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## 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product Name**                    **AICAR**  
**Product Number**                **9944**  
**Identified Uses**                 For Research Use Only (RUO). Not intended for use in humans or animals.  
   Not intended for therapeutic or diagnostic procedures.

**Manufacturer/Supplier**        Cell Signaling Technology, Inc.  
   3 Trask Lane  
   Danvers, MA 01923 USA

**Phone #:**                            978-867-2300

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## 2. HAZARDS IDENTIFICATION

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### Emergency Overview



### Warning

#### OSHA Hazards

Target organ effect. Highly toxic by ingestion, Irritant, Teratogen, Mutagen

#### GHS Classification

Skin Irritation (Category 2)

Eye Irritation (Category 2)

Specific target organ toxicity – single exposure (Category 3)

#### Physical State

Solid powder

#### Potential Health Effects

##### Acute Toxicity

Eyes	Causes eye irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be fatal if swallowed.

##### Target organ effects

Nerves, Adrenal cortex, Kidneys, Cardiovascular System, Reproductive system, liver, gastrointestinal tract, cardiovascular system, stomach.

##### Chronic Effects

Carcinogenic effects	No data available.
Mutagenic effects	No data available.
Sensitization	No data available.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Hazardous Ingredients**

Chemical Name	CAS No.	EC No.	Concentration
AICAR Synonym: 5-Amino-1 $\beta$ -D-ribofuranosyl-1H-imidazole-4-carboxamide	2627-69-2	220-097-5	>95%

**4. FIRST AID MEASURES**

<b>Eye Contact</b>	Rinse immediately with plenty of water for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Rinse immediately with soap and plenty of water. Get medical attention immediately.
<b>Inhalation</b>	Move to fresh air. Get medical attention.
<b>Ingestion</b>	Call Poison Control immediately. Never give anything by mouth to an unconscious person. Rinse mouth with water.
<b>Notes to physician</b>	Treat symptomatically.

**5. FIRE FIGHTING MEASURES**

<b>Flash Point</b>	Not flammable or combustible.
<b>Suitable Extinguishing Media</b>	Use dry chemical , water spray, alcohol resistant foam or carbon dioxide.
<b>Special exposure hazards</b>	Hazardous decomposition products formed under fire conditions –toxic gases can be evolved.
<b>Special protection for fire fighters</b>	Wear self-contained breathing apparatus and protective unit
<b>Other information</b>	No data available

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	Avoid contact with skin, eyes, clothing. Avoid creating dusts during clean up.
<b>Environmental precautions</b>	Prevent product from entering drains. Prevent further spillage if safe to do so.

**7. HANDLING AND STORAGE**

<b>Safe handling advice</b>	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.
<b>Storage conditions</b>	Keep container tightly closed in cool dry place.
<b>Incompatibilities</b>	No data available
<b>Specific end uses</b>	No data available

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**
**Exposure Limits**

This product contains no substances with established exposure limit values.

**Engineering Measures**

Emergency eyewash and safety shower. Mechanical exhaust required.

**Hygiene Measures**

Do not eat, drink or smoke when handling product. Wear suitable gloves and eye/face protection. Wash hands thoroughly after handling product. Regular cleaning of equipment, work area and clothing is recommended. Wash contaminated clothing before reuse.

**Personal Protective Equipment****Respiratory Protection**

In case of insufficient ventilation wear suitable respiratory protective equipment tested and approved under appropriate government standards such as NIOSH, CEN)

**Eye Protection:**

Safety glasses tested and approved under appropriate government standards such as NIOSH,

**Skin and body protection:**

Wear suitable protective clothing, protective shoes or boots.

**Hand protection:**

Wear compatible chemical resistant gloves. Dispose of gloves in accordance with applicable laws and good laboratory practices.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Information on basic physical and chemical properties**

Physical State	solid powder
Appearance	white to yellowish
Odor	no data available
pH	no data available
Melting point/freezing point	no data available
Boiling point	no data available
Evaporation rate	no data available
Flash point	no data available
Autoignition temperature	no data available
Flammability limits in air	no data available
Explosive properties	no data available
VOC content	no data available
Decomposition temperature	no data available
Solubility	no data available

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**10. STABILITY AND REACTIVITY**

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<b>Stability</b>	Stable under normal conditions.
<b>Conditions/Materials to avoid</b>	no data available
<b>Hazardous decomposition products</b>	no data available

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**11. TOXICOLOGICAL INFORMATION**

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**Acute Toxicity**

To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

Acute Oral Toxicity : No data available.

**Routes of Exposure****Potential Health Effects****Acute Toxicity**

Eyes	May cause eye irritation with susceptible persons.
Skin	May cause skin irritation and/or dermatitis.
Inhalation	No information available.
Ingestion	Harmful if swallowed.

**Target organ effects** No information available

**Chronic Effects**

Carcinogenic effects	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, or OSHA.
Mutagenic effects	No information available
Reproductive toxicity	No information available
Sensitization	No information available

Additional Information: RTECS: Not available.

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**12. ECOLOGICAL INFORMATION**

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<b>Ecotoxicity</b>	No data available
<b>Persistence and degradability</b>	No data available
<b>Bioaccumulation</b>	No data available
<b>Mobility</b>	No data available

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**13. DISPOSAL CONSIDERATIONS**

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**Waste Disposal Methods** Dispose of in accordance with all applicable environmental laws and regulations.

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**14. TRANSPORT INFORMATION**

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<b>IATA</b>	Not regulated
<b>DOT</b>	Not regulated
<b>IMDG</b>	Not regulated

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**15. REGULATORY INFORMATION**

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**OSHA Hazards**

Irritant

**GHS Classification**

Skin Irritation (Category 2)

Eye Irritation (Category 2)

Specific target organ toxicity – single exposure (Category 3)

Signal Word: Warning



Pictogram:

#### Hazard Statements

H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H335 May cause respiratory irritation.

#### Precautionary Statements

P261 Avoid breathing dust/fume/mist/vapors/spray  
 P264 Wash hands thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/eye protection/face protection.  
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305 + P351 +P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a Poison Center or doctor/physician if you feel unwell.  
 P332 + P313 If skin irritation occurs: Get medical advice/attention  
 P337 + P313 If eye irritation persists: Get medical advice/attention  
 P362 Take off contaminated clothing and wash before reuse.  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents/container to an approved waste disposal plant.

#### U.S. Federal Regulations

##### SARA 302

No chemicals in this material are subject to reporting requirements established by SARA Title III, Section 302:

##### SARA 311/312

Acute Health Hazard

##### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals that exceed the reporting levels of the Act and Title 40 of the Code of Federal Regulations, Part 372.

##### Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

##### Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPs) under Section 112 of the Clean Air Act Amendments of 1990.

**U.S. State Regulations**

Massachusetts Right-to-Know Components:  
None

New Jersey Right-to-Know Components:  
5-Amino-1 $\beta$ -D-ribofuranosyl-1H-imidazole-4-carboxamide CAS# 2627-69-2

Pennsylvania Right-to-Know Components:  
5-Amino-1 $\beta$ -D-ribofuranosyl-1H-imidazole-4-carboxamide CAS# 2627-69-2

**California Proposition 65**

This product does not contain any chemicals known to the State of California to cause birth defects or other reproductive harm:

**WHMIS Hazard Class**

D2B Toxic Material causing other toxic effects  
Moderate skin Irritant  
Moderate respiratory irritant  
Moderate eye irritant

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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**16. OTHER INFORMATION**

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**Revision date** 2012-07-27  
**Revision Note** \*\*\*Indicates updated section

**Disclaimer**

The information provided on this material safety data sheet is to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet