

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

Application of the substance / the preparation:

DX1080 is a fluorosurfactant intended exclusively for commercial use as a component for the manufacture of class B firefighting foam concentrates that are used on flammable liquids

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

DYNAX CORPORATION

79 Westchester Ave. Pound Ridge NY 10576 USA.

Tel: +1 914-764-0202

Fax: 914 -764 - 0553.

info@dynaxcorp.com

www.dynaxcorp.com

Further information obtainable from:

B-Lands Consulting

5 Place Robert Schuman, BP 1516

38025 Grenoble, FRANCE

Tel: +33 476 295 869

Fax: +33 476 295 870

Email: clients@reachteam.eu

www.reachteam.eu

1.4 Emergency telephone number(s):

CHEMTREC: +1 703-741-5970 (24h)

Ireland - National Poisons Information Centre: 01 837 9964 or 01 809 2566 (healthcare professionals only).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

STOT SE 2 H371 May cause damage to the central nervous system and the visual organs.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation.

Hazard pictograms:



GHS08

Signal word: Warning

Hazard-determining components of labelling:

ethanediol

Methanol

Hazard statements:

H371 May cause damage to the central nervous system and the visual organs.

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

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.

P314 Get medical advice/attention if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information: DX1080 contains per- or poly-fluoroalkyl substances (PFAS)**2.3 Other hazards** No further relevant information available.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****Description:** Mixture consisting of the following components.**Hazardous components:**

CAS: 107-21-1 EINECS: 203-473-3	ethanediol STOT RE 2, H373; Acute Tox. 4, H302	34-<38%
CAS: 112-34-5 EINECS: 203-961-6	2-(2-butoxyethoxy)ethanol Eye Irrit. 2, H319	13-<19%
CAS: 67-56-1 EINECS: 200-659-6	Methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370 Specific concentration limits: STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %	3-<6%
CAS: 64-17-5 EINECS: 200-578-6	Ethanol Flam. Liq. 2, H225	1-<4%

Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident is recommended.

After inhalation: Move patient to fresh air, if symptoms persist consult a doctor.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters**Protective equipment:**

Do not enter fire area without proper personal protective equipment, including respiratory protection (EN137).

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Mouth respiratory protective device.

Additional information:

Thermal combustion may release carbon monoxide, carbon dioxide, nitrogen oxides (NO_x) and hydrofluoric acid- possibly carbonyl fluoride.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Use respiratory protective device.

6.2 Environmental precautions

Prevent entry to soil, sewage systems, water course and the environment.

Inform respective authorities in case of seepage into water course, soil, sewage systems or the environment.

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material.

Ensure adequate ventilation.

Dispose contaminated material as waste according to section 13.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about fire - and explosion protection: Keep respiratory protective device available.**7.2 Conditions for safe storage, including any incompatibilities****Requirements to be met by storerooms and receptacles:**

Store in a cool, dry place in well sealed receptacles.

Information about storage in one common storage facility: No special measures required.**Further information about storage conditions:** Keep container tightly closed.**7.3 Specific end use(s):** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:****107-21-1 ethanediol**

OEL	Short-term value: 40 mg/m ³ , 104 ppm
	Long-term value: 52 mg/m ³ , 20 ppm
Sk, IOELV	

112-34-5 2-(2-butoxyethoxy)ethanol

OEL	Short-term value: 101.2 mg/m ³ , 15 ppm
	Long-term value: 67.5 mg/m ³ , 10 ppm
IOELV	

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67-56-1 Methanol	
OEL	Long-term value: 260 mg/m ³ , 200 ppm Sk, IOELV
64-17-5 Ethanol	
OEL	Short-term value: 1000 ppm

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing
Store protective clothing separately.
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and feed.
Store protective clothing separately.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. In case of intensive or longer exposure use self-contained breathing apparatus.
In case of brief exposure use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Hand protection

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/the preparation/ the chemical mixture.
Select the glove material based on a consideration of the penetration times, rates of diffusion and the degradation.



Protective gloves.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/the preparation/ the chemical mixture.

Select the glove material based on a consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time must be determined by the manufacturer of the protective gloves.

Eye/face protection



Safety goggles (EN 166).

Goggles recommended during refilling

Body protection: Protective work clothing.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state	Fluid
Colour:	Light yellow.
Odour:	Mild.
Odour threshold:	Not determined.
Melting point/freezing point:	Not determined.
Boiling point or initial boiling point and boiling range	Not determined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Non-flammable
Auto-ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
pH at 20 °C	6.5
VOC (EC):	
Dynamic:	Not determined.
Solubility	
Water:	Fully miscible.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20 °C:	1.17 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.

9.2 Other information

Appearance:	
Form:	Liquid.
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
	Not determined.
Water:	1.3 %
Solids content:	0.0 %
Softening point/range	
Oxidising properties	Not determined.
Evaporation rate	Not determined.

Information with regard to physical hazard classes

Explosives	Not applicable.
Flammable gases	Not applicable.
Aerosols	Not applicable.
Oxidising gases	Not applicable.
Gases under pressure	Not applicable.
Flammable liquids	Not applicable.
Flammable solids	Not applicable.
Self-reactive substances and mixtures	Not applicable.
Pyrophoric liquids	Not applicable.
Pyrophoric solids	Not applicable.
Self-heating substances and mixtures	Not applicable.
Substances and mixtures, which emit flammable gases in contact with water	Not applicable.
Oxidising liquids	Not applicable.
Oxidising solids	Not applicable.

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Trade name: DX1080**Organic peroxides**

Not applicable.

Corrosive to metals

Not applicable.

Desensitised explosives

Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts with reducing agents.

Reacts with strong oxidising agents.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials No further relevant information available.

10.6 Hazardous decomposition products

Fumes: Carbon monoxide, carbon dioxide, nitrogen oxides (NO_x), and hydrofluoric acid- possibly carbonyl fluoride.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available LD50 values, the classification criteria are not met

Based on available data, the classification criteria are not met.

LD/LC50 values:

Oral	LD50	>2,000 mg/kg (Rat) (Not harmful)
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107-21-1 ethanediol

Oral	LD50	7,712 mg/kg (Rat)
Dermal	LD50	3,500 mg/kg (Mouse)
Inhalative	LC50	2.5 mg/L (Rat)

112-34-5 2-(2-butoxyethoxy)ethanol

Oral	LD50	5,660 mg/kg (Rat)
Dermal	LD50	4,000 mg/kg (Rabbit)

67-56-1 Methanol

Oral	LD50	5,628 mg/kg (Rat)
Dermal	LD50	17,100 mg/kg (Rabbit)
Inhalative	LC50/6h	43,680 mg/m ³ air (Cat)

64-17-5 Ethanol

Oral	LD50	7,060 mg/kg (Rat)
Inhalative	LC50/4h	20,000 mg/L (Rat)

Potential Health Effects:

Skin corrosion/Irritation:

According to existing data (Acute Dermal Irritation in Rabbits; EPA Health Effects Testing Guidelines, OPPTS Series 870.2500, August 1998), and to EU criteria, this product is not considered irritating to the skin and does not require an H315 statement.

Serious eye damage/Irritation:

According to existing data (Acute Eye Irritation in Rabbits; EPA Health Effects Testing Guidelines, OPPTS Series 870.2400, August 1998), and to EU criteria, this product is not considered to be significantly irritating and does not require an H319 statement.

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Trade name: DX1080**Skin corrosion/irritation:** Based on available data, the classification criteria are not met.**Serious eye damage/irritation:** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.**Carcinogenicity:** Based on available data, the classification criteria are not met.**Reproductive toxicity:** Based on available data, the classification criteria are not met.**STOT-single exposure:** May cause damage to the central nervous system and the visual organs.**STOT-repeated exposure:** May cause damage to organs through prolonged or repeated exposure.**Aspiration hazard:** Based on available data, the classification criteria are not met.**11.2 Information on other hazards****11.2.1 Endocrine disrupting properties**

None of the ingredients are listed.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:**

Based on available EC50 and LC50 values, no adverse effects are expected for the aquatic environment

LC50/96h 24,000 mg/L (Rainbow Trout) (Not Harmful)

LC50/48h 1,436 mg/L (Daphnia Magna) (Not Harmful)

12.2 Persistence and degradability

Fluorinated components of DX1080 are persistent and non-degradable.

12.3 Bioaccumulative potential No further relevant information available.**12.4 Mobility in soil** This family of products shows mobility in soil.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects**Additional environmental information:****General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): Slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation:**

Do not allow product to reach water course, sewage systems, soil and the environment.

DX1080 contains PFAS. Small quantities of DX1080 may be collected on adsorbents which can then be disposed of. Collect all waste in suitable and labelled containers and disposed in accordance with official regulations.

Disposal of this product and all wastes containing this product must be performed using high temperature incineration at a minimum of 1000°C with a minimum residence time of 2 seconds.

Do not allow product to reach sewage system.

Uncleaned packaging:**Recommendation:**

Disposal must be made in accordance with official regulations.

Packaging that may not be cleansed must be disposed of in the same manner as the product.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

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SECTION 14: Transport information

14.1 UN number or ID number

ADR, ADN, IMDG, IATA

Not applicable.

14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

Not applicable.

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Not applicable.

14.4 Packing group

ADR, IMDG, IATA

Not applicable.

14.5 Environmental hazards

Marine pollutant:

No

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients are listed.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 55, 69

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients are listed.

REGULATION (EU) 2019/1148
Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients are listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients are listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients are listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients are listed.

15.2 Chemical safety assessment A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H370 Causes damage to organs.

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

Date of previous version: 31.10.2022**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

WEL: Workplace Exposure Limits

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2