

Title: Safety Data Sheet of ARIALINON



ARIA SHIMI RAYKA

Dept.: Health & Safety	Doc. Code: ASR-HS-SP-003-WI-F0 23	Issue / Revising Date:2022.07.21
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:	5-CHLORO-2-METHYL-4-ISOTHIAZOLINE-3-ONE & 2- METHYL-4-ISOTHIAZOLINE-3-ONE
Product description:	5-CHLORO-2-METHYL-4-ISOTHIAZOLINE-3-ONE & 2- METHYL-4-ISOTHIAZOLINE-3-ONE 1.5%
catalog code :	ARIALINON-SDS 23
Manufacturer:	Aria Shimi Rayka Co. Unit 3, No.18, 17 th Alley, Bokharest St. Argentina Sq. Tehran, IRAN
Telephone:	(+98-21)433 87
fax number :	(+98) 21 88100000

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical and Common Name	CAS Registry Number	Wt. %
5-CHLORO-2-METHYL-4-ISOTHIAZOLINE-3-ONE	26172-55-4	1.08-1.2
2- METHYL-4-ISOTHIAZOLINE-3-ONE	2682-20-4	0.35-0.45
Magnesium nitrate	10377-60-3	21.0 - 25%
Water	7732-18-5	73.0 - 77.0%

3. HAZARDS IDENTIFICATION

Emergency Overview:	Colorless to pale yellow clear liquid CORROSIVE, CAUSES SEVERE EYE/SKIN BURNS. MAY CAUSE SENSITIZATION BY SKIN CONTACT. IRRITATING TO RESPIRATORY SYSTEM.
Eye contact:	Material can cause the following: corrosion to eyes. May cause permanent eye injury.
Skin contact:	Material can cause the following: corrosion to the skin burns. May cause sensitization of susceptible persons by skin contact.
Inhalation:	Inhalation of vapor or mist can cause the following: irritation of nose, throat, and lungs. Do not breathe {dust/fume/gas/mist/vapors/spray}.
Ingestion:	Toxic if swallowed. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Chronic hazards:	Material may be irritating to the mucous membranes and upper respiratory tract.
Physical hazards:	Material is corrosive. It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsions maybe necessary

4. FIRST AID MEASURES

Eye:	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Skin:	IMMEDIATELY get under a safety shower. Remove contaminated clothing. Wash off with soap and water. Immediate medical attention is required. Wash contaminated clothing before re-use. Do not take clothing home to be laundered. Discard contaminated shoes, belts, and other articles made of leather.
Inhalation:	Move to fresh air. Give artificial respiration if breathing has stopped. Call a physician if symptoms develop or persist.

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Ingestion:	Rinse mouth. Drink 1 or 2 glasses of water. IMMEDIATELY see a physician. Never give anything by mouth to an unconscious person.
Most important symptoms/effects, acute and delayed	Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in section 2.2) and/or in section 11.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Suppress (knock down) gases/vapors/mists with a water spray jet. Water spray jet, extinguishing powder, CO2, foam.
Unsuitable extinguishing media	Prevent fire extinguishing water from contaminating surface water or the ground water system. A solid water stream may be inefficient.
Specific hazards arising from the chemical	Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride gas, Magnesium oxide, Not combustible. Ambient fire may liberate hazardous vapours.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Cool containers / tanks with water spray. Minimize exposure. Do not breathe fumes. Contain run-off.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear a NIOSH approved (or equivalent) respirator (with organic vapor/acid gas cartridge and a dust/mist filter) during spill clean-ups and deactivation of this material. MATERIAL IS CORROSIVE. Protective clothing, including chemical splash goggles, nitrile or butyl rubber full length gloves, rubber apron, or clothing made of nitrile or butyl rubber, and rubber overshoes must be worn during spill clean-ups and deactivation of this material. If material comes in contact with the skin during clean-up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information.
Methods and materials for containment and cleaning up	WARNING: KEEP SPILLS AND CLEAN-UP RESIDUALS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER. Adsorb the spill with spill pillows or inert solids such as clay or vermiculite, and transfer contaminated materials to suitable containers for disposal.
Environmental precautions	Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes deactivation solution per estimated volume of residual spill to deactivate any residual active ingredient. Let stand for 30 minutes. Flush the spill area with copious amounts of water to chemical sewer (if in accordance with local procedures, permits and regulations). DO NOT add deactivation solution to the waste pail to deactivate the adsorbed material. See Section 13, "Disposal Considerations", for information regarding the disposal of contained materials.

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7. HANDLING AND STORAGE

Precautions for safe handling	This material is corrosive. For personal protection see section 8. Do not handle material near food, feed or drinking water.
Conditions for safe storage, including any incompatibilities	<p>Storage conditions: Keep in a well-ventilated place. The product as supplied may evolve gas (largely carbon dioxide) slowly. To prevent the buildup of pressure the product is packaged in specially vented containers, where necessary. Keep this product in the original container when not in use. Container must be stored and transported in an upright position to prevent spilling the contents through the vent, where fitted. Do not store this material in containers made of the following: steel Do not store this material near food, feed or drinking water.</p> <p>Further information on storage conditions: CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all MSDS and label warnings even after container is emptied. Expiration date based only on retention of >95% actives during storage at 20°C-25°C (68°F-77°F).</p> <p>Storage temperature: >= 1 °C (>= 34 °F)</p> <p>Storage temperature: <= 55 °C (<= 131 °F)</p>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Biological limit values	<p>HUMAN EXPOSURE AND TOXICITY: In vitro studies show that a brief exposure to MIT is highly toxic to cultured neurons but not to glia. The toxic actions of this biocide are zinc-dependent and require the activation of p44/42 extracellular signal-regulated kinase (ERK) via a 12-lipoxygenase-mediated pathway. The cell death process also involves activation of NADPH oxidase, generation of reactive oxygen species, DNA damage, and overactivation of poly(ADP-ribose) polymerase, all occurring downstream from ERK phosphorylation. The Cosmetic Ingredient Review Expert Panel noted the in vitro evidence of neurotoxicity but concluded that the absence of any neurotoxicity findings in the many in vivo studies, including subchronic, chronic, and reproductive and developmental animal studies, suggests that MIT would not be neurotoxic as used in cosmetics. Although recognizing that MIT was a sensitizer in both animal and human studies, the panel concluded that there is a threshold dose response and that cosmetic products formulated to contain concentrations of MIT at 100 ppm (0.01%) or less would not be expected to pose a sensitization risk. Accordingly, MIT may be safely used as a preservative in cosmetics up to that concentration.</p>
Appropriate engineering controls	Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.
Individual protection measures, such as personal protective equipment Eye/face protection	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Skin protection Hand protection	Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): butyl-rubber Nitrile rubber PVC gloves >1 mm thickness Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. NOTE: Material is a possible skin sensitizer.

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Other	Wear as appropriate: Chemical resistant apron complete suit protecting against chemicals
Respiratory protection	Typical use of this material does not result in workplace exposures that exceed the exposure limits listed in the Exposure Limit Information Section. For those special workplace conditions where the listed exposure limits are exceeded, a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. For concentrations up to 10 times the exposure limit, wear a properly fitted NIOSH approved (or equivalent) half-mask or full face piece air purifying respirator equipped with organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters. For those unlikely situations where exposure may greatly exceed the listed exposure limits (i.e. greater than 10-fold), or in any emergency situation, wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode or a full face piece airline respirator in the pressure demand mode with emergency escape provision. See SECTION 6, Accidental Release Measures, for respirator and protective clothing requirements for spill clean-up and decontamination of this material.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless to pale yellow clear
Physical state	Liquid
Odor:	Mild, inoffensive odor
pH:	1.5 - 3 (100%)
Melting point/freezing point	-21.00 °C (-5.80 °F)
Initial boiling point and boiling range	> 100°C (> 212 °F)
Viscosity, dynamic	5.000 mPa.s at 23.00 °C (73.40 °F)
Relative density	approximate 1.2
Vapour pressure	0.1 mmHg Isothiazolone
Relative vapour density	approximate 0.6
Water solubility	completely soluble
Percent volatility	73 - 77 % Water

10. STABILITY AND REACTIVITY

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport
Chemical stability	Material is stable under normal conditions. Product will not undergo polymerization.
Possibility of hazardous reactions	Violent reactions possible with: The generally known reaction partners of water.
Conditions to avoid	Avoid temperatures exceeding the flash point. Avoid contact with incompatible materials
Incompatible materials	Avoid contact with the following: Oxidizing agents Amines, Reducing agents mercaptans.
Hazardous decomposition products	Nitrogen oxides (NO _x), Sulphur oxides, hydrogen chloride.

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11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure Inhalation	LC50 rat 4 h 0.33 mg/l Active ingredient
Skin contact	Corrosive
Eye contact	Causes serious eye damage. Corrosive.
Ingestion	Corrosive.
Symptoms related to the physical, chemical and toxicological characteristics	<p>Carcinogenicity: Carcinogenicity: Non-carcinogenic in both a mouse dermal and rat oral carcinogenicity study. Active ingredient</p> <p>Reproductive toxicity This product is not a reproductive hazard. Active ingredient</p> <p>Teratogenicity Did not show teratogenic effects in animal experiments. Active ingredient</p> <p>Mutagenicity Non-mutagenic Active ingredient</p>
Dermal LD50	> 5000 mg/kg
Oral LD50	LD50 rat female 2,630 mg/kg LD50 rat male 3,350 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity	<p>Very toxic to aquatic life with long lasting effects</p> <p>Toxicity to fish LC50 Oncorhynchus mykiss (rainbow trout) 96 h OECD Test Guideline 203 or Equivalent 0.19 mg/l Active ingredient</p> <p>Toxicity to fish LC50 Lepomis macrochirus (Bluegill sunfish) 96 h OECD Test Guideline 203 or Equivalent 0.28 mg/l Active ingredient</p> <p>Toxicity to algae EC50 Pseudokirchneriella subcapitata (green algae) 72 h OECD Test Guideline 201 0.003 mg/l Active ingredient</p> <p>Toxicity to algae ErC50 Algae (Selenastrum capricornutum) 72 h OECD Test Guideline 201 0.003 mg/l Active ingredient</p> <p>Toxicity to aquatic invertebrates EC50 Daphnia magna 48 h FIFRA 77-2 0.16 mg/l Active ingredient</p> <p>Toxicity to aquatic invertebrates EC50 Daphnia magna (Water flea) 48 h OECD Test Guideline 202 or Equivalent 0.126 mg/l</p>
Persistence and degradability	<p>OECD Test Guideline 301B or Equivalent 0.3 %</p> <p>Not readily biodegraded.</p> <p>10-day Window: Fail</p>
Bioaccumulative potential	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Mobility in soil	have very high mobility in soil(SRC)
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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13. DISPOSAL CONSIDERATIONS

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused product	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

DOT	Corrosive liquid, acidic, organic, N.O.S.(5-Chloro-2-methyl-4-isothiazolin-3-one)
IATA	Corrosive liquid, acidic, organic, N.O.S.(5-Chloro-2-methyl-4-isothiazolin-3-one)
IMDG	Corrosive liquid, acidic, organic, N.O.S.(5-Chloro-2-methyl-4-isothiazolin-3-one)
Transport in bulk according. Annex II of MARPOL 73/78 and the IBC Code	Not available.

15. REGULATORY INFORMATION

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
TSCA Section 12(b) Export Notification (40 CFR 707, Sub pt. D)	This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from U.S. Toxic Substances Control Act (TSCA) Inventory listing requirements. Pennsylvania Any material listed as "Not Hazardous" in the CAS REG NO. Column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.
CERCLA Hazardous Substance List (40 CFR 302.4)	This material is regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304. This material is or contains chemical(s) listed in 40 CFR Table 302.4 or non-designated RCRA ICR substance(s). (Non-designated ICR substances apply to materials that will not be reused.) The Reportable Quantity(s) (RQ) are listed below. Releases in excess of its reportable quantity must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations. D002, 100lbs.
SARA 304 Emergency release notification	Not available.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)	This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Superfund Amendments and Reauthorization Act of 1986 (SARA)	Not regulated.
SARA 311/312 Hazardous	Acute Health Hazard
Clean Water Act (CWA)	Not regulated.

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16. OTHER INFORMATION

THE INFORMATION ON THIS SAFETY DATA SHEET IS BELIEVED TO BE ACCURATE AND IT IS THE BEST INFORMATION AVAILABLE TO ARIA SHIMI RYKA Co. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONS FOR HANDLING A CHEMICAL BY A PERSON TRAINED IN CHEMICAL HANDLING. ARIA SHIMI RYKA MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED WITH RESPECT TO SUCH INFORMATION OR THE PRODUCT TO WHICH IT RELATES, AND WE ASSUME NO LIABILITY RESULTING FROM THE USE OR HANDLING OF THE PRODUCT TO WHICH THIS SAFETY DATA SHEET RELATES. USERS AND HANDLERS OF THIS PRODUCT SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION PROVIDED HEREIN FOR THEIR OWN PURPOSES.