADR/RID - Class | 3 |
| ADR/RID - Item No. | 19b |
| IMDG - Proper Shipping Name | Flammable liquid, toxic, N.O.S. (Methanol mixture) |
| IMDG - Packaging Group | II |
| IMDG - Class | 3.2 |
| IMDG - Subsidiary Risk | 6.1 |
| IMDG - Marine Pollutant | No. |
| IMDG - Ems Number | 3-06 |
| IMDG - MFAG Table Number | 306 |
| IATA - Proper Shipping Name | Flammable liquid, toxic, N.O.S. (Methanol mixture) |
| IATA - Packaging Group | II |
| IATA - Class | 3 |
| IATA - Subsidiary Risks | 6.1 |
| Tremcard No. TEC(R) | 663 |

15. REGULATORY INFORMATION

Labelling Information



Toxic



Highly flammable

R phrases

S phrases

Highly flammable. Toxic by inhalation and if swallowed.
Keep container tightly closed. Keep away from sources of ignition - No Smoking. Avoid contact with skin. Use only in well ventilated areas.
Keep out of reach of children.

Contains:-

Methanol.

16. OTHER INFORMATION

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| MSDS first issued | 20 June 1996 |
| MSDS data revised | 28 February 1997 |
| Product Use | For industrial use only. Marking out of engineering components. |
| Revisions Highlighted | Labelling Information |

17. NATIONAL LEGISLATION

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| EC Legislation | EC Directive 91/155/EEC defining the laying down and detailed arrangements for the system of specific information relating to dangerous preparations. EC Directive 88/379/EEC relating to the classification, packaging and labelling of dangerous preparations. |
| UK Guidance Publications | EH40, Occupational Exposure Limits, HSE. Revised Annually. Guide to Highly Flammable Liquids & LPG Regulations - H&SE. H&SE Guidance Notes HS(G)50, 51 & 52 - Storage of Flammable Liquids in containers and fixed tanks. |

To the best of our knowledge, the information contained herein is accurate. Although certain hazards may be described we cannot predict that these are the only hazards, or combination of hazards, that may exist in a workplace. This MSDS, therefore, forms a component only of a risk assessment carried out by, or on behalf of, the user.