



**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 01/12/2017

Reviewed on 01/11/2017

## 1 Identification

- **Product identifier**
- **Trade name:** 100X 5-Fluoroorotic Acid (5-FOA)
- **Article number:** F9003
- **Application of the substance / the mixture** Laboratory Reagent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Zymo Research Corp.  
17062 Murphy Ave.  
Irvine, CA 92614  
USA  
Phone: 1-949-679-1190 or 1-888-882-9682  
sds@zymoresearch.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard statements**  
Causes skin irritation.  
Causes serious eye irritation.
- **Precautionary statements**  
Wear protective gloves / eye protection / face protection.  
Wash thoroughly after handling.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Specific treatment (see on this label).  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.

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- Classification system:
NFPA ratings (scale 0 - 4)



- HMIS-ratings (scale 0 - 4)



- Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

Table with 3 columns: CAS number, Component name, and Concentration. Rows include 5-Fluoroorotic Acid Monohydrate and dimethyl sulfoxide.

4 First-aid measures

- Description of first aid measures
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing: Do not induce vomiting; immediately call for medical help.
Information for doctor:
Most important symptoms and effects, both acute and delayed No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- Advice for firefighters
Protective equipment: Wear protective clothing.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
Environmental precautions: Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up: Pick up mechanically.
Reference to other sections
Protective Action Criteria for Chemicals

PAC-1:

CAS: 67-68-5 dimethyl sulfoxide 150 ppm

PAC-2:

CAS: 67-68-5 dimethyl sulfoxide 290 ppm

PAC-3:

CAS: 67-68-5 dimethyl sulfoxide 1,800 ppm

7 Handling and storage

- Handling:
Precautions for safe handling
Information about protection against explosions and fires: No special measures required.
Conditions for safe storage, including any incompatibilities
Storage:
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.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
Control parameters
Components with limit values that require monitoring at the workplace:
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

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At this time, the remaining constituent has no known exposure limits.

CAS: 67-68-5 dimethyl sulfoxide

WEEL Long-term value: 250 ppm

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures: Wash hands before breaks and at the end of work.

Breathing equipment: Not required.

Protection of hands:

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.

Selection of the glove material on 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 has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Table with 2 columns: Property (Form, Color, Odor, Odor threshold) and Value (Liquid, Colorless, Characteristic, Not determined).

pH-value: Not applicable.

Change in condition

Melting point/Melting range: 18.45 °C (65 °F)

Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

Flammability (solid, gaseous): Not determined.

Ignition temperature: 270 °C (518 °F)

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

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Table with 2 columns: Property and Value. Rows include Explosion limits, Vapor pressure, Density, Solubility, Partition coefficient, Viscosity, Solvent content, and Solids content.

10 Stability and reactivity

- Reactivity, Chemical stability, Thermal decomposition, Possibility of hazardous reactions, Conditions to avoid, Incompatible materials, Hazardous decomposition products.

11 Toxicological information

- Information on toxicological effects, Acute toxicity, Primary irritant effect (on skin, on eye), Sensitization.

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- Additional toxicological information:
Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Water hazard class 1 (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.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
Recommendation:
Dispose of contents in accordance with local/regional/national, and international recommendations.
Uncleaned packagings:
Recommendation:
Dispose of container in accordance with local/regional/national and international recommendations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number: Not dangerous goods.
DOT, ADN, IMDG, IATA: not regulated
UN proper shipping name: Not dangerous goods.

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Table with 2 columns: Hazard/Regulation and Status. Rows include DOT, ADN, IMDG, IATA; Transport hazard class(es); Packing group; Environmental hazards; Special precautions for user; Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code; UN Model Regulation.

15 Regulatory information

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

Sara

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

CAS: 67-68-5 dimethyl sulfoxide

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

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**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard statements**
  - Causes skin irritation.
  - Causes serious eye irritation.
- **Precautionary statements**
  - Wear protective gloves / eye protection / face protection.
  - Wash thoroughly after handling.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Specific treatment (see on this label).
  - If skin irritation occurs: Get medical advice/attention.
  - If eye irritation persists: Get medical advice/attention.
  - IF ON SKIN: Wash with plenty of water.
  - Take off contaminated clothing and wash it before reuse.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**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.

**· Department issuing SDS:**

Zymo Research Corp.  
Safety Department  
17062 Murphy Ave.  
Irvine, CA 92614  
USA  
Phone: 1-949-679-1190 or 1-888-882-9682

**· Contact:** sds@zymoresearch.com**· Date of preparation / last revision** 01/12/2017 / -**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
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)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
VOC: Volatile Organic Compounds (USA, EU)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health

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US





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*The Beauty of Science is to Make Things Simple*

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TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

US