



SAFETY DATA SHEET

M681 Blue Offset Ink

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name M681 Blue Offset Ink

Product number 71002125

Container size 1 Liter

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Printing ink.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Matthews Marking Systems
6515 Penn Avenue
Pittsburgh, PA 15206
412.665.2500
412.828.4545
info@matw.com

Manufacturer Matthews Marking Systems
101 Fairview Ave.
Pittsburgh, PA 15238

1.4. Emergency telephone number

Emergency telephone Chemtrec US : 1-800-424-9300 Chemtrec World: 1-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

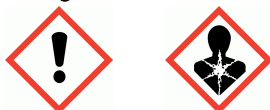
Health hazards Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Repr. 2 - H361d

Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) Xn; R22. Xi; R36/38. Carc. Cat. 3 R40. Repr. Cat. 3 R63

2.2. Label elements

Pictogram



Signal word

Warning

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| | |
|---|--|
| Hazard statements | H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H361d Suspected of damaging the unborn child. |
| Comments | Full list of Hazard Statements is found in Sec. 16 |
| Precautionary statements | P264 Wash contaminated skin thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/attention. P501 Dispose of contents/container in accordance with national regulations. |
| Contains | Glycol Ether EB, Glycol Ether PM |
| Supplementary precautionary statements | P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P270 Do not eat, drink or smoke when using this product. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P321 Specific treatment (see medical advice on this label). P330 Rinse mouth. P332+P313 If skin irritation occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P405 Store locked up. |

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

| | |
|------------------------|--|
| Glycol Ether EB | 10-30% |
| CAS number: 111-76-2 | EC number: 203-905-0 |
| Classification | Classification (67/548/EEC or 1999/45/EC) |
| Acute Tox. 4 - H302 | Xn; R22. Xi; R36/38 |
| Acute Tox. 4 - H312 | |
| Acute Tox. 4 - H332 | |
| Skin Irrit. 2 - H315 | |
| Eye Irrit. 2 - H319 | |
| Glycol Ether DB | 10-30% |
| CAS number: 112-34-5 | EC number: 203-961-6 |
| Classification | Classification (67/548/EEC or 1999/45/EC) |
| Skin Irrit. 2 - H315 | Xi; R36/37/38 |
| Eye Irrit. 2 - H319 | |
| STOT SE 3 - H335 | |

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| | |
|--|--|
| Glycol Ether PM | 5-10% |
| CAS number: 111-77-3 | EC number: 203-906-6 |
| Classification Repr. 2 - H361d | Classification (67/548/EEC or 1999/45/EC) Repr. Cat. 3 R63 |

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|-----------------------------------|---|
| General information | Consult a physician for specific advice. Show this Safety Data Sheet to the medical personnel. |
| Inhalation | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention immediately. |
| Ingestion | Do not induce vomiting. Rinse nose and mouth with water. Never give anything by mouth to an unconscious person. Get medical attention. |
| Skin contact | Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if symptoms are severe or persist after washing. Wash clothing and clean shoes thoroughly before reuse. |
| Eye contact | Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. |
| Protection of first aiders | First aid personnel should wear appropriate protective equipment during any rescue. |

4.2. Most important symptoms and effects, both acute and delayed

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| General information | See Section 11 for additional information on health hazards. |
| Inhalation | Vapour may irritate respiratory system/lungs. Overexposure may depress the central nervous system, causing dizziness and intoxication. |
| Ingestion | Harmful if swallowed. May cause discomfort if swallowed. May cause nausea, headache, dizziness and intoxication. |
| Skin contact | Causes skin irritation. Symptoms following overexposure may include the following: Pain or irritation. Redness. |
| Eye contact | This product is strongly irritating. A single exposure may cause the following adverse effects: Severe irritation, burning, tearing and blurred vision. May cause blurred vision and serious eye damage. |

4.3. Indication of any immediate medical attention and special treatment needed

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| Notes for the doctor | Treat symptomatically. |
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SECTION 5: Firefighting measures

5.1. Extinguishing media

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| Suitable extinguishing media | Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. |
| Unsuitable extinguishing media | Water spray. |

5.2. Special hazards arising from the substance or mixture

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| Specific hazards | Combustible liquid. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. |
| Hazardous combustion products | Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO ₂). Carbon monoxide (CO). |
| 5.3. Advice for firefighters | |
| Protective actions during firefighting | Evacuate area. Stop leak if safe to do so. Use water to keep fire exposed containers cool and disperse vapours. Use water spray to reduce vapours. |
| Special protective equipment for firefighters | Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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| Personal precautions | No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Wash thoroughly after dealing with a spillage. |
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6.2. Environmental precautions

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| Environmental precautions | Avoid release to the environment. |
|----------------------------------|-----------------------------------|

6.3. Methods and material for containment and cleaning up

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| Methods for cleaning up | Eliminate all sources of ignition. Stop leak if safe to do so. Contain and absorb spillage with sand, earth or other non-combustible material. Dilute contained spill with water. Collect and place in suitable waste disposal containers and seal securely. |
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6.4. Reference to other sections

| | |
|------------------------------------|---|
| Reference to other sections | For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13. |
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

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| Usage precautions | Wear protective clothing as described in Section 8 of this safety data sheet. |
| Advice on general occupational hygiene | Do not eat, drink or smoke when using this product. Provide eyewash station and safety shower. Good personal hygiene procedures should be implemented. Wash skin thoroughly after handling. |

7.2. Conditions for safe storage, including any incompatibilities

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| Storage precautions | Keep only in the original container in a cool, well-ventilated place. |
| Storage class | Flammable liquid storage. |

7.3. Specific end use(s)

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| Specific end use(s) | The identified uses for this product are detailed in Section 1.2. |
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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Glycol Ether EB

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Long-term exposure limit (8-hour TWA): WEL 20 ppm 98 mg/m³ Austria, Belgium, Denmark, European Union, Finland, Ireland, Italy, Latvia, Spain

Long-term exposure limit (8-hour TWA): WEL 25 ppm 123 mg/m³ United Kingdom

Long-term exposure limit (8-hour TWA): WEL 10 ppm 49 mg/m³ France, Germany (AGS), Germany (DFG), Switzerland

Long-term exposure limit (8-hour TWA): WEL 98 mg/m³ Hungary, Poland

Long-term exposure limit (8-hour TWA): WEL 10 ppm 50 mg/m³ Sweden

Long-term exposure limit (8-hour TWA): WEL 100 mg/m³ The Netherlands

Short-term exposure limit (15-minute): WEL 40 ppm 200 mg/m³ Austria

Short-term exposure limit (15-minute): WEL 50 ppm 246 mg/m³ Belgium, European Union, France, Ireland, Italy, Latvia, United Kingdom

Short-term exposure limit (15-minute): WEL 40 ppm 196 mg/m³ Denmark, Germany (AGS)

Short-term exposure limit (15-minute): WEL 50 ppm 250 mg/m³ Finland

Short-term exposure limit (15-minute): WEL 20 ppm 98 mg/m³ Germany (DFG), Switzerland

Short-term exposure limit (15-minute): WEL 246 mg/m³ Hungary, The Netherlands

Short-term exposure limit (15-minute): WEL 200 mg/m³ Poland

Short-term exposure limit (15-minute): WEL 50 ppm 245 mg/m³ Spain

Short-term exposure limit (15-minute): WEL 20 ppm 100 mg/m³ Sweden

Sk

Glycol Ether DB

Long-term exposure limit (8-hour TWA): WEL 10 ppm 67.5 mg/m³ Austria, Belgium, European Union, France, Ireland, Italy, Latvia, Spain, United Kingdom

Long-term exposure limit (8-hour TWA): WEL 100 mg/m³ Denmark

Long-term exposure limit (8-hour TWA): WEL 10 ppm 68 mg/m³ Finland

Long-term exposure limit (8-hour TWA): WEL 10 ppm 67 mg/m³ Germany (AGS), Germany (DFG), Switzerland

Long-term exposure limit (8-hour TWA): WEL 67.5 mg/m³ Hungary

Long-term exposure limit (8-hour TWA): WEL 67 mg/m³ Poland

Long-term exposure limit (8-hour TWA): WEL 15 ppm 100 mg/m³ Sweden

Long-term exposure limit (8-hour TWA): WEL 50 mg/m³ The Netherlands

Short-term exposure limit (15-minute): WEL 15 ppm 101.2 mg/m³ Austria, Belgium, European Union, France, Ireland, Italy, Latvia, Spain, Switzerland, United Kingdom

Short-term exposure limit (15-minute): WEL 15 ppm 100 mg/m³ Germany (AGS)

Short-term exposure limit (15-minute): WEL 15 ppm 100.5 mg/m³ Germany (DFG)

Short-term exposure limit (15-minute): WEL 101.2 mg/m³ Hungary

Short-term exposure limit (15-minute): WEL 100 mg/m³ Poland, The Netherlands

Short-term exposure limit (15-minute): WEL 30 ppm 200 mg/m³ Sweden

Glycol Ether PM

Long-term exposure limit (8-hour TWA): WEL 10 ppm 50.1 mg/m³

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. Use explosion-proof ventilating equipment.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

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| Hand protection | It is recommended that chemical-resistant, impervious gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. It is recommended that gloves are made of the following material: Butyl rubber. Nitrile rubber. Rubber (natural, latex). Frequent changes are recommended. |
| Other skin and body protection | Wear appropriate clothing to prevent repeated or prolonged skin contact. |
| Hygiene measures | Provide eyewash station and safety shower. |
| Respiratory protection | If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Organic vapour filter. |
| Thermal hazards | If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures. |
| Environmental exposure controls | Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. |

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

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|---|--|
| Appearance | Coloured liquid. |
| Colour | Blue. |
| Odour | Ether. |
| Odour threshold | Not available. |
| pH | pH (concentrated solution): 6.0 - 8.5 |
| Melting point | -70°C/-94°F |
| Initial boiling point and range | 171°C/340°F @ 760 mm Hg |
| Flash point | 67°C/153°F CC (Closed cup). |
| Evaporation rate | 0.62 (butyl acetate = 1) |
| Upper/lower flammability or explosive limits | Upper flammable/explosive limit: 22.7 % vol Lower flammable/explosive limit: 0.95 % vol |
| Vapour pressure | 0.6 mm Hg @ 20°C/68°F |
| Vapour density | 5.6 |
| Relative density | 1.10306 g/cc 1103.06 g/l 9.19 lbs/gal |
| Solubility(ies) | Soluble in the following materials: Ether. Soluble in water. |
| Partition coefficient | log Pow: 1.0 |
| Auto-ignition temperature | 204°C/40°F |
| Decomposition Temperature | Not applicable. |
| Explosive properties | Not applicable. |
| Oxidising properties | Not applicable. |
| Comments | Data based on literature. Product not tested. Information given is applicable to the product as supplied. Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures. |

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9.2. Other information

Volatile organic compound This product contains a maximum VOC content of 504 g/l. This product contains a maximum VOC content of 4.20 lbs/gal.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react with the product: Acids. Strong alkalis. Strong oxidising agents.

10.4. Conditions to avoid

Conditions to avoid Avoid the following conditions: Heat, sparks, flames.

10.5. Incompatible materials

Materials to avoid Avoid contact with the following materials: Acids. Strong alkalis. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Heating may generate the following products: Carbon dioxide (CO₂). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Data based on literature. Product not tested.

Acute toxicity - oral

ATE oral (mg/kg) 1,775.57

Acute toxicity - dermal

ATE dermal (mg/kg) 3,906.25

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 39.06

Specific target organ toxicity - single exposure

Target organs Central nervous system Eyes Gastro-intestinal tract Respiratory system, lungs Skin

Specific target organ toxicity - repeated exposure

Target organs Central nervous system Eyes Gastro-intestinal tract Kidneys Liver Reproductive organs
Respiratory system, lungs Skin

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Toxicological information on ingredients.

Glycol Ether EB

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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Acute toxicity - dermal

ATE dermal (mg/kg) 1,100.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 11.0

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Glycol Ether PM

Acute toxicity - oral

Notes (oral LD₅₀) > 7000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) > 24,000 mg/kg, Dermal, Rabbit 9404 mg/kg, Dermal, Rabbit

Comments:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.|| RTECS: KL6125000 Stomach - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence

SECTION 12: Ecological Information

Ecotoxicity Data based on literature. Product not tested.

12.1. Toxicity

Ecological information on ingredients.

Glycol Ether EB

Acute toxicity - fish LC₅₀, 96 hours: 220 mg/l, Fish

Glycol Ether PM

Acute toxicity - fish LC₅₀, 96 hours: 7500 mg/l, Lepomis macrochirus (Bluegill)

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Partition coefficient log Pow: 1.0

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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| | |
|----------------------------|---|
| General information | Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. |
| Disposal methods | Dispose of contents/container in accordance with national regulations. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. When handling waste, the safety precautions applying to handling of the product should be considered. |

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

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All the ingredients are listed or exempt.

Australia - AICS

The following ingredients are listed or exempt:

Glycol Ether EB

Glycol Ether DB

Japan - MITI

The following ingredients are listed or exempt:

Glycol Ether EB

Glycol Ether DB

Korea - KECI

The following ingredients are listed or exempt:

Glycol Ether EB

Glycol Ether DB

China - IECSC

The following ingredients are listed or exempt:

Glycol Ether EB

Glycol Ether DB

Philippines – PICCS

The following ingredients are listed or exempt:

Glycol Ether EB

Glycol Ether DB

SECTION 16: Other information

| | |
|-----------------------------|--|
| General information | Containers of this material may be hazardous when emptied, all hazard precautions given in the data sheet must be observed. |
| Issued by | Matthews Marking Systems - Chemical Services Department |
| Revision date | 31/12/2015 |
| Revision | 2 |
| Supersedes date | 01/06/2015 |
| SDS number | 5577 |
| SDS status | Approved. |
| Risk phrases in full | R22 Harmful if swallowed. R36/37/38 Irritating to eyes, respiratory system and skin. R36/38 Irritating to eyes and skin. R40 Limited evidence of a carcinogenic effect. R63 Possible risk of harm to the unborn child. |

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Hazard statements in full

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H361d Suspected of damaging the unborn child.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.