

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : agarGEL
Product Code : A-C310 A-C38 A-C58 A-C510
A-M310 A-M38 A-M58 A-M510
MSDS No. : A0009-1
General Use : Research use only

MANUFACTURER

Company Name : ATTO Corporation
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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute toxicity -Oral	Category 4
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Category 3 Respiratory tract irritation	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 thyroid gland	
aquatic environment (acute hazard)	Category 2
aquatic environment (long-term hazard)	Category 2

PICTOGRAMS :



SIGNAL WORD: Danger

HAZARD STATEMENTS :

- H320 - Causes eye irritation
- H302 - Harmful if swallowed
- H351 - Suspected of causing cancer
- H361 - Suspected of damaging fertility or the unborn child
- H335 - May cause respiratory irritation
- H317 - May cause an allergic skin reaction
- H401 - Toxic to aquatic life
- H411 - Toxic to aquatic life with long lasting effects
- H372 - Causes damage to the following organs through prolonged or repeated exposure: thyroid gland

PRECAUTIONARY STATEMENTS :

Precautionary statements-(Prevention)

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required.
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Contaminated work clothing should not be allowed out of the workplace
- Protective gloves
- Do not breathe dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Avoid release to the environment

Precautionary statements-(Response)

- IF exposed or concerned: Get medical advice/attention
- IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
- IF ON SKIN: Wash with plenty of soap and water
- If skin irritation or rash occurs: Get medical advice/attention
- Wash contaminated clothing before reuse.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth.
- Collect spillage

Precautionary statements-(Storage)

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

Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Single Substance or Mixture : Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No	CAS No
Thiourea	9.60%	76.12	(2)-1733	N/A	62-56-6

4. FIRST AID MEASURES

Inhalation

- Remove to fresh air. If symptoms persist, call a physician.

Skin contact

- Wash off immediately with soap and plenty of water.

If symptoms persist, call a physician.

Eye contact

- IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do.

Continue rinsing. Immediate medical attention is required.

Ingestion

- Rinse mouth. Never give anything by mouth to an unconscious person.

Call a physician or poison control center immediately.

Do not induce vomiting without medical advice.

Protection of first-aiders

- Use personal protective equipment as required.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Water spray (fog), carbon dioxide (CO₂), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

No information available

Special extinguishing method

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Protection of fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required.

Environmental precautions

Local authorities should be advised if significant spillages cannot be contained To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminant and methods and materials for cleaning up

Do not touch spilled material without suitable protection.

After material is completely picked up, wash the spill site with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly.

Remove, clean, or dispose of contaminated clothing.

Recovery, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

HANDLIN

Technical measures

Avoid contact with strong oxidizing agents. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering.

Not to generate steam and dust in vain. Seal the container after use.

After handling, wash hands and face, and then gargle.

In places other than those specified, should not be smoking or eating and drinking.

Should not be brought contaminated protective equipment and gloves to rest stops.

Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Safe storage conditions

Storage conditions

Store away from sunlight in well-ventilated place at room temperature (preferably cool).

Safe packaging material Polypropylene

Incompatible substances Strong oxidizing agents

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES

: Use exhaust ventilation to keep airborne concentrations below exposure limits.

Use only with adequate ventilation.

VENTILATION

: Local Exhaust ; Necessary,

Mechanical (General); Recommended

PERSONAL PROTECTION;

Respiratory protection

: Use a NIOSH/MSHA or European Standard EN149 approved respirator if the vapor concentrations exceed regulatory guidelines.

Hand protection : Chemical resistant gloves

Eye protection : Safety glasses (Chemical goggles)

Skin protection : Protective clothing

CONTROL PARAMETER

OSHA Final Limits : None established

ACGIH TLV(s) : None established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid (clear)

Odor : Odorless

pH : Not available

Boiling Point / Boiling Range
: Not availableMelting Point / Melting Range
: Not availableDecomposition Temperature
: Not available

Flash Point : Not available

Auto Ignition Temperature
: Not available

Flammability : Not flammable

Explosive Properties : Not available

Oxidizing Properties : Not available

Vapor Pressure : Not available

Relative Density : Not available

Solubility : Not available

Partition Coefficient(n-octanol /water)
: Not available

Viscosity : Not available

Vapor Density : Not available

Evaporation Rate : Not available

10. STABILITY AND REACTIVITY**CONDITIONS TO AVOID**

: Sunlight, heat, moisture

STABILITY : Stable under recommended storage conditions.**MATERIALS TO AVOID**

: Oxidizers, alkalis, Strong Acids

HAZARDOUS REACTIONS / DECOMPOSITION PRODUCTS

: Carbon monoxide, Nitrogen oxide,

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - Rat - 1.750 mg/kg

LC50 Inhalation - Rat - 4 h - > 170 mg/m³

LD50 Dermal - Rabbit - > 2.800 mg/kg

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitisation

Maximisation Test (GPMT) - Guinea pig

Does not cause skin sensitisation.

Germ cell mutagenicity

No data available

in vitro assay

Result: Not mutagenic in Ames Test

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Thiourea)

Reproductive toxicity

Suspected human reproductive toxicant

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - Danio rerio (zebra fish) - 10,000 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 5,6 - 18,0 mg/l - 48 h

Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - 6,8 mg/l - 96 h

Persistence and degradability

Biodegradability Biotic/Aerobic - Exposure time 31 d

Result: < 1 % - Not readily biodegradable.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

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.

Other adverse effects

Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Comply with all federal, state and local regulation.

Do not dump this product into sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATION

IATA : Not Restricted.

MARINE POLLUTANT : NO

DOT (Department of Transportation): Not a Hazardous Material for DOT shipping.

15. REGULATORY INFORMATION

US REGULATIONS ;

EPA : CERCLA RQ=Not listed

EPCRA TPQ=Not listed

OSHA; TQ = Not listed

16. OTHER INFORMATIONS

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