

Safety Data Sheet

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

1.1 Product identifiers

Product name: DiYO™-3 [equivalent to YOYO®-3] *5 mM DMSO Solution* *CAS 156312-20-8*

Product number: 17581

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

Identified uses: For research use only. Not intended for diagnostic or therapeutic use.

1.3 Details of the supplier of the safety data sheet

Company: AAT Bioquest, Inc.

Address: 5775 W Las Positas Blvd, Pleasanton, CA 94588

Telephone: (408)-733-1055

Fax: (408)-733-1304

Email: info@aatbio.com

1.4 Emergency telephone number

Chemtrec (Within USA): 1-(800)-424-9300

Chemtrec (Outside USA): 1-(703)-527-3887

Section 2: Hazard identifications

2.1 Classification of the substance or mixture

Flammable liquids: Category 4

2.2 Label elements

Signal word: Warning

Hazard statements: H227 - Combustible liquid

Symbols/Pictograms: Not available

Precautionary statements - prevention: Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Precautionary statements - response: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Precautionary statements - storage: Store in a well-ventilated place.

Precautionary statements - disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Hazards not otherwise classified (HNOC): Not available

2.4 Other information

Other hazards: Not Applicable

Section 3: Composition/information on ingredients

3.1 Substances

Chemical name: DiYO™-3 [equivalent to YOYO®-3] *5 mM DMSO Solution* *CAS 156312-20-8*

CAS number: Not available

Molecular weight: 1322.73

Formula: Not available

Section 4: First aid measures

4.1 First-aid measures

General advice: If symptoms occur, seek medical advice/attention.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact: Rinse skin with water. Immediate medical attention is not required.

Inhalation: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

Ingestion: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

Self-protection of the first aider: Use personal protective equipment.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: H227 - Combustible liquid

4.3 Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically.

Section 5: Firefighting measures

5.1 Suitable extinguishing media

Suitable extinguishing media: Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Unsuitable extinguishing media: No information available.

5.2 Specific hazards arising from the chemical

Specific hazards arising from the chemical: No information available.

Hazardous combustion products: No information available.

5.3 Explosion data

Sensitivity to mechanical impact: No information available.

Sensitivity to static discharge: No information available.

5.4 Protective equipment and precautions for firefighters

Protective equipment and precautions for firefighters: Standard procedure for chemical fires.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Personal precautions:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area) Use personal protection equipment See section 8 for more information
-----------------------	--

6.2 Environmental precautions

Environmental precautions:	No special environmental precautions required.
----------------------------	--

6.3 Methods and material for containment and cleaning up

Methods for containment:	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up:	Soak up with inert absorbent material.

Section 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling:	Use personal protective equipment as required. No special handling advices are necessary.
--------------------------	---

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:	Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.
Incompatible materials:	No information available.

Section 8: Exposure controls/personal protection

8.1 Control parameters

Exposure guidelines:	Organic Sulfoxide: OSHA PEL None; OSHA PEL (Ceiling) None; ACGIH OEL (TWA) None; ACGIH OEL (STEL) None. Organic Sulfoxide: Brazil - OEL - TWAs (LTs) None; Brazil - OEL - Ceilings None; Brazil - OEL - Skin Designations None.
----------------------	---

8.2 Appropriate engineering controls

Engineering controls:	Ensure adequate ventilation, especially in confined areas.
-----------------------	--

8.3 Individual protection measures, such as personal protective equipment

Eye/face protection:	Tight sealing safety goggles.
Skin and body protection:	Wear suitable protective clothing.
Respiratory protection:	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
General hygiene considerations:	Handle in accordance with good industrial hygiene and safety practice

Section 9: Physical and chemical properties

Physical state:	Liquid
Solubility in water:	Moderate
Appearance:	No information available.
Odor/odor threshold:	No data
pH:	6-8
Melting point/freezing point:	°C 18 - 19 / °F 64.4 - 66.2

Boiling point:	°C 188 - 190 / °F 370 - 374
Flashpoint:	°C 87 - 89 / °F 188.6 - 192.2
Liquid density:	No information available.
Evaporation rate:	No data
Upper flammability limit:	61% - 64%
Lower flammability limit:	2.4% - 2.8%
Vapor pressure:	No data
Vapor density:	No data
Specific gravity:	No data
Water solubility:	No information available.
Solubility in other solvents:	No data
Partition coefficient:	No data
Autoignition temperature:	°C 214 - 216 / °F 417.2 - 420.8
Decomposition temperature:	°C No data / °F No data
Viscosity:	No data
Explosive properties:	No data
Oxidizing properties:	No data

Section 10: Stability and reactivity

Reactivity:	None known.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	Hazardous reaction has not been reported.
Hazardous polymerization:	No information available.
Conditions to avoid:	No information available.
Incompatible materials:	Strong acids. Strong oxidizing agents.
Hazardous decomposition products:	No data available.

Section 11: Toxicological information

11.1 Information on likely routes of exposure

Inhalation:	Organic Sulfoxide: Inhalation LC50 >5000 mg/l
Eye contact:	Serious eye damage/irritation: Data are conclusive but insufficient for classification
Skin contact:	Skin corrosion/irritation: Mild skin irritant Mild eye irritation Components of the product may be absorbed into the body through the skin. Organic Sulfoxide: Dermal LD50 >40000 mg/kg bw
Ingestion:	Organic Sulfoxide: Oral LD50 14500 mg/kg Oral LD50

11.2 Information on toxicological effects

Symptoms:	No information available.
-----------	---------------------------

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity:

Carcinogenicity: Data are conclusive but insufficient for classification.
Germ cell mutagenicity: Data are conclusive but insufficient for classification. Reproductive toxicity: Data are conclusive but insufficient for classification. Specific target organ toxicity (STOT) – single exposure: Data are conclusive but insufficient for classification. Specific target organ toxicity (STOT) – repeated exposure: Data are conclusive but insufficient for classification.

11.4 Numerical measures of toxicity - product information

Unknown acute toxicity:

Acute toxicity: Data are conclusive but insufficient for classification.

Section 12: Ecological information

Ecotoxicity:

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Organic Sulfoxide: Toxicity to algae No data available; Toxicity to daphnia and other aquatic invertebrates No data available; Toxicity to fish No data available; Microtox Data No data available; log Pow logPow-1.35

Persistence and degradability:

Inherently biodegradable.

Bioaccumulation:

Material does not bioaccumulate.

Mobility:

No information available.

Section 13: Disposal consideration

Disposal of wastes:

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

Contaminated packaging:

Do not reuse container.

Other information:

None

Section 14: Transport information

DOT:

IATA / ADR / DOT-US / IMDG: Not classified as dangerous in the meaning of transport regulations. UN number or ID number: Not Applicable. UN proper shipping name: Not Applicable. Transport hazard class(es): Not Applicable. Packing group: Not Applicable. Environmental hazards: Not Applicable. Special precautions for user: Not Applicable. Maritime transport in bulk according to IMO instruments: Not Applicable.

IMDG:

IATA / ADR / DOT-US / IMDG: Not classified as dangerous in the meaning of transport regulations. UN number or ID number: Not Applicable. UN proper shipping name: Not Applicable. Transport hazard class(es): Not Applicable. Packing group: Not Applicable. Environmental hazards: Not Applicable. Special precautions for user: Not Applicable. Maritime transport in bulk according to IMO instruments: Not Applicable.

IATA:

IATA / ADR / DOT-US / IMDG: Not classified as dangerous in the meaning of transport regulations. UN number or ID number: Not Applicable. UN proper shipping name: Not Applicable. Transport hazard class(es): Not Applicable. Packing group: Not Applicable. Environmental hazards: Not Applicable. Special precautions for user: Not Applicable. Maritime transport in bulk according to IMO instruments: Not Applicable.

Section 15: Regulatory information

15.1 International Inventories

US Toxic Substances Control Act (TSCA):	Component: Organic Sulfoxide (90-100); US TSCA: Listed
Canada (DSL/NDSL):	Not listed
Europe (EINECS/ELINCS/NLP):	Not listed
Australia (AICS):	Not listed
South Korea (KECL):	Not listed
China (IECSC):	Not listed
Japan (ENCS):	Not listed
Phillipines (PICCS):	Not listed

15.2 US Federal Regulations

SARA 313:	This product is not regulated by SARA.
SARA 311/312 components:	Not listed
CWA (Clean Water Act):	No information available.

15.3 US State Regulations

California Proposition 65:	This product does not contain any Proposition 65 chemicals.
Massachusetts-RTK:	Organic Sulfoxide: Massachusetts - RTK (Right-to-Know) Listed
New Jersey-RTK:	Organic Sulfoxide: New Jersey - RTK (Right-to-Know)
Pennsylvania-RTK:	Organic Sulfoxide: Pennsylvania - RTK (Right-to-Know)
U.S. State Right-To-Know Regulations:	Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61): This product does not contain HAPs. WHMIS Hazard Class: B3 - Combustible liquid. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR. National Regulations - Brazil: Organic Sulfoxide; CAS No. Not applicable; Brazil - National Agency for Sanitary Surveillance (ANVISA) Not Listed; Brazil - National List of Carcinogen Agents to Humans (LINACH) Not Listed.

Section 16: Other information

16.1 HMIS

Health hazards:	Not determined
Flammability:	Not determined
Reactivity:	Not determined
Personal protection:	Not determined

16.2 NFPA

Health hazards:	Not determined
Flammability:	Not determined
Stability:	Not determined
Physical and chemical properties:	Not determined

16.3 Further information

This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Users should make independent decisions regarding the completeness of the information based on all sources available. AAT Bioquest shall not be held liable for any damage resulting from handling or from contact with the above product.