


**KRISHNA INDUSTRIES**
**MATERIAL SAFETY DATA SHEET**
**Section - 1 : Product and Company Identification**

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| <b>Product Name / Identifier</b> | SULPHAMIC ACID DESCALENT GRADE                 |
| <b>Synonyms</b>                  | AMIDOSULFONIC ACID                             |
| <b>CAS No</b>                    | 5329-14-6                                      |
| <b>Molecular Weight</b>          | 97.09                                          |
| <b>Chemical Formula</b>          | NH <sub>2</sub> SO <sub>3</sub> H              |
| <b>Manufacturer Name</b>         | KRISHNA INDUSTRIES,                            |
| <b>Address</b>                   | PLOT NO : 5722, GIDC ESTATE, ANKLESHWAR-393002 |
| <b>Chemical Identity</b>         | POWDER                                         |

**Section - 2 : Composition and Information on Ingredients**

| Component Ingredients | Approximate Concentration | CAS or UN Number | Hazardous |
|-----------------------|---------------------------|------------------|-----------|
| SULPHAMIC ACID        | 96.0 – 97.0 %             | 5329-14-6        | Yes       |
| ORGANO COUMPOUND      | 1.0 - 2.0 %               | NON-SPECIFIED    | Yes       |

**Section - 3 : Hazards Identification**
**Potential Acute Health Effects:**

Extremely hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Very hazardous in case of skin contact (sensitizer). Hazardous in case of skin contact (permeator). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic Health Effects:**

Extremely hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Very hazardous in case of skin contact (sensitizer). Hazardous in case of skin contact (permeator). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.


**Section – 4: First Aid Measures**

|                     |                                                                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eyes contact</b> | Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid.                                                                            |
| <b>Skin contact</b> | In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. |
| <b>Inhalation</b>   | Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.                                                                     |
| <b>Ingestion</b>    | Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person.                              |

**Section – 5 : Fire & Explosion Data**

|                                 |                                                                                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire</b>                     | Thermal decomposition produces highly toxic fumes.                                                                                                                   |
| <b>Explosion</b>                | Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. |
| <b>Fire Extinguishing Media</b> | Carbon Dioxide, dry chemical powder or appropriate foam                                                                                                              |
| <b>Special Information</b>      | Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.                                                           |

**Section – 6: Accidental Release Measures**

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accidental Spill</b> | <b>Small Spill:</b><br>Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.<br><b>Large Spill:</b><br>Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Section – 7: Handling and Storage**

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling and Storage</b> | <b>Precautions:</b><br>Keep container dry. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.<br><b>Storage:</b><br>Corrosive materials should be stored in a separate safety storage cabinet or room. |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|


**Section – 8: Exposure Controls / Personal Protection**

|                                                     |                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering Controls</b>                         | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. |
| <b>Personal Protection:</b>                         | Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.                                                                                                                                              |
| <b>Personal Protection in Case of a Large Spill</b> | Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.          |
| <b>Exposure Limits</b>                              | Not Available.                                                                                                                                                                                                                                                                  |

**Section – 9: Physical and Chemical Properties**

|                                           |                              |
|-------------------------------------------|------------------------------|
| <b>Description</b>                        | White Solid Powder.          |
| <b>Odour / Colour</b>                     | Not Available.               |
| <b>Solubility</b>                         | Soluble in cold water.       |
| <b>pH</b>                                 | Acidic                       |
| <b>% Volatiles by volume @ 21C (70F):</b> | Not Available.               |
| <b>Specific Gravity</b>                   | 2.15 (Water = 1)             |
| <b>Boiling Point</b>                      | Not Available.               |
| <b>Melting Point</b>                      | Decomposes. (205°C or 401°F) |
| <b>Vapour Density (Air=1)</b>             | Not Available.               |
| <b>Vapour Pressure (mm Hg)</b>            | Not Available.               |

**Section – 10: Stability and Reactivity Data**

|                                                       |                                                                 |
|-------------------------------------------------------|-----------------------------------------------------------------|
| <b>Stability<br/>If no, under what condition</b>      | Stable under ordinary conditions of use and storage.            |
| <b>Incompatibility to other<br/>If yes, Which one</b> | Chlorine hypochlorous acid, hypochlorites, cyanide or sulfides. |
| <b>Hazardous decomposition<br/>Products</b>           | oxides of sulfur. Nitrogen, water and ammonia gas.              |
| <b>Hazardous Polymerisation</b>                       | Will not occur.                                                 |
| <b>Conditions to Avoid</b>                            | None known.                                                     |


**Section – 11: Toxicological Information**

|                                               |                                                    |
|-----------------------------------------------|----------------------------------------------------|
| <b>Eye Contact</b>                            | Causes eye irritation.                             |
| <b>Skin Contact</b>                           | May cause skin irritation.                         |
| <b>Ingestion</b>                              | May be harmful if swallowed.                       |
| <b>Carcinogenicity</b>                        | The substance is toxic to lungs, mucous membranes. |
| Acute oral toxicity (LD50): 3160 mg/kg [Rat]. |                                                    |

**Section – 12: Ecological Information**

|                                                           |                                                                                                                       |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Ecotoxicity:</b>                                       | No information found.                                                                                                 |
| <b>BOD5 and COD:</b>                                      | No information found.                                                                                                 |
| <b>Products of Biodegradation:</b>                        | Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. |
| <b>Toxicity of the Products of Biodegradation:</b>        | The products of degradation are as toxic as the original product.                                                     |
| <b>Special Remarks on the Products of Biodegradation:</b> | No information found.                                                                                                 |

**Section – 13 : Disposal Considerations**

|                       |                                                                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste Disposal</b> | Collect and add slowly to large volume of agitated solution of soda ash and slaked lime. Add neutralized solution to excess running water in accordance with applicable regulations |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Section – 14: Transport Information**

|                                |                   |
|--------------------------------|-------------------|
| <b>Proper Shipping Name</b>    | SULPHAMIC ACID    |
| <b>Packing Group</b>           | III               |
| <b>Maritime Transportation</b> | No Data Available |
| <b>Hazardous Class</b>         | 8 Corrosive Solid |

**Section – 15: Regulatory Information**

**Federal and State Regulations:** TSCA 8(b) inventory: Sulfamic acid

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):** CLASS E: Corrosive solid.

**DSCL (EEC):** R35- Causes severe burns. R43- May cause sensitization by skin contact.

**HMIS (U.S.A.):**

**Health Hazard:** 3

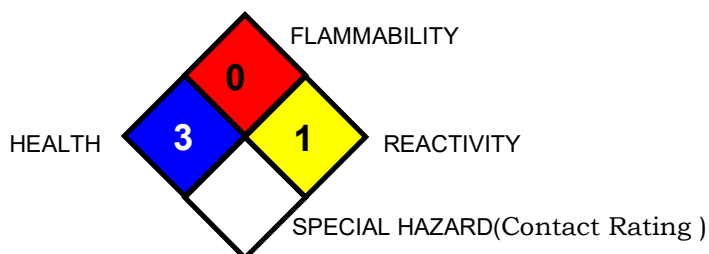
**Fire Hazard:** 0

**Reactivity:** 1

**Personal Protection:** j

**Protective Equipment:**

Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.


**Section – 16 : Other Information**

**Label Hazard Warning:**

WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED.

**Revision Date of MSDS**

01 April 2011

Authorized Signatory:

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