

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.02.2023

Version number 1

Revision: 21.02.2023

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

1.1 Product identifier

Trade name: DX1025

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

Sector of Use: Product supplied for industrial use only

Application of the substance / the preparation:

DX1025 is a blend of fluorosurfactants 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:

REACH Only Representative
B-Lands Consulting
5 Place Robert Schuman, BP 1516
38025 Grenoble, FRANCE
Tel: +33 476 295 869
Fax: +33 476 295 870
Email: clients@reach-compliance.eu
Web: 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

Repr. 1B	H360FD	May damage fertility. May damage the unborn child.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

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: Danger

Hazard-determining components of labelling:

C6 fluorotelomer-based surfactant
ethanediol
2-methylpentane-2,4-diol

Hazard statements:

H360FD May damage fertility. May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

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H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P314 Get medical advice/attention if you feel unwell.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

DX1025 contains per- or poly-fluoroalkyl substances (PFAS)
 Restricted to professional users.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****Description:** Mixture.**Hazardous components:**

CAS: 107-21-1 EINECS: 203-473-3	Ethylene glycol Acute Tox. 4, H302	19-22%
CAS: 112-34-5 EINECS: 203-961-6	Butyl carbitol Eye Irrit. 2, H319	7-11%
CAS: 107-41-5 EINECS: 203-489-0	Hexylene glycol Skin Irrit. 2, H315; Eye Irrit. 2, H319. Repr. 2, H361d;	4-8%
	C6 fluorotelomer-based surfactant Acute Tox. 2, H330; Repr. 1B, H360FD; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302	3-5%
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 %	1-3%
CAS: 64-17-5 EINECS: 200-578-6	Ethanol Flam. Liq. 2, H225	1-2%

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****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.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Carbon dioxide (CO₂). Dry chemical. Foam.

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

Protective equipment:

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

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

No special measures are required

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.

6.3 Methods and material for containment and cleaning up

Dispose contaminated material as waste according to item 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

No special measures required.

No special precautions are necessary if used correctly.

Information about fire - and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.

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	

107-41-5 2-methylpentane-2,4-diol

OEL	Short-term value: 125 mg/m ³ , 25 ppm
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DNELs		
67-56-1 Methanol		
Dermal	DNEL - Long-term exposure - systemic effects	8 mg/kg bw/day (General Population) 40 mg/kg bw/day (workers)
	DNEL - Short-term exposure - systemic effects	8 mg/kg bw/day (General Population) 40 mg/kg bw/day (workers)
Inhalative	DNEL - Long-term exposure - local effects	50 mg/m ³ (General Population) 260 mg/m ³ (workers)
	DNEL - Long-term exposure - systemic effects	50 mg/m ³ (General Population) 260 mg/m ³ (workers)
	DNEL - Short-term exposure - systemic effects	50 mg/m ³ (General Population) 260 mg/m ³ (workers)
	DNEL - Short term exposure - local effects	50 mg/m ³ (General Population) 260 mg/m ³ (workers)
PNECs		
67-56-1 Methanol		
PNEC	20.8 mg/L (Water (Freshwater))	
	20.8 mg/L (Water (Marine Water))	
	100 mg/L (Sewage Treatment Plant (STP))	
PNEC	7.7 mg/kg sedim. dw (Sediment (Marine Water))	
	77 mg/kg sedim. dw (Sediment (Freshwater))	
PNEC	3.18 mg/kg soil dw (Soil)	

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.

Respiratory protection:

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

Hand protection

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.

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Trade name: DX1025**Eye/face protection**

Safety glasses with side-shields (EN 166).

Body protection: Protective work clothing.**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information**

Physical state	Liquid
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	Non-flammable
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Non-flammable
Ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
pH at 20 °C	6-7
Viscosity:	
Kinematic viscosity	Not determined.
VOC (EC):	Not determined
Dynamic:	<100 Cps
Solubility	
Water:	Not determined.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20 °C:	1.18 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.

9.2 Other information

Appearance:	
Form:	Liquid.
Explosive properties:	Product does not present an explosion hazard.
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.

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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.
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 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 (NOx), 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 data, the classification criteria are not met.

LD/LC50 values: DX1025

Oral	LD50	>5,000 mg/kg (Rat) (EPA Health Effects testing Guidelines OPPTS Series)
107-21-1 Ethylene glycol		
Oral	LD50	5,840 mg/kg (Rat)
Dermal	LD50	9,530 mg/kg (Rabbit)
112-34-5 Butyl carbitol		
Oral	LD50	5,660 mg/kg (Rat)
Dermal	LD50	4,000 mg/kg (Rabbit)
107-41-5 2-methylpentane-2,4-diol		
Oral	LD50	3,700 mg/kg (Rat)
Dermal	LD50	8,560 mg/kg (Rabbit)
C6 fluorotelomer-based surfactant		
Oral	LD50	300 mg/kg (Rat)
Dermal	LD50	>2,000 mg/kg (Rat)
Inhalative	LC50	0.16 mg/L (Rat)
67-56-1 Methanol		
Oral	LD50	>1,187-2,769 mg/Kg bw (Rat) (15 to 35 % aqueous solution)
Inhalative	LC50/4h	128.2 mg/L (Rat)
64-17-5 Ethanol		
Oral	LD50	7,060 mg/kg (Rat)
Inhalative	LC50/4h	20,000 mg/L (Rat)

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Trade name: DX1025**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.

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.

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: May damage fertility. May damage the unborn child.

STOT-single exposure: Based on available data, the classification criteria are not met.

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.

Reproductive toxicity:

Reproductive toxicity NOAEL values		
67-56-1 Methanol		
Inhalative	NOAEC(reproduction toxicity)	1.3 mg/L (Rat) (OECD 416)
	NOAEC(developmental toxicity)	1.33 mg/L (Rat) (OECD 414)

Additional toxicological information:

Repeated dose toxicity		
67-56-1 Methanol		
Inhalative	NOAEC	0.013 mg/L (monkey)

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):		
67-56-1 Methanol		
Inhalative	NOAEC (carcinogenicity)	≥1.3 mg/L (Rat) (OECD 453)

Repr. 1B

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, there is no acute classification.

LC50/96h	>100 mg/L (Fish) (OECD 203)
EC50/48h	122 mg/L (Daphnia Magna) (OECD 202)
EC50/72h	28 mg/L (Algae) (OECD 201)

C6 fluorotelomer-based surfactant	
LC50/96h	>100 mg/L (Danio rerio)

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LC50/48h	4 mg/L (Daphnia Magna)
EC50/48h	7.41 mg/L (Daphnia Magna)
EC50r/72h	0.62 mg/L (Algae)
67-56-1 Methanol	
LC50/96h	15,400 mg/L (Fish) (EPA-660/3-75-009, 1975)
IC50	>1,000 mg/L (Microorganisms) (OECD 209)
EC50/96h	22,000 mg/L (Algae) (OECD 201)
	18,260 mg/L (Daphnia Magna) (OECD 202)

12.2 Persistence and degradability

Fluorinated components of DX1025 are persistent and non-degradable.

12.3 Bioaccumulative potential No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**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**Remark:** Harmful to fish**Additional environmental information:****General notes:**

Harmful to aquatic organisms

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

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

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

DX1025 contains PFAS. Small quantities of DX1025 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.

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.

SECTION 14: Transport information**14.1 UN number or ID number**

ADR, IMDG, IATA

Not applicable.

14.2 UN proper shipping name

ADR, IMDG, IATA

Not applicable.

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Not applicable.

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Trade name: DX1025**14.4 Packing group**

ADR, IMDG, IATA

Not applicable.

14.5 Environmental hazards

Not applicable.

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.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H331 Toxic if inhaled.

H370 Causes damage to organs.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Date of previous version: 20.02.2023**Abbreviations and acronyms:**

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

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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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

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

Acute Tox. 2: Acute toxicity – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

Repr. 1B: Reproductive toxicity – Category 1B

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

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

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3