

## Safety Data Sheet

### Section 1: Product & Company Identification

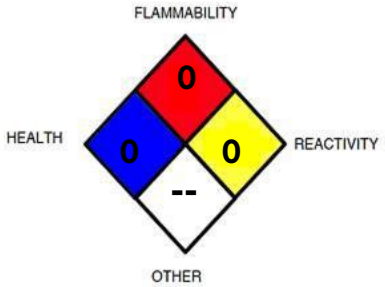
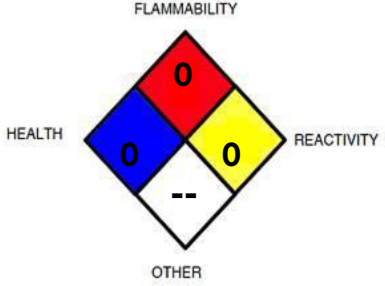
<b>Product Name:</b>	E-64
<b>Product #:</b>	E-2030
<b>Synonyms:</b>	Thiol protease inhibitor; L-trans-Epoxy succinyl-Leu-4-guanidinobutylamide, L-transEpoxy succinyl-Leu- agmatine, L-trans-3-Carboxyoxiran-2- carbonyl-L-leucylagmatine, trans-Epoxy succinyl- L-leucylamido(4-guanidino)butane, N-(trans- Epoxy succinyl)-L-leucine 4-guanidinobutylamide
<b>Supplier:</b>	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego CA 92131 Tele# + 858-452-9925
<b>Emergency Tele#:</b>	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

### Section 2: Composition / Information on Ingredients

Component	CAS#	EC #	% Composition
E-64	66701-25-5	-	100

### Section 3: Hazards Identification

<b>Symbols</b>	N/A
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<b>HMIS Classification</b>	
<b>NFPA Classification</b>	

## Section 4: First Aid Measures

<b>General Overview:</b>	Not a hazardous substance or mixture.
<b>Inhalation:</b>	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
<b>Skin:</b>	Wash off with soap and plenty of water.
<b>Eyes:</b>	Flush eyes with water as a precaution.
<b>Ingestion:</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water.
	See section 11 for more detailed information on health effects & symptoms

## SECTION 5: Fire Fighting Measures

<b>Flammability of the product:</b>	No data available
<b>Extinguishing Media:</b>	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
<b>Hazardous thermal (de)composition products:</b>	Hazardous decomposition products formed under fire conditions: Carbon oxides, Nitrogen oxides (NO <sub>x</sub> )
<b>Special Fire Fighting Procedures:</b>	Wear self-contained breathing apparatus for firefighting if necessary.
<b>Flash Point:</b>	No data available




## Section 6: Accidental Release Measures


<b>Personal Precautions:</b>	Avoid dust formation. Avoid breathing vapors, mist, or gas.
<b>Environmental Precautions:</b>	Do not let product enter drains.
<b>Methods for Clean-up:</b>	Sweep up and shovel. Keep in suitable, closed containers for disposal.

## SECTION 7: Handling & Storage

<b>Storage:</b>	Store under argon. Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: -20°C. Storage class (TRGS 510): 13: Non-Combustible Solids.
<b>Handling:</b>	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

## SECTION 8: Exposure controls / Personal Protection

<b>Respiratory Protection:</b>	 <p>Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).</p>
<b>Skin and Body:</b>	  <p>Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.</p>

	<p>Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)</p> <p>Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)</p> <p>Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.</p>
<b>Eyes:</b>	 <p>Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</p>
<b>Ventilation/Engineering Measures:</b>	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
<b>Hygiene:</b>	General industrial hygiene practice.
<b>Other:</b>	Do not let product enter drains.

## SECTION 9: Physical and Chemical Properties

<b>Appearance &amp; Odor:</b>	White powder
<b>Formula</b>	$C_{15}H_{27}N_5O_5$
<b>Molecular Wt.</b>	357.4
<b>Melting Pt.</b>	No data available
<b>Boiling Pt.</b>	No data available
<b>Density:</b>	No data available
<b>Vapor Pressure:</b>	No data available
<b>Evaporation Rate:</b>	No data available

<b>Vapor Density:</b>	No data available
<b>Solubility:</b>	Up to 20 mg/mL in water, up to 25 mg/mL in DMSO
<b>Flash Point:</b>	No data available
<b>Autoignition Temp:</b>	No data available

## SECTION 10: Stability and Reactivity

<b>Stability:</b>	Stable under proper storage conditions
<b>Hazardous decomposition products:</b>	Carbon oxides, Nitrogen oxides
<b>Materials to Avoid:</b>	Strong oxidizing agents
<b>Conditions to avoid:</b>	Fire, excessive temperatures, direct sunlight

## SECTION 11: Toxicological Information

<b>RTECS#:</b>	N/A
<b>ACUTE Toxicity:</b>	N/A
<b>CHRONIC Toxicity:</b>	N/A
<b>Chronic Exposure:</b> <b>Carcinogen:</b> <b>Mutagen:</b> <b>Teratogen:</b> <b>Reproductive:</b>	<p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.</p> <p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or, anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or, potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>

## SECTION 12: Ecological Information

<b>Ecotoxicity:</b>	May cause long lasting harmful effects to aquatic life.
<b>Mobility:</b>	N/A
<b>Persistence and degradability:</b>	N/A
<b>Bioaccumulative potential:</b>	N/A
<b>Other adverse effects:</b>	N/A

<b>Corrosivity Characteristic:</b>	N/A
<b>General Notes:</b>	Do not allow undiluted product or large quantities of it to reach groundwater, water course or sewer system. Do not allow materials to be released into the environment without proper government permits.

## SECTION 13: Disposal Considerations

<b>Residue Waste or Unused product:</b>	Only professional staff trained in such techniques must undertake waste disposal. Observe all appropriate federal, provincial or state and local regulations.
<b>Contaminated Packaging:</b>	Do not re-use empty containers. Dispose of as unused product.

## SECTION 14: Transportation Information

<b>UN ID#:</b>	N/A
<b>ADR / RID (LAND):</b>	Not shipping hazard
<b>DOT regulations:</b>	Not shipping hazard
<b>IMDG/IMO (SEA):</b>	Not shipping hazard
<b>IATA/DGR (AIR):</b>	Not shipping hazard
<b>Special Provisions:</b>	N/A

## SECTION 15: Regulatory Information

<b>Health Phrases:</b>	N/A
<b>Risk Phrases:</b>	N/A
<b>Safety Phrases:</b>	N/A
<b>EU Regulations:</b>	N/A
<b>US Regulations:</b>	TSCA: No products were found California Proposition 65: No products were found
<b>U.S. Federal Regulations:</b>	SARA 302/304/311/312 extremely hazardous substances: No products were found SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: No products were found. SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found. SARA 313 toxic chemicals notification and release reporting: No products were found.  Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found.



	Clean Air Act (CAA) 112 regulated toxic substances: No products were found. OSHA: No Products were found.
<b>WHMIS (Canada):</b>	N/A

## **SECTION 16: Other Information**

**LIABILITY STATEMENT:** *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*