

SAFETY DATA SHEET

Preparation Date: 3/5/2018

Revision Date: 3/5/2018

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: AR130
Product Name: ARSENAZO III

Other means of identification

Synonyms: No information available
CAS #: 1668-00-4
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: For use by qualified personnel for research and development or other authorized use only.
Uses advised against Not for food or drug use.

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Gases)	Category 3
Acute toxicity - Inhalation (Vapors)	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Carcinogenicity	Category 1B

Label elements

Danger

Hazard statements

Toxic if swallowed
 Toxic if inhaled
 May cause cancer



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Very toxic to aquatic life with long lasting effects
Very toxic to aquatic life

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Arsenazo III	1668-00-4	100

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or

corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.

Ingestion: Toxic if swallowed. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms May cause eye/skin/respiratory tract irritation
Toxic if swallowed
May cause central nervous system effects
May cause anorexia
May affect the liver
It may affect the kidneys
Peripheral neuropathy
Paresthesia (numbness and tingling of the extremities)
Perforation of the nasal septum if inhaled in excessive quantities
Skin lesions, thickened skin and/or patchy areas of darkening and loss of pigment
Mee's lines (transverse white lines) in the nails may be seen after acute or chronic exposure
May affect the cardiovascular system
May cause metabolic acidosis
May cause digestive (gastrointestinal) tract irritation
May cause abdominal pain, nausea, vomiting, diarrhea

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Monoxide, Carbon Dioxide. Nitrogen Oxides. Sulfur Oxides. arsenic oxides.

Specific hazards: May be combustible at high temperatures.

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid breathing dust. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Arsenazo III	1668-00-4	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Arsenazo III	1668-00-4	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Arsenazo III	1668-00-4	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles or Safety glasses with side-shields
Skin and body protection:	Chemical resistant apron Long sleeved clothing Gloves
Respiratory protection:	Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Powder. Granules.	Color: Dark brown. Black.
Odor: No information available.	Taste No information available.	Formula: C ₂₂ H ₁₈ N ₄ O ₁₄ S ₂ As ₂
Molecular/Formula weight: 776.37	Flammability: No information available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): >320°C/>608°F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm³): No information available
Specific gravity: No information available	pH: No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility:	Solubility:	

No information available

No information available

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Incompatible materials.

Incompatible Materials: Oxidizing agents

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Inhalation.

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Component Information

Arsenazo III	
CAS-No.	1668-00-4

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Inhalation Toxic by inhalation. May cause irritation of respiratory tract.

Ingestion Toxic if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause abdominal pain. May cause metabolic acidosis. May cause central nervous system effects (affect behavior). May affect liver. May affect urinary system (kidneys). May affect the cardiovascular system (hypotension). It may affect cardiovascular system (hypertension). May affect the cardiovascular system (cardiac arrhythmias). May affect the peripheral nervous system (peripheral neuropathy with paresthesia - a tingling, pricking, or numbness of the skin (known as the feeling of "pins and needles" generally of the hands and feet (extremities)),. May cause muscle weakness.

Aspiration hazard No information available.

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

Chronic Toxicity Chronic exposure to arsenic or arsenic compounds by dermal contact can cause dermatitis or painful ulceration of the skin, lips. The wrists, as are the genitalia (if personal hygiene is poor) are common sites. It can also cause hyperkeratosis (thickening of the skin), depigmentation (patchy areas of darkening and loss of pigment)and some persons may develop Mees' lines (white lines on the nails). Chronic exposure to arsenic or arsenic compounds by inhalation may cause irritation and conjunctivitis of the eyes, lacrimation hoarseness of the voice, laryngitis, irritation of the lips, nasal irritation (irritation of the nostrils), mucous membrane irritation, possible perforation of the nasal septum, and other symptoms similar to chronic ingestion. Chronic inhalation of arsenic and arsenic compounds is the most common cause of occupational poisoning. Chronic ingestion of arsenic or arsenic compounds can cause nausea, vomiting, anorexia, a garlic-like odor of the breath, and sweat and may affect the kidneys (renal tubular disorder/necrosis, anuria, hematuria, proteinuria, renal failure), liver (hepatomegaly, jaundice). It may also affect the blood/bone marrow (pancytopenia, isolated leukopenia, aplastic anemia, acute myelogenous leukemia), and cause alopecia (hair loss), dermatitis, skin disorders such as melanosis, depigmentation, keratosis, hyperkeratosis, Mees' lines and dimness of vision, double vision, and hyperglycemia. Prolonged or repeated inhalation or ingestion may affect the peripheral nervous system (weakness, paresthesia - a tingling, pricking, or numbness of the skin (known as the feeling of "pins and needles" generally of the hands and feet (extremities))). Prolonged or repeated inhalation and/or ingestion may cause central nervous system effects (affect behavior).

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: May cause cancer.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Arsenazo III	1668-00-4	IARC Group 1 - Carcinogenic to Humans - Supplement 7 [1987] Monograph 23 [1980] this evaluation applies to the group of compounds as a whole and not necessarily to all individual compounds within the group (for Arsenic compounds) IARC Group 1- Carcinogenic to Humans - Monograph 100C [2012](not metabolized in humans) (arsenic organic compounds)	Not listed	Not listed	Present (Arsenic compounds, organic)	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: Liver. Kidneys. Skin. Respiratory system. Central nervous system. Gastrointestinal tract.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Arsenazo III	1668-00-4	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN3465
Proper Shipping Name: Organoarsenic compound, solid, n.o.s. (Arsenazo III)
Hazard Class: 6.1
Subsidiary Class: No information available
Packing group: II
Emergency Response Guide Number: 151
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions: IB8, IP2, IP4, T3, TP33
Symbol(s): [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.

Description: UN3465, Organoarsenic compound, solid, n.o.s., 6.1, II

TDG (Canada)

UN-No: UN3465
Proper Shipping Name: Organoarsenic compound, solid, n.o.s. (Arsenazo III)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant: No Information available
Description: UN3465, Organoarsenic compound, solid, n.o.s., 6.1, II

ADR

UN-No: UN3465
Proper Shipping Name: Organoarsenic compound, solid, n.o.s. (Arsenazo III)
Hazard Class: 6.1
Packing Group: II
Subsidiary Risk: No information available

Special Provisions 274
Description: UN3465, Organoarsenic compound, solid, n.o.s., 6.1, II

IMO / IMDG
UN-No: UN3465
Proper Shipping Name: Organoarsenic compound, solid, n.o.s. (Arsenazo III)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant No information available
EMS: F-A
Special Provisions 274
Description UN3465, Organoarsenic compound, solid, n.o.s. (ARSENAZO III), 6.1, II

RID
UN-No: UN3465
Proper Shipping Name: Organoarsenic compound, solid, n.o.s. (Arsenazo III)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: II
Special Provisions 274
Description: UN3465, Organoarsenic compound, solid, n.o.s., 6.1, II

ICAO
UN-No: UN3465
Proper Shipping Name: Organoarsenic compound, solid, n.o.s. (Arsenazo III)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: II
Description: UN3465, Organoarsenic compound, solid, n.o.s., 6.1, II
Special Provisions A3, A5

IATA
UN-No: UN3465
Proper Shipping Name: Organoarsenic compound, solid, n.o.s. (Arsenazo III)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: II
ERG Code: 6L
Special Provisions No information available
Description: UN3465, Organoarsenic compound, solid, n.o.s., 6.1, II

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Arsenazo III</i>	1668-00-4	Not Listed	Present KE-05-0208	Not present	Not present	Present	Not present	Present 216-788-6

U.S. Regulations

Arsenazo III

- New Jersey RTK Hazardous Substance List:** Present (organic compounds)
- New Jersey (EHS) List:** SN 2138 500 lb TPQ (arsenic compounds)
- New Jersey - Discharge Prevention - List of Hazardous Substances:** Present (arsenic compounds)
- Pennsylvania RTK:** Environmental Hazard (arsenic compounds)
- Pennsylvania RTK - Environmental Hazard List** Present (arsenic compounds)
- Minnesota - Hazardous Substance List:** Present (carcinogen (as As) (organic Arsenic compounds)

California Directors List of Hazardous Substances: Present (arsenic compounds)

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Arsenazo III	1668-00-4	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Arsenazo III	1668-00-4	None	None	None	Arsenic Compounds (organic)	1%

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Arsenazo III	1668-00-4	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

- D1A Very toxic materials
- D2A Very toxic materials

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Arsenazo III	1668-00-4	Not Listed	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Arsenazo III	1668-00-4	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Arsenazo III	1668-00-4	Not listed

EU Classification

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Arsenazo III	1668-00-4	

EU - CLP (1272/2008)

R-phrase(s)

R50 - Very toxic to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

R23/25 - Toxic by inhalation and if swallowed.

S-phrase(s)

S28 - After contact with skin, wash immediately with plenty of water

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 - This material and its container must be disposed of as hazardous waste.

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

S 1/2 - Keep locked up and out of the reach of children.

S20/21 - When using, do not eat, drink or smoke.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Arsenazo III	1668-00-4	N;R50-53 T;R23/25 (arsenic compounds)	0.1%≤C<0.2% Xn;R20/22 0.2%≤C T;R23/25 (arsenic compounds)	S1/2 S20/21 S28 S45 S60 S61 (arsenic compounds)

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

T - Toxic

N - Dangerous for the environment.

T



N

**16. OTHER INFORMATION**

Preparation Date: 3/5/2018
Revision Date: 3/5/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on

technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet