Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Initial preparation date: : 01.14.2015

Molybdenum Indicator

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Molybdenum Indicator

Manufacturer/Supplier Article number: AR-1041-60 EW

Recommended uses of the product and restrictions on use: Laboratory Chemicals

Manufacturer Details:

Aqua Analytics
39555 Orchard Hill Place, Suite 600, Novi, MI 48375
(888) 712-4000

Emergency telephone number:

Emergency Telephone No.: (800) 424-9300

SECTION 2: Hazards identification

Classification of the substance or mixture:

Health hazard
Specific target organ toxicity following single exposure, category 1

Stot SE. 1.

Signal word: Danger

Hazard statements:

Causes damage to organs.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use ... for extinction.
Store in a well ventilated place. Keep cool.
Dispose of contents/container.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 25322-68-3	Polyethylene Glycol	>76 %
CAS 67-56-1	Methanol	20 %
CAS 538-62-8	S-Diphenylcarbazone	2 %
CAS 3486-30-4	Alphazurine A	<1 %

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CAS 81012-93-3	Thymol Blue, Sodium Salt	<1 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

After skin contact:

Wash affected area with soap and water. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention immediately. Have exposed individual drink sips of water.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Shortness of breath. Gastrointestinal complications. Nausea.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Water spray can keep containers cool.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Poisonous gas can be produced in fire.

Advice for firefighters:

Protective equipment:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid contact with skin, eyes and clothing. Fire is possible at elevated temperatures or with contact of ignition source. Use water to keep surrounding containers cool. Avoid breathing vapors, mist, or gas. Remove all sources of ignition.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area. Ensure adequate ventilation. Use spark-proof tools

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and explosion-proof equipment.

Environmental precautions:

Prevent from reaching drains, sewer, or waterway. Should not be released into environment.

Methods and material for containment and cleaning up:

Ventilate area of leak or spill. Wear protective eyeware, gloves, and clothing. If necessary use trained response staff or contractor. Follow advice and precautions. Always obey local regulations. Absorb with suitable absorbent material such as sand or earth and containerize for disposal. Refer to Section 13. Refer to Section 8. Refer to Section 5. Place into properly labeled containers for recovery or disposal. Remove all sources of ignition. Contain spillage and then collect. Do not flush to sewer.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use only in well ventilated areas. Avoid contact with skin, eyes and clothing. Follow proper disposal methods. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Keep container tightly closed. Protect from freezing and physical damage. Store product and empty container away from heat and sources of ignition.

SECTION 8: Exposure controls/personal protection

Control parameters:	67-56-1, Methyl Alcohol., ACGIH TLV: 262 mg/m³, OSHA PEL: 260 mg/m³.
Appropriate engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves.
Eye protection:	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.
General hygienic measures:	Perform routine housekeeping. Wash hands before breaks and at the end of work. Before re-wearing, wash contaminated clothing. Avoid contact with skin, eyes and clothing.

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SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear dark colored liquid	**Explosion limit lower**: **Explosion limit upper**:	Not determined Not determined
Odor:	Odorless	**Vapor pressure at 20°C**:	Not determined
Odor threshold:	Not determined	**Vapor density**:	Not determined
pH-value:	Not determined	**Relative density**:	Not determined
Melting/Freezing point:	Not determined	**Solubilities**:	None
Boiling point/Boiling range:	Not determined	**Partition coefficient (n-octanol/water)**:	Not determined
Flash point (closed cup):	Not determined	**Auto/Self-ignition temperature**:	Not determined
Evaporation rate:	Not determined	**Decomposition temperature**:	Not determined
Flammability (solid, gaseous):	Not determined	**Viscosity**:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Incompatible materials.

Incompatible materials:

Strong oxidizing agents. Accelerators.

Hazardous decomposition products:

Carbon oxides.

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

LD50 Dermal - Rabbit - > 5,000 mg/kg 25322-68-3.

LD50 Dermal - rabbit - 17,100 mg/kg 67-56-1.

Chronic Toxicity: No additional information.
Skin corrosion/irritation: No additional information.
Serious eye damage/irritation: No additional information.
Respiratory or skin sensitization: No additional information.
Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

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Reproductive Toxicity: No additional information.

STOT-single and repeated exposure:

Classified as STOT SE 2.

Additional toxicological information:

No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Toxicity to fish static test - Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h (DIN 38412) , 25322-68-3.
Toxicity to fish mortality LC50 - Lepomis macrochirus (Bluegill) - 15,400.0 mg/l - 96 h NOEC - Oryzias latipes - 7,900 mg/l - 200 h, 67-56-1.
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - > 10,000.00 mg/l - 48 h, 67-56-1.
Toxicity to algae Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 22,000.0 mg/l - 96 h, 67-56-1.
Aquatic Tox., Product is not classified as a hazard to the aquatic environment.

Persistence and degradability:

67-56-1: Biodegradability aerobic Result: 72 % - rapidly biodegradable.

Bioaccumulative potential:

67-56-1: Cyprinus carpio (Carp) - 72 d at 20 °C Bioconcentration factor (BCF): 1.0.

Mobility in soil: No additional information.

Other adverse effects:

67-56-1: Biochemical Oxygen Demand (BOD) 600 - 1,120 mg/g Chemical Oxygen Demand (COD) 1,420 mg/g.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed together with household garbage. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Offer surplus and non-recyclable solutions to a licensed disposal company. Do not allow product to reach sewage system or open water. Absorb with a noncombustible absorbent material such as sand or earth and containerize for disposal. Provide ventilation.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA	Not Regulated
Limited Quantity Exception:	None
Bulk:	**Non Bulk:**

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RQ (if applicable): None
Proper shipping Name: Not Regulated.
Hazard Class: None
Packing Group: Not Regulated.
Marine Pollutant (if applicable): No
additional information.
Comments: None

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additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

67-56-1 Methanol 5000.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

67-56-1 Methanol.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages

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incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0
HMIS: 1-0-0
GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG	International Maritime Code for Dangerous Goods.
PNEC.	Predicted No-Effect Concentration (REACH).
CFR	Code of Federal Regulations (USA)
SARA	Superfund Amendments and Reauthorization Act (USA).
RCRA.	Resource Conservation and Recovery Act (USA).
TSCA.	Toxic Substances Control Act (USA).
NPRI	National Pollutant Release Inventory (Canada).
DOT	US Department of Transportation.
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GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service (division of the American Chemical Society).
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