Athens Research and Technology, Inc.

Revision Date: 30 Dec 24

SDS – SAFETY DATA SHEET

Version: 3

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

### 1.1 – Product Identifiers

| | |
|---|---|
| Product Name: | Immunoglobulin G, Fab Fragment, Human Plasma; Immunoglobulin G1, Human Myeloma Plasma, Fab Fragment; or Immunoglobulin G, Fab '2, Human Plasma |
| Synonyms: | IgG Fab, IgG1 Fab or IgG Fab '2 |
| Product Number: | 16-16-090707-FAB, 16-16-090707-1M-FAB, or 16-16-090707-FAB2 |
| Brand: | Athens Research and Technology |

### 1.2 – Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

| | |
|---|---|
| Identified uses: | Research Reagent Only, Not Approved for Therapeutic Use |
| Uses Advised Against: | Not for Use as a Drug or Drug Component for Humans or Animals |

### 1.3 – Details of the Supplier of the Safety Data Sheet

| | |
|---|---|
| Supplier: | Athens Research and Technology<br>110 Trans Tech Drive<br>Athens, GA 30601<br>USA |
| Email: | sales@athensresearch.com |
| Telephone: | +1 706-546-0207 |
| Fax: | +1 706-546-7395 |

### 1.4 – Emergency Telephone Number

Emergency Phone: +1 706-546-0207

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## Section 2: Hazards Identification

### 2.1 – Classification of the Substance or Mixture

GHS Classification:

Acute toxicity, Oral (Category 2), H300
Acute toxicity, Dermal (Category 1), H310
Acute toxicity, Inhalation (Category 2), H330
Specific target organ toxicity – repeated exposure, Oral (Category 2), Brain, H373
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

OSHA Classification: No known OSHA Hazards

### 2.2 – GHS Label Elements, including precautionary statements

Pictogram 

Signal Word Danger

Hazard Statements

| | |
|---|---|
| H300+H310+H330 | Fatal if swallowed, in contact with skin, or if inhaled. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |

Precautionary Statements

| | |
|---|---|
| P260 | Do not breathe dust/fume/gas/mist/vapors/spray. |
| P262 | Do not get in eyes, on skin, or on clothing. |
| P264 | Wash skin thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |

| | |
|---|---|
| P271 | Use in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/ protective clothing. |
| P284 | In case of inadequate ventilation, wear respiratory protection. |
| P301+P316 | IF SWALLOWED: Get emergency medical help immediately. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P316 | Get emergency medical help immediately. |
| P319 | Get medical help if you feel unwell. |
| P361+P364 | Take off immediately all contaminated clothing and wash it before reuse. |
| P391 | Collect spillage. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |

**2.3 – Hazards not otherwise classified (HNOC) or not covered by GHS -** Human source material

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## Section 3: Composition/Information on Ingredients

**3.1 – Substance –** Immunoglobulin G, Fab Fragment from Human Plasma; Immunoglobulin G1, Fab Fragment from Myeloma Human Plasma or Immunoglobulin G, Fab '2 from Human Plasma. The product contains no substances which at their present concentrations are considered hazardous to health.

**3.2 – Mixtures**

| Chemical ID | Synonyms | CAS-No. | EC-No. | Classification | Concentration |
|---|---|---|---|---|---|
| $H_2O$ | Water | 7732-18-5 | 231-791-2 | None | ≤98.7% |
| NaCl | Sodium chloride | 7647-14-5 | 231-598-3 | None | ≤0.88% |
| $NaH_2PO_4$ | Sodium phosphate, monobasic, Monosodium phosphate | 7558-80-7 | 231-598-3 | None | ≤0.24% |

| | | | | | |
|---|---|---|---|---|---|
| Immunoglobulin G Fab, Fab '2, or Immunoglobulin G1 Fab | IgG Fab, IgG1 Fab, IgG Fab '2 | None | None | None | ≥0.1% |
| $NaN_3$ | Sodium azide | 26628-22-8 | 247-852-1 | Acute Tox. 2; Acute Tox. 1; STOT RE2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H373, H400, H410 M-Factor – Aquatic Acute: 1; M-Factor – Aquatic Chronic: 1 | ≤0.05% |

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**Section 4: First Aid Measures**

**4.1 – Description of First Aid Measures**

**If Inhaled –** If inhaled, move person into fresh air. If not breathing, give CPR

**In Case of Skin Contact –** Remove contaminated clothing. Wash skin with soap and water

**In Case of Eye Contact –** Flush eyes with plenty of water. Remove contact lens

**If Swallowed -** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult physician

**4.2 – Most Important Symptoms and Effect, both Acute and Delayed** – No Information Available

**4.3 – Indication of Immediate Medical Attention and Special Treatment Needed –** Notes to Physician – Treat Symptomatically

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**Section 5: Firefighting Measures**

**5.1 – Extinguishing Media -** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. No limitations of extinguishing agents are given.

**5.2 – Special Hazards Arising from Substance –** Not flammable or combustible

Carbon oxides
Nitrogen Oxides (Nox)
Oxides of phosphorus
Sodium oxides

**5.3 – Advise for Firefighters –** Use SCBA and full turn-out gear

**5.4 – Further Information –** Suppress (knockdown) gases/vapors/mists with a water spray jet

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**Section 6: Accidental Release Measures**

**6.1 – Personal Precautions, Protective Equipment and Emergency Procedures** – Safety glasses/goggles, gloves, lab coat. Avoid inhalation of dust

**6.2 – Environmental Precautions -** Do not let product enter drain system

**6.3 – Methods and Material for Containment and Cleaning up -** Pick up and arrange disposal in accordance with existing disposal practices employed for infectious waste at your location. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 – Reference to Other Sections –** See Section 13 for disposal

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**Section 7: Handling and Storage**

**7.1 – Precautions for Safe Handling –** Avoid contact with skin and eyes. Provide appropriate exhaust ventilation at places where dust is formed.

**7.2 – Conditions for Safe Storage, including any Incompatibilities –** Keep container tightly closed in a dry and well-ventilated place. Recommended Storage temperature: -20°C

**7.3 – Specific End Uses –** Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

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## Section 8: Exposure Controls/Personal Protection

### 8.1 – Control Parameters – Ingredients with Workplace Control Parameters

| Component | CAS-No. | Value | Control Parameters | Basis | Remarks |
|---|---|---|---|---|---|
| Sodium azide | 26628-22-8 | C | 0.29mg/m$^3$ | USA. ACGIH Threshold Limit Value (TLV) | Not classifiable as a human carcinogen. |
| | | C | 0.11 ppm | USA. ACGIH Threshold Limit Value (TLV) | Not classifiable as a human carcinogen. |
| | | C | 0.1 ppm | USA. NIOSH Recommended Exposure Limits | Potential for absorption. |
| | | C | 0.3 mg/m$^3$ | USA. NIOSH Recommended Exposure Limits | Potential for absorption |
| | | C | 0.1 ppm & 0.3mg/m$^3$ | California Permissible exposure limits for chemical contaminants (Title 8, Article 10) | Skin |

### 8.2 – Exposure Controls

**Appropriate engineering controls –** Change contaminated clothing. Wash hands after working with substance

**Personal Protective Equipment**

**Respiratory Protection** – Ensure adequate ventilation

**Hand Protection** – Handle with gloves, inspect prior to use

**Eye Protection** – Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH or EN 166

**Skin & Body Protection** – Lab coat, long pants/skirt, and closed toe shoes. PPE must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Engineering Measures –** Ensure adequate ventilation

**Hygiene Measures –** General industrial hygiene practice

**Control of Environmental Exposure –** No special precautions necessary

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## Section 9: Physical and Chemical Properties

### 9.1 – Information on Basic Physical and Chemical Properties

| | |
|---|---|
| **Physical State @ 20°C** | Aqueous Solution |
| **Color** | Clear |
| **Odor** | No data available |
| **pH** | 7.4 |
| **Melting point/Freezing Point** | No data available |
| **Boiling Point/Boiling Range** | No data available |
| **Flash Point** | No data available |
| **Flammability** | No data available |
| **Ignition temperature** | No data available |
| **Auto-ignition temperature** | No data available |
| **Lower explosion limit** | No data available |
| **Upper explosion limit** | No data available |
| **Vapor pressure** | No data available |
| **Density** | No data available |
| **Solubility in Water** | No data available |
| **Solubility in Oil** | No data available |
| **Solubility in Acetone** | No data available |

| | |
|---|---|
| **Relative vapor density** | No data available |
| **Decomposition temperature** | No data available |
| **Kinematic viscosity** | No data available |
| **Partition coefficient n-octanol/water** | No data available |
| **Evaporation Rate** | No data available |
| **Odor Threshold** | No data available |
| **Particle Characteristics** | Not Applicable |

**9.2 – Other information –** No data available

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**Section 10: Stability and Reactivity**

**10.1 – Reactivity –** No data available

**10.2 – Chemical Stability –** Stable under recommended storage conditions

**10.3 – Possibility of Hazardous Reactions –** No data available

**10.4 – Conditions to Avoid –** No data available

**10.5 – Incompatible Materials –** Halogenated hydrocarbon, acids, bases, oxidizing agents, strong oxidizing agents, metal, acid chlorides

**10.6 – Hazardous Decomposition Products –** In the event of fire see Section 5

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**Section 11: Toxicological Information**

**Mixture**

**Acute Toxicity Data**

Oral – No data available

Inhalation – No data available

Dermal – No data available

**Ingestion –** No data available.

**Skin Corrosion/Irritation** – No data available.

**Serious Eye Damage/Irritation** – No data available.

**Respiratory or Skin sensitization –** No data available.

**Related Symptoms** – No data available

**Acute & Chronic Effects** – No data available

**Reproductive toxicity** – No data available

**Teratogenicity** – No data available

**Germ cell Mutagenicity** – No data available

**STOT-single exposure** – No data available

**STOT-repeated exposure** – No data available

**Aspiration Hazard** – No data available

**Carcinogenicity**

IARC – No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen.

NTP – No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed carcinogen.

OSHA – No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**Component – Sodium Azide**

**Acute Toxicity Data**

Oral - LD50 – Rat - 27 mg/kg. Remarks: RTECS
Inhalation LC50 – Rat – male and female - 4 h - 0.054 - 0.52 mg/l. Remarks: US-EPA
Dermal LD50 – Rabbit – 20mg/kg Remarks: RTECS

**Ingestion –** May be harmful if swallowed.

**Skin Corrosion/Irritation** – May be harmful if absorbed through the skin. May cause irritation.

**Serious Eye Damage/Irritation** – May cause eye irritation.

**Respiratory or Skin sensitization –** May be harmful if inhaled. May cause respiratory tract irritation.

**Related Symptoms** – No data available

**Acute & Chronic Effects** – No data available

**Reproductive toxicity** – No data available

**Teratogenicity** – No data available

**Germ cell Mutagenicity** – No data available

**STOT-single exposure** – No data available

**STOT-repeated exposure** – Central nervous system (CNS) Cardiovascular system, Liver, Kidney, Heart, and Spleen

**Aspiration Hazard** – No data available

**Carcinogenicity**

IARC – No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen.

NTP – No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed carcinogen.

OSHA – No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**11.2 – Information on Other Hazards –** No data available

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**Section 12: Ecological Information**

**12.1 – Ecotoxicity –** Toxicity to daphnia and other aquatic invertebrates – EC50
- Daphnia pulex (water flea) – 4.2 mg/l – 48 h (sodium azide)

Toxicity to fish – flow-through test LC50 – *Oncorhynchus mykiss* (rainbow trout) – 2.75mg/ml – 96h (OEC Test Guideline 203)

Toxicity to algae – static test ErC50 – *Pseudokirchneriella subcapitata* – 0.35mg/l – 96h (OECD Test Guideline 201)

**12.2 – Persistence/Degradability -** No data available

**12.3 – Bioaccumulation potential -** No data available

**12.4 – Mobility in Soil -** No data available

**12.5 – Results of PBT and vPvB assessment -** No data available

**12.6 – Endocrine disrupting properties -** No data available

**12.7 – Other Adverse Effects -** No data available

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**Section 13: Disposal Considerations**

**13.1 – Waste Treatment Methods**

**Contaminated Packaging –** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Waste from Residues/Unused Products –** Dispose of in accordance with local regulations

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**Section 14: Transport Information**

**DOT –** Not dangerous goods. This substance is considered to be non-hazardous for transport.

**ADR –** Not dangerous goods. This substance is considered to be non-hazardous for transport.

**IATA –** Not dangerous goods. This substance is considered to be non-hazardous for transport.

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**Section 15: Regulatory Information**

**15.1 – Safety, Health, and Environmental Regulations**

| | |
|---|---|
| **OSHA Hazards** | No known OSHA hazards |
| **SARA 311/312 Hazards** | No SARA hazards. |
| **SARA 302 Components** | Sodium Azide – CAS No. 26628-22-8 |
| **SARA 313 Components** | This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels. |

| | |
|---|---|
| **Massachusetts Right to Know Components** | $H_2O$ CAS-No. 7732-18-5<br>NaCl CAS-No. 7647-14-5<br>$NaH_2PO_4$ CAS-No. 7558-80-7<br>IgG Fab, IgG1 Fab, or IgG Fab '2 CAS-No. N/A<br>$NaN_3$ CAS-No. 26628-22-8 |
| **Pennsylvania Right to Know Components** | $H_2O$ CAS-No. 7732-18-5<br>NaCl CAS-No. 7647-14-5<br>$NaH_2PO_4$ CAS-No. 7558-80-7<br>IgG Fab, IgG1 Fab, or IgG Fab '2 CAS-No. N/A<br>$NaN_3$ CAS-No. 26628-22-8 |
| **New Jersey Right to Know Components** | $H_2O$ CAS-No. 7732-18-5<br>NaCl CAS-No. 7647-14-5<br>$NaH_2PO_4$ CAS-No. 7558-80-7<br>IgG Fab, IgG1 Fab, or IgG Fab '2 CAS-No. N/A<br>$NaN_3$ CAS-No. 26628-22-8 |

| | |
|---|---|
| **California Prop. 65 Components** | This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other reproductive harm. |

**15.2 Chemical Safety Assessment -** No data available

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**Section 16: Other Information**

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The above information is believed to be correct but does not purport to be all inclusive. It shall be used only as a guide for experienced personnel. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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