

# ARGYLLA TECHNOLOGIES

## MATERIAL SAFETY DATA SHEET

### Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Guanidinium Hydrochloride Solution, 7.5M

**Product Number:** 310-00-20

**Synonyms:** Guanidine Hydrochloride, Guanidinium Chloride

**Intended use of product:** Refer to Argylla Technologies DNA MicroExtract Kit instruction literature for proper and intended use

**Manufacturer's Name, in & outside U.S.:** Argylla Technologies, LLC

**Manufacturer's Street Address:** 1500 E. 17<sup>th</sup> St. Tucson, Arizona 85726

**Supplier's name, in & outside U.S.:** Argylla Technologies, LLC

**Supplier's Address:** 1500 E. 17<sup>th</sup> St. Tucson, Arizona 85719

**Mailing Address of Manufacturer/Supplier:** P.O. Box 26906 Tucson, Arizona 85719

**MSDS Preparation Date:** 20070828

**MSDS Responsible Name:** Argylla Technologies, LLC

**Responsible Phone Number:** 1-800-234-6642

**MSDS Number:** 001

### Section 2. CHEMICAL COMPOSITION, INFORMATION ON INGREDIENTS

Substance/Preparation: Preparation

Component	CAS no.	%	EC no.	Symbol	R-Phrases (Europe)	Ingredient LD <sub>50</sub> (species, route)
Guanidine Hydrochloride	50-01-1	30-50	200-002-3	T	R25, R36/37/38	1056mg/kg, rat, orally

R-Phrases EU Guide: R25- Toxic if swallowed R36/37/38- Irritant to eyes, respiratory tract & skin

### Section 3. HAZARDS IDENTIFICATION

**Route of Entry:** Skin absorption. Eye contact. Inhalation. Ingestion.

**Emergency Overview:** Warning!

Harmful if swallowed.

Contains material damaging to the following organ system: nervous system

May cause respiratory tract, eye and skin irritation.

Avoid contact with eyes, skin and clothing. Do not ingest. Keep container closed.

Avoid inhalation of vapor or mist. Use in presence of adequate ventilation.

Wash hands/contact surfaces thoroughly after use.

**Potential Acute Health Effects:** Irritant in case of skin or eye contact, in case of ingestion or inhalation (lung irritant).

Severe over-exposure can result in death.

**Carcinogenic /Teratogenic/Mutagenic Effects Data:** not available

### Section 4. FIRST AID MEASURES

**Skin contact:** Irritant in case of skin contact; skin irritation and/or inflammation is characterized by itching, scaling, reddening or, less frequently, blistering

**Eye contact:** Irritant in case of contact with eyes. If eyes are contacted, check for and remove contact lenses. In case of contact, flush eyes with excessive water for at least 15 minutes; cold water may be used. Seek immediate medical attention.

**Inhalation:** Hazardous in case of inhalation (lung irritant) If inhaled, relocate individual to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

**Ingestion:** May be fatal if swallowed. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Loosen tight-fitting clothing and seek medical attention immediately.

### Section 5. FIRE FIGHTING MEASURES

**Flammability:** Non-flammable product, may be combustible at high temperatures.

**Flashpoint:** Not available

**Means of extinction:**

Small Fire: extinguish with dry chemical powder

Large Fire: extinguish with water spray, fog or foam. Do not use water jet.

**Protective Clothing (Fire):** Wear approved/certified respirator or equivalent

**Hazardous Thermal Decomposition Products:** carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>), halogenated compounds

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#### **Section 6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** splash goggles, lab coat, vapor respirator, gloves

**Large Spill/ Environmental Clean-up Methods:** Poisonous liquid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Reduce vapors with water spray. Prevent entry into seweters, basements or confined areas. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by coating contaminated surface with water and allow it to evacuate through the sanitary system.

**Small Spill and Leak:** Dilute with water and mop up or absorb with inert dry material and place in appropriate waste disposal container. Finish cleaning by coating contaminated surface with water and dispose of according to local and regional authority requirements.

#### **Section 7.. HANDLING AND STORAGE**

**Handling Procedures:** Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapors or spray mist. Keep container closed. Use in presence of adequate ventilation. Wash hands thoroughly after handling.

**Storage Requirements:** Keep container closed tightly. Maintain in cool, well-ventilated area.

**Containment Materials:** Use and store in original container

#### **Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Occupational Exposure Limits:** not established in U.S. nor Europe

**Specific Engineering Controls:** provide exhaust ventilation to keep the airborne concentrations of vapors below their respective threshold limit values. Ensure that eye-wash stations and safety showers are proximal to the workstation.

**Personal Protective Equipment:**

**Eyes:** splash goggles    **Body:** Lab coat    **Hands:** Gloves

**Respirator:** Not needed under normal and intended conditions of use

#### **Section 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Liquid

**Appearance:** Clear, colorless

**Molecular Weight:** Not Applicable

**pH:** Neutral

**Odor:** Not available

**Specific Gravity:** only known value, Deionized Water = 1

**Vapor Density:** Highest known value is 0.62(Air=1) (deionized water)

**Vapor Pressure:** Highest known value is 2.3kPa (at 200C, Deionized Water)

**Evaporation Rate:** 0.36 (Deionized Water) compared to *n-butyl* acetate = 1

**Boiling Point:** Lowest known value is 100OC / 212OF (deionized water)

**Dispersion Properties:** see *Solubility in Water*

**Solubility in Water:** easily soluble in cold and hot water

**Freezing Point:** May start to solidify at -0.1°C / 31.8°F based on data for deionized water

#### **Section 10. STABILITY AND REACTIVITY**

**Stability and Reactivity:** The product is stable.

**Incompatibility with other Substances:** Reactive with oxidizing agents

**Hazardous Decomposition Products:** Products are carbon oxides (CO,CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>), halogenated compounds

**Hazardous Polymerization:** Will not occur

#### **Section 11. TOXICOLOGICAL INFORMATION**

**Effects of Acute Exposure:** Irritant in case of eye exposure, ingestion, or inhalation

**Effects of Chronic Exposure:** Contains material which may damage the central nervous system.

**Toxicity to Animals:** LD50 = 1056mg/kg (rat, orally)

**Special Remarks on Toxicities:** To the best of our knowledge, the following toxicological properties of this compound have not been thoroughly investigated, teratogenicity, mutagenicity, carcinogenicity.

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**Section 12. ECOLOGICAL INFORMATION**

**Germany Water Class:** VCI WGK: no products found

**Persistence:** Not Available

**Aquatic Toxicity:** Not Available

**Bioaccumulative Potential:** Not Available

**Mobility:** Not Available

**Section 13. DISPOSAL CONSIDERATIONS**

**Waste Information:** Waste is to be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. TRANSPORT INFORMATION**

**DOT Classification:** Not a DOT controlled material (United States).

**Special Provisions for Transport:** Not applicable

**Section 15. REGULATORY INFORMATION**

**U.S. Federal Regulations:** TSCA 8(b) inventory: Guanidine Hydrochloride; Deionized Water

No products were found: SARA 302/304/311/312; 313

CWA 307,311 and CAA 112

**European Label Requirements:**



R25- Toxic if swallowed

R36/37/38- Irritant to eyes, respiratory tract & skin

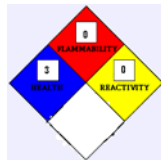
S20/21 When using, do not eat, drink or smoke

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

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

*This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.*

**Section 16. OTHER INFORMATION**



Validated by Argylla Technologies Administration on 8/30/07

Verified by Argylla Technologies Administration.

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