

# DX1080

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 06/22/2015      Revision date: 04/10/2015      Version: 2.0

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

#### 1.1. Product identifier

Trade name : DX1080

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

Use of the substance/mixture : Fire fighting foam

#### 1.3. Details of the supplier of the safety data sheet

DYNAX CORPORATION  
79 Westchester Ave. Pound Ridge NY 10576 USA  
Tel: +1 914-764-0202  
Fax: 914 -764 - 0553

Email: Chang.jho@dynaxcorp.com  
info@dynaxcorp.com

Website: www.dynaxcorp.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: +1 800-424-9300      24 hours

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

STOT SE 2 H371

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS08

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H371 - May cause damage to organs

Precautionary statements (GHS-US) :

P260 - Do not breathe fume, mist, spray, vapours  
P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P405 - Store locked up  
P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-US)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixture

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Name	Product identifier	%	GHS-US classification
Ethylene glycol	(CAS No) 107-21-1	25 - 50	Acute Tox. 4 (Oral), H302
Diethylene glycol monobutyl ether	(CAS No) 112-34-5	10 - 20	Flam. Liq. 4, H227 Eye Irrit. 2A, H319
Methyl alcohol	(CAS No) 67-56-1	4 - 10	Flam. Liq. 2, H225 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 STOT SE 1, H370

Full text of H-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest. In all cases of doubt, or when symptoms persist, seek medical advice.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.
- First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Immediately call a POISON CENTER or doctor/physician. Obtain emergency medical attention.

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

- Symptoms/injuries : May cause damage to organs.
- Symptoms/injuries after skin contact : Prolonged or repeated contact with the skin may cause dermatitis.
- Symptoms/injuries after eye contact : In fine dispersion/spraying/misting: May cause eye irritation.
- Symptoms/injuries after ingestion : Harmful if swallowed.

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

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand. Fight larger fires with spray or alcohol resistant foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Explosion hazard : In closed containers, pressure build up could result in distortion, blowing and in extreme cases bursting of the container. Heavier than air, vapours may travel long distances along ground, ignite and flash back to source.

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Thermal combustion may release carbon monoxide and dioxide. Nitrogen oxides (NOx). Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Spills of this product present a serious slipping hazard. Avoid breathing mist or vapor. Avoid contact with skin, eyes and clothing. Take precautionary measures against static discharge.

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.

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Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Ensure adequate ventilation. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect all waste in suitable and labelled containers and dispose according to local legislation. Store away from other materials. Use only non-sparking tools. Take precautionary measures against static discharge. Dispose in a safe manner in accordance with local/national regulations. Do not allow to enter into surface water or drains. Ensure all national/local regulations are observed.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide good ventilation in process area to prevent formation of vapour. do not handle or store near heat, sparks, or any other potential ignition sources. Take precautionary measures against static discharge. Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools. Avoid all eye and skin contact and do not breathe vapour and mist. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety practices.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : A washing facility/water for eye and skin cleaning purposes should be present. Ensure adequate ventilation.

Storage conditions : Keep out of reach of children. Keep only in the original container in a cool, well ventilated place. Keep container tightly closed and dry. Keep container closed when not in use. Keep away from heat and direct sunlight. Keep away from food and drink.

Incompatible materials : Oxidizing agents. Reducing agents.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Diethylene glycol monobutyl ether (112-34-5)		
ACGIH	ACGIH TWA (ppm)	10 ppm (inhalable fraction and vapor)

Ethylene glycol (107-21-1)		
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (aerosol only)

Methyl alcohol (67-56-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	200 ppm

### 8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

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Personal protective equipment : Avoid all unnecessary exposure. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Protective goggles. Gloves. Protective clothing. For certain operations, additional Personal Protection Equipment (PPE) may be required.



Hand protection : Wear protective gloves. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Eye protection : Chemical goggles or safety glasses. with side-shields.

Skin and body protection : Long sleeved protective clothing. Antistatic non-skid safety shoes or boots.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. In case of intensive or longer exposure use self-contained apparatus.

Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Yellow

Odour : Ammonia-like

Odour threshold : No data available

pH : 6-7 at 20°C

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : 43 °C

"non-flammable, does not sustain combustibility" in compliance with the requirements of the HMR and United Nations Transport of Dangerous Goods Manual of Tests and Criteria, fifth revised edition (2009), Test Method L.2 and to the CLP Annex I: 2.6.4.5 sustained combustibility test L.2, Part III, section 32 of the UN RTDG, Manual of Tests and Criteria.

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : No data available

Density : 1.17 g/cm<sup>3</sup> at 20°C

Solubility : Water: Fully miscible

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Not established.

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### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. heat/sparks/open flames/hot surfaces.

### 10.5. Incompatible materials

Oxidizing agents. Reducing agents.

### 10.6. Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide. Nitrogen oxides (NOx).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>DX1080</b>	
LD50 oral rat	> 2000 mg/kg On basis of test data
<b>Diethylene glycol monobutyl ether (112-34-5)</b>	
LD50 oral rat	3384 mg/kg
LD50 dermal rabbit	2700 mg/kg
ATE US (oral)	3384.000 mg/kg bodyweight
ATE US (dermal)	2700.000 mg/kg bodyweight
<b>Ethylene glycol (107-21-1)</b>	
LD50 oral rat	4000 - 10200 mg/kg
LD50 dermal rat	10600 mg/kg
LD50 dermal rabbit	9530 µl/kg
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	10600.000 mg/kg bodyweight
<b>Methyl alcohol (67-56-1)</b>	
LC50 inhalation rat (ppm)	22500 ppm (Exposure time: 8 h)
ATE US (dermal)	300.000 mg/kg bodyweight
ATE US (vapours)	3.000 mg/l/4h

Skin corrosion/irritation : Not classified  
(Based on available data, the classification criteria are not met)  
pH: 6.5 at 20°C

Serious eye damage/irritation : Not classified  
(Conclusive but not sufficient for classification. On basis of test data.)  
pH: 6.5 at 20°C

Respiratory or skin sensitisation : Not classified  
(Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified  
(Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified  
(Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause damage to organs.

Specific target organ toxicity (repeated exposure) : Not classified  
(Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified  
(Based on available data, the classification criteria are not met)

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Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after skin contact	: Prolonged or repeated contact with the skin may cause dermatitis.
Symptoms/injuries after eye contact	: In fine dispersion/spraying/misting: May cause eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Diethylene glycol monobutyl ether (112-34-5)	
LC50 fish 1	1300 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Ethylene glycol (107-21-1)	
LC50 fish 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

#### 12.2. Persistence and degradability

DX1080	
Persistence and degradability	Not established.

#### 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

Diethylene glycol monobutyl ether (112-34-5)	
BCF fish 1	(no bioconcentration expected)

Ethylene glycol (107-21-1)	
Log Pow	-1.93

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on the global warming	: No additional information available
Other information	: Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of in accordance with relevant local regulations. Do not allow to enter into surface water or drains.
Additional information	: Prevent contamination of soil, drains and surface waters. Do not re-use empty containers. Do not allow product to reach sewage system.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT  
Not regulated for transport

#### Additional information

Other information	: No supplementary information available.
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#### ADR

No additional information available

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### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Diethylene glycol monobutyl ether (112-34-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag

T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.  
Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

#### Ethylene glycol (107-21-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

EPA TSCA Regulatory Flag

Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

RQ (Reportable quantity, section 304 of EPA's List of Lists)

5000 lb

SARA Section 313 - Emission Reporting

1.0 %

#### Methyl alcohol (67-56-1)

RQ (Reportable quantity, section 304 of EPA's List of Lists)

5000 lb

SARA Section 313 - Emission Reporting

1.0 %

### 15.2. International regulations

#### CANADA

#### Diethylene glycol monobutyl ether (112-34-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Class B Division 3 - Combustible Liquid  
Class D Division 2 Subdivision B - Toxic material causing other toxic effects

#### Ethylene glycol (107-21-1)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects  
Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

### EU-Regulations

#### Diethylene glycol monobutyl ether (112-34-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Ethylene glycol (107-21-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

### Classification according to Directive 67/548/EEC or 1999/45/EC

No additional information available

### 15.2.2. National regulations

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### Diethylene glycol monobutyl ether (112-34-5)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Canadian IDL (Ingredient Disclosure List)

### Ethylene glycol (107-21-1)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Canadian IDL (Ingredient Disclosure List)

### 15.3. US State regulations

#### Methyl alcohol (67-56-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	Yes	No	No	

### SECTION 16: Other information

Indication of changes : 3. Composition/information on ingredients. 2.1. Classification of the substance or mixture.  
Revision date : 04/10/2015  
Other information : None.

Full text of H-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 4	Flammable liquids Category 4
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
H225	Highly flammable liquid and vapour
H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H319	Causes serious eye irritation
H331	Toxic if inhaled
H370	Causes damage to organs
H371	May cause damage to organs

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*