



SAFETY DATA SHEET

EasyCode Flush Solution

1. Identification

Product identifier

Product name EasyCode Flush Solution

Recommended use of the chemical and restrictions on use

Restriction on use Ink cleaner for printing inks.

Uses advised against Use only for intended applications.

Details of the supplier of the safety data sheet

Supplier Matthews Marking Systems
3159 Unionville Road, Suite 500
Cranberry Township, PA 16066
412.665.2500
412.828.4545
info@matw.com

Manufacturer Matthews Marking Systems
Zona Franca La Lima
Multitenant #8
Cartago, Costa Rica 30106
(506) 4000-1103

Emergency telephone number

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

2. Hazard identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards STOT RE 2 - H373

Environmental hazards Not Classified

Label elements

Hazard pictograms



Signal word Warning

Hazard statements H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements P260 Do not breathe vapour/ spray.
P314 Get medical advice/ attention if you feel unwell.
P501 Dispose of contents/ container in accordance with national regulations.

Contains Ethylene Glycol

3. Composition/information on ingredients

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Mixtures

Polyethylene Glycol	90-100%
CAS number: 25322-68-3	
Classification	
Not Classified	
Diethylene Glycol	1-<5%
CAS number: 111-46-6	
Classification	
Acute Tox. 4 - H302	
Ethylene Glycol	1-<5%
CAS number: 107-21-1	
Classification	
Acute Tox. 4 - H302	
STOT SE 3 - H336	
STOT RE 2 - H373	

The full text for all hazard statements is displayed in Section 16.

Composition comments This material does contain Hazardous Air Pollutants (HAPS) as defined by the Clean Air Act under the US Environmental Protection Agency (EPA). See Sections 9 and 15 for further details.

Ingredient notes The exact percentage/concentration is withheld as a trade secret in accordance with the Regulations amending the Hazardous Products Regulations. The exact identity is withheld as a trade secret in accordance with 29 CFR 1910.1200.

4. First-aid measures

Description of first aid measures

General information	Consult a physician for specific advice. If medical advice is needed, have product container or label at hand. If in doubt, get medical attention promptly. 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. Consult a physician for specific advice.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
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.

Most important symptoms and effects, both acute and delayed

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General information	The product is considered to be a low hazard under normal conditions of use. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. See Section 11 for additional information on health hazards.
Inhalation	May cause respiratory system irritation. May cause coughing and difficulties in breathing. Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	May cause discomfort if swallowed. Symptoms following overexposure may include the following: Gastrointestinal symptoms, including upset stomach. Nausea, vomiting. Diarrhea.
Skin contact	May cause irritation. Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	May cause irritation. May cause discomfort. Symptoms following overexposure may include the following: Redness. Conjunctivitis, irritation, tearing.

Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
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Unsuitable extinguishing media	None known.
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Specific hazards arising from the hazardous product

Specific hazards	The product is not flammable.
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Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO ₂). Carbon monoxide (CO).
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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.
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Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place.
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Environmental precautions

Environmental precautions	Avoid release to the environment. Do not discharge into drains or watercourses or onto the ground. Use appropriate containment to avoid environmental contamination. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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Methods and material for containment and cleaning up

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Methods for cleaning up

Stop leak if safe to do so. Do not touch or walk into spilled material. Take care as floors and other surfaces may become slippery. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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.

7. Handling and storage

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. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions

Keep only in the original container in a cool, well-ventilated place.

Storage class

Chemical storage.

Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

Polyethylene Glycol

Long-term exposure limit (8-hour TWA): AIHA - American International Health Alliance 10 mg/m³ particulate vapour

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

Avoid contact with skin. Wear appropriate clothing to prevent repeated or prolonged skin contact.

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Hygiene measures	Wash contaminated skin thoroughly after handling. 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.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Clear.
Odour	Almost odourless.
Melting point	0°C/32°F
Initial boiling point and range	100°C/212°F @ 760 mm Hg
Flash point	Not applicable.
Evaporation rate	0.3 (butyl acetate = 1)
Vapour pressure	17.54 mm Hg @ 20°C/68°F
Vapour density	1.27
Solubility(ies)	Completely soluble in water.
Partition coefficient	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Explosive properties	Not applicable.
Oxidising properties	Not applicable.
Comments	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.
HAPS Content	1.00

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended.
Conditions to avoid	Avoid the following conditions: Freezing.
Materials to avoid	Avoid contact with the following materials: Strong alkalis.
Hazardous decomposition products	Heating may generate the following products: Carbon dioxide (CO ₂). Carbon monoxide (CO).

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11. Toxicological information

Information on toxicological effects

Toxicological effects Information given is based on data of the components and of similar products.

Acute toxicity - oral

ATE oral (mg/kg) 34,642.03

Specific target organ toxicity - single exposure

Target organs Eyes Gastro-intestinal tract Skin

Specific target organ toxicity - repeated exposure

Target organs Eyes Gastro-intestinal tract Kidneys Liver Skin

Toxicological information on ingredients

Polyethylene Glycol

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 10,000.0

Species Rat

ATE oral (mg/kg) 10,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 20,000.0

Species Rat

ATE dermal (mg/kg) 20,000.0

Diethylene Glycol

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,500.0

Species Rat

ATE oral (mg/kg) 4,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 11,890.0

Species Rabbit

ATE dermal (mg/kg) 11,890.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 29.0

Species Rat

ATE inhalation (dusts/mists mg/l) 29.0

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Serious eye damage/irritation

Serious eye damage/irritation Causes eye irritation.

Ethylene Glycol

Acute toxicity - oral

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 10,600.0

Species Rat

ATE dermal (mg/kg) 10,600.0

Skin corrosion/irritation

Skin corrosion/irritation May cause skin irritation.

Specific target organ toxicity - single exposure

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

Target organs Kidneys Liver

12. Ecological information

Ecological information on ingredients

Polyethylene Glycol

Ecotoxicity The product components are not classified as environmentally hazardous.

Ecological information on ingredients

Polyethylene Glycol

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 87209 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 53484 mg/l, Daphnia magna

Diethylene Glycol

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 24 hours: 5000 mg/l, Carassius auratus (Goldfish)
LC₅₀, 96 hours: 75200 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 24 hours: >10,000 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 96 hours: >100 mg/l, Algae

Ethylene Glycol

Acute aquatic toxicity

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Acute toxicity - fish	LC ₅₀ , 96 hours: 16000 mg/l, Poecilia reticulata (Guppy)
	LC ₅₀ , 96 hours: 40000-60000 mg/l, Pimephales promelas (Fat-head Minnow)
	LC ₅₀ , 96 hours: 40761 mg/l, Oncorhynchus mykiss (Rainbow trout)
	LC ₅₀ , 96 hours: 27540 mg/l, Lepomis macrochirus (Bluegill)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 46300 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 6500-13000 mg/l, Freshwater algae

Persistence and degradability

Ecological information on ingredients

Diethylene Glycol

Persistence and degradability	The product is readily biodegradable.
Biodegradation	Soil - Degradation 85%: 28 days
Biological oxygen demand	0.250 g O ₂ /g substance
Chemical oxygen demand	2.08 g O ₂ /g substance

Bioaccumulative potential

Partition coefficient	Not applicable.
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Ecological information on ingredients

Ethylene Glycol

Partition coefficient	log Pow: -1.93
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13. Disposal considerations

Waste treatment methods

General information	The generation of waste should be minimized or avoided wherever possible. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Dispose of waste product or used containers in accordance with local regulations 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. When handling waste, the safety precautions applying to handling of the product should be considered.

14. Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, TDG).
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UN number

UN No. (International)	Not applicable.
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UN proper shipping name

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**Proper shipping name
(International)** Not applicable.

Transport hazard class(es)

**Transport Labels
(International)** No transport warning sign required.

Packing group

Packing group (International) Not applicable.

Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

Special precautions for user

Not applicable.

**Transport in bulk according to
Annex II of MARPOL 73/78
and the IBC Code** Not applicable.

15. Regulatory information

**Hazardous Air Pollutants
Content** Contains - Ethylene Glycol

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

Ethylene Glycol

Diethylene Glycol

Japan - ENCS

Ethylene Glycol

Diethylene Glycol

Korea - KECI

Ethylene Glycol

Diethylene Glycol

China - IECSC

Ethylene Glycol

Diethylene Glycol

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Phillippines – PICCS

Ethylene Glycol

Diethylene Glycol

New Zealand - NZIOC

Ethylene Glycol

Diethylene Glycol

Taiwan - TCSI

Ethylene Glycol

Diethylene Glycol

16. Other information

Issued by	Matthews Marking Systems - Chemical Services Department
Revision date	2020-05-14
Revision	2
Supersedes date	2017-06-29
SDS number	5885
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H336 May cause drowsiness or dizziness. H373 May cause damage to organs through prolonged or repeated exposure. H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure.

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.