



SAFETY DATA SHEET

M661 Black Water Removable Ink

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

1.1. Product identifier

Product name M661 Black Water Removable Ink

Product number 71013017

Container size 6 x 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 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319

Environmental hazards Not Classified

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

2.2. Label elements

Pictogram



Signal word Warning

Hazard statements H315 Causes skin irritation.
H319 Causes serious eye irritation.

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Comments	Full list of Hazard Statements is found in Sec. 16
Precautionary statements	<p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention.</p>
Supplementary precautionary statements	<p>P321 Specific treatment (see medical advice on this label).</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p>

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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		
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		
Proprietary - Pigment - Black		5-10%
CAS number: Proprietary	EC number: Proprietary	REACH registration number: Proprietary
Classification		
Carc. 2 - H351		

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.

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Ingestion	Get medical attention immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting unless under the direction of medical personnel.
Skin contact	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash skin thoroughly with soap and water. Get medical attention if irritation persists 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

General information	See Section 11 for additional information on health hazards.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Vapour may affect central nervous system. Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	May be harmful if swallowed. May cause nausea, headache, dizziness and intoxication.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	May cause irritation. A single exposure may cause the following adverse effects: Pain. Severe irritation, burning, tearing and blurred vision. Corneal damage.

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

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

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	None known.

5.2. Special hazards arising from the substance or mixture

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

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

Environmental precautions	Avoid release to the environment.
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6.3. Methods and material for containment and cleaning up

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.

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

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)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

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 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

Proprietary - Pigment - Black

Long-term exposure limit (8-hour TWA): WEL 3.5 mg/m³

Short-term exposure limit (15-minute): WEL 7 mg/m³

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Proprietary - Pigment - Black

DNEL

- respirable; : 0.5 mg/m³

- Inhalation; : 2.0 mg/m³

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.

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.

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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

Appearance	Coloured liquid.
Colour	Black.
Odour	Ether.
Odour threshold	Not available.
pH	pH (concentrated solution): 6.0 - 8.5
Melting point	-75°C/-103°F
Initial boiling point and range	169°C/336°F @ 760 mm Hg
Flash point	67°C/153°F CC (Closed cup).
Evaporation rate	0.1 (butyl acetate = 1)
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 12.7 % vol Lower flammable/explosive limit: 0.95 % vol
Vapour pressure	0.6 mm Hg @ 20°C/68°F
Vapour density	4.08
Relative density	1.02026 g/cc 1020.26 g/l 8.50 lbs/gal
Solubility(ies)	Soluble in the following materials: Ether. Miscible with water.
Partition coefficient	log Pow: 0.83
Auto-ignition temperature	204°C/400°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.

9.2. Other information

Volatile organic compound	This product contains a maximum VOC content of 275 g/l. This product contains a maximum VOC content of 2.29 lbs/gal.
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SECTION 10: Stability and reactivity

10.1. Reactivity

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

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

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Possibility of hazardous reactions The following materials may react with the product: 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: 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) 4,508.57

Acute toxicity - dermal

ATE dermal (mg/kg) 9,918.85

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 99.19

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 Respiratory system, lungs Skin

Aspiration hazard

Aspiration hazard Not relevant.

Toxicological information on ingredients.

Glycol Ether EB

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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.

Proprietary - Pigment - Black

Acute toxicity - oral

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Acute toxicity oral (LD₅₀ mg/kg)	8,000.0
Species	Rat
ATE oral (mg/kg)	8,000.0
<u>Carcinogenicity</u>	
IARC carcinogenicity	IARC Group 2B Possibly carcinogenic to humans.

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

Proprietary - Pigment - Black

Acute toxicity - fish LC₅₀, 96 hours: > 1000 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 24 hours: >5600 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 10000 mg/l, Scenedesmus subspicatus
NOEC, 50 : 10000 mg/l, Scenedesmus subspicatus

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Partition coefficient log Pow: 0.83

Ecological information on ingredients.

Proprietary - Pigment - Black

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

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

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.

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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

All the ingredients are listed or exempt.

Australia - AICS

The following ingredients are listed or exempt:

Glycol Ether EB

Proprietary - Pigment - Black

Glycol Ether DB

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Japan - MITI

The following ingredients are listed or exempt:

Glycol Ether EB

Proprietary - Pigment - Black

Glycol Ether DB

Korea - KECI

The following ingredients are listed or exempt:

Glycol Ether EB

Proprietary - Pigment - Black

Glycol Ether DB

China - IECSC

The following ingredients are listed or exempt:

Glycol Ether EB

Proprietary - Pigment - Black

Glycol Ether DB

Philippines – PICCS

The following ingredients are listed or exempt:

Glycol Ether EB

Proprietary - Pigment - Black

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	5641
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.
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.

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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.