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**Section 1. Product and Company Identification****Product Name** Antipain Dihydrochloride**Product ID** A5478**Chemical Name  
(Synonyms)** [(S)-1-Carboxy-2-phenylethyl]carbamoyl-L-arginyl-L- valyl-argininal**Supplier** LKT Laboratories, Inc  
545 Phalen Blvd.  
St. Paul, MN 55130 USA  
Ph: 651-644-8424 Fax: 651-644-8357  
www.lktlabs.com - getinfo@lktlabs.com**Emergency Phone #** 1-800-424-9300

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**Section 2. Hazards Identification****GHS Classification** Acute toxicity, Oral (Category 4), H302**GHS Label elements including precautionary statements****Pictogram****Signal word** Warning**Hazard and  
precautionary statements****Hazard statement**

H302 - Harmful if swallowed.

**Precautionary statements**

P264 - Wash skin thoroughly after handling.

P270 - Do not eat, drink, or smoke when using this product.

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P330 - Rinse mouth.

P501 - Dispose of contents/ container to an approved waste disposal plant.

**HMIS Classification**Health hazard: 1  
Chronic health hazard: \*  
Flammability: 0  
Physical hazard: 0**NFPA Rating**Health hazard: 1  
Fire hazard: 0  
Reactivity hazard: 0**Potential Health Effects**Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.  
Skin - May be harmful if absorbed through skin. May cause skin irritation.  
Eyes - May cause eye irritation.

Ingestion - Acute toxicity. Harmful if swallowed.

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### Section 3. Composition/Information on Ingredients

|                   |                                    |                    |        |
|-------------------|------------------------------------|--------------------|--------|
| <b>Substances</b> | Ingredient: Title Compound         | Percent: 100       |        |
| <b>Formula</b>    | $C_{27}H_{44}N_{10}O_6 \cdot 2HCl$ | <b>Formula Wt.</b> | 677.62 |
| <b>CAS No.</b>    | 37682-72-7                         | <b>EC No.</b>      |        |

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### Section 4. First Aid Measures

|                       |                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>General advice</b> | Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.       |
| <b>Eye Contact</b>    | Flush eyes with water as a precaution.                                                                          |
| <b>Skin Contact</b>   | Wash off with soap and plenty of water. Consult a physician.                                                    |
| <b>Inhalation</b>     | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| <b>Ingestion</b>      | Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.             |

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### Section 5 . Firefighting Measures

|                                |                                                                           |
|--------------------------------|---------------------------------------------------------------------------|
| <b>Flash Point</b>             | Not available.                                                            |
| <b>Extinguishing Media</b>     | Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. |
| <b>Firefighting Procedures</b> | Wear self-contained breathing apparatus for firefighting if necessary.    |
| <b>Unusual Fire Hazards</b>    | Carbon oxides, nitrogen oxides (NOx).                                     |

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### Section 6. Accidental Release Measures

|                                                          |                                                                                                                                   |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                              | Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. |
| <b>Environmental Precautions</b>                         | Do not let product enter drains.                                                                                                  |
| <b>Methods and materials for containment and cleanup</b> | Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.        |

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### Section 7. Handling and Storage

|                                         |                                                                                                                                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b>                         | Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. |
| <b>Storage Conditions</b>               | Keep container tightly closed in a dry and well-ventilated place.<br>Recommended storage temperature: -20°C                                     |
| <b>Hazardous Decomposition Products</b> | Not available.                                                                                                                                  |
| <b>Other Remarks</b>                    | This product is air and moisture sensitive. Store under inert gas.                                                                              |

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## Section 8. Exposure Controls/Personal Protection

### Personal protective equipment EXPOSURE CONTROLS

#### equipment

Contains no substances with occupational exposure limit values.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### PERSONAL PROTECTION

**Eye/face protection:** Safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Skin protection:** 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.

**Body protection:** Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** For nuisance exposures, use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection, use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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## Section 9. Physical and Chemical Properties

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|-----------------------------------------------|-------------------------------------------------|---------------------------------|-----------------------|
| <b>Physical State</b>                         | Solid.                                          | <b>Color</b>                    | Yellow to tan powder. |
| <b>Boiling Point</b>                          | Not available.                                  | <b>Volatility</b>               | Not available.        |
| <b>Melting Point</b>                          | Not available.                                  | <b>Density</b>                  | Not available.        |
| <b>Solubility</b>                             | Soluble in water (10 mg/mL), methanol, ethanol. | <b>pH</b>                       | Not available.        |
| <b>Flash Point</b>                            | Not available.                                  | <b>Ignition temperature</b>     | Not available.        |
| <b>Lower explosion limit</b>                  | Not available.                                  | <b>Autoignition temperature</b> | Not available.        |
| <b>Upper explosion limit</b>                  | Not available.                                  | <b>Vapor pressure</b>           | Not available.        |
| <b>Water solubility</b>                       | Soluble in water (10 mg/mL).                    | <b>Odor</b>                     | Not available.        |
| <b>Partition coefficient: n-octanol/water</b> | Not available.                                  | <b>Odor Threshold</b>           | Not available.        |
| <b>Relative vapor density</b>                 | Not available.                                  | <b>Evaporation rate</b>         | Not available.        |

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## Section 10. Stability and Reactivity

**Stability** Stable under recommended storage conditions.

**Materials To Avoid** Strong oxidizing agents.

**Hazardous Decomposition Products** Not available.

**Possibility of hazardous reactions** Not available.

**Conditions to avoid** Not available.

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## Section 11. Toxicological Information

**Oral LD50** Mouse - > 500 mg/kg.

**Skin corrosion/irritation** Not available.

**Inhalation LC50** Not available.

**Serious eye damage/irritation** Not available.

**Dermal LD50** Not available.

**Respiratory or skin sensitization** Not available.

**Other information on acute toxicity** Not available.

**Germ cell mutagenicity** Not available.

**Reproductive Toxicity** Monkey - Intravaginal Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).  
Developmental Toxicity - rat - intrauterine. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

**Aspiration Hazard** Not available.

**Specific organ toxicity single exposure (GHS)** Not available.

**Synergistic effects** Not available.

**Specific organ toxicity repeated exposure (GHS)** Not available.

**Additional Information** RTECS: YV9350700

**Teratogenicity** Not available.

**Signs and symptoms of exposure** Not available.

**Potential Health Effects** Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.  
Skin - May be harmful if absorbed through skin. May cause skin irritation.  
Eyes - May cause eye irritation.  
Ingestion - Acute toxicity. Harmful if swallowed.

**Carcinogenicity** **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.  
**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH  
**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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## Section 12. Ecological Information

**Toxicity** Not available.

**Mobility in soil** Not available.

**PBT and vPvB assessment** PBT/vPvB assessment not available as chemical safety assessment not required/not

conducted.

**Persistence and degradability** Not available.

**Other adverse effects** Not available.

**Bioaccumulative potential** Not available.

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### Section 13. Disposal Considerations

**Waste Disposal** Dispose of material according to all federal, state, and local regulations.  
Offer material to a licensed, professional waste disposal company to dispose of as unused product.

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### Section 14. Transport Information

**DOT (US)** Not dangerous goods.

**IATA** Not dangerous goods.

**IMDG** Not dangerous goods.

**Further Information**

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### Section 15. Regulatory Information

**Reach No.**

**SARA 302 Components** SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Components** Acute health hazard

**Massachusetts Right To Know Components** No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components** Antipain Dihydrochloride CAS #: 37682-72-7 Revision Date:

**New Jersey Right To Know Components** Antipain Dihydrochloride CAS #: 37682-72-7 Revision Date:

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

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### Section 16. Other Information

**Other information** The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.

**Updated** 5/29/2019

For emergencies in the USA, call  
CHEMTREC 800-424-9300