Composed 2010/4/26

SAFETY DATA SHEET

1. IDENTIFICATION
   CHEMICAL SUBSTANCE NAME: Aminotoriazole(P)
   COMPANY NAME:

2. HAZARDS IDENTIFICATION
   <GHS classification>
   HAZARD STATEMENT                  HAZARD CLASS                  HAZARD CATEGORY
   PHYSICAL HAZARDS                   Not applicable
   HEALTH HAZARDS
   Acute Toxicity, oral               out of category
   dermal                             out of category
   inhalation                         not classifiable
   Skin Corrosion/irritation          3
   Serious eye damage/eye irritation   2B
   Sensitization, respiratory skin    1
   Germ Cell Mutagenicity             out of category
   Carcinogenicity                    out of category
   Toxic to Reproduction              2
   Specific Target Organ Toxicity,
   single exposure                    not classifiable
   repeated exposure                  1(thyroid gland)
   2(liver)
   Aspiration Hazard                  not classifiable

   ENVIROMENTAL HAZARD
   Hazardous to The Aquatic
   Environment, acute toxicity         2
   chronic toxicity                    2

   <GHS Labelling>
   Signal word: Danger

   Pictogram

   Hazard Statement
   H316 Causes mild skin irritation
   H320 Causes eye irritation
   H317 may cause an allergic skin reaction
   H361 Suspected of damaging fertility or the unborn child
   H372 Causes damage to the thyroid gland through prolonged or repeated exposure
   H373 May cause damage to the liver through prolonged or repeated exposure
Hazard Statement: continue
H401 Toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Prevention
P264 Wash hands thoroughly after handling.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read understood.
P281 Use personal protective equipment as required.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P270 Do not eat, drink, or smoke when using this product.
P273 Avoid release to the environment.

Storage
P405 Store locked up.

Disposal
P501 Dispose of contents/container in accordance with local/regional/national/international regulations(to be specified).

3. COMPOSITION/INFORMATION ON INGREDIENTS
Composition: One component
Chemical Identity: (chemical name)3-Amino-1H-1,2,4-triazole
(general name)Aminotriazole, Amitrole
Chemical formula: \( \text{C}_2\text{H}_4\text{N}_4 \)
Structure:

Molecular weight: 84.1

Content of Ingredient
<table>
<thead>
<tr>
<th>Component</th>
<th>Content(%)</th>
<th>METI</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminotriazole*</td>
<td>Min.97.0</td>
<td>5-602</td>
<td>61-82-5</td>
</tr>
</tbody>
</table>

*: Hazardous component

4. FIRST-AID MEASURES
Inhalation: Call a POISON CENTRE or doctor/physician if you feel unwell.

Skin contact: Wash with plenty of soap and water.
Take off contaminated clothing and wash before reuse.
If skin irritation occurs, get medical advice/attention.

Eye contact: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical advice/attention.

Ingestion: Call a POISON CENTRE or doctor/physician if you feel unwell.
Rinse mouth.
5. FIRE-FIGHTING MEASURES

Fire extinguisher type: Powder, Carbon dioxide gas or Water available.
Special protective equipment and precautions for the fire-fighting:
- Remove flammable material from the fire and extinguish the fire by using fire extinguishers.
- Cool the surroundings by spraying water so that the fire does not spread.
- Fire fighting should be done in the windward of fire. If necessary, wear protective inhalers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
- Use chemical compound protective equipments such as boots, gloves and protective glasses.

Environmental precautions
- If the material is leaked into a river or a lake, make immediate contact with a person in charge in the local government.

Methods and materials for containment and cleaning up
- Collect leaked material in an empty container.

7. HANDLING AND STORAGE

HANDLING
- Precautions safe handling
  - Wash hands and face after handling this material.

Note for safety
- Wear protective equipments such as protective glasses and protective gloves, to prevent it from touching eyes and the skin.

Personal precautions
- Wear suitable protective equipments.
  - After the handling, wash the hands and face well by water.

STORAGE
- Suitable condition
  - Store this material in a warehouse under room temperature.
  - Do not store this material with foods, seeds, chemical fertilizer or breeder.

- Suitable material
  - Paper, Plastic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT: Set an eye and body washer near the workplace.

CONTROL PARAMETERS

<table>
<thead>
<tr>
<th></th>
<th>Exposure Limit</th>
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<tbody>
<tr>
<td>The Labor Health &amp; Safety law (JAPAN)</td>
<td>ACGIH (2009)</td>
</tr>
<tr>
<td>Aminotriazole</td>
<td>Not set</td>
</tr>
<tr>
<td></td>
<td>TWA-0.2mg/m³ STEL/C:Not set</td>
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<tr>
<td></td>
<td>Not set</td>
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</table>

*1 : Standard for evaluation of work place environment(Article 6, 2nd paragraph item 1)

PROTECTIVE EQUIPMENT

- Respiratory protection: A dust mask
- Eye protection: Safety goggle, Safety glass
- Hand protection: Protective glove
- Skin and body protection: Working clothe against static discharge. Protective boots against organic solvent.
9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Colour</td>
<td>White to slightly yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>Abt.7</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data known</td>
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<tr>
<td>Vapour pressure</td>
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<td>Melting point</td>
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<tr>
<td>Specific gravity</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Ignition point</td>
<td>No data known</td>
</tr>
<tr>
<td>Explosion range</td>
<td>No data known</td>
</tr>
<tr>
<td>Solubility</td>
<td>[Water]52%(20 deg.C)</td>
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</table>

10. STABILITY AND REACTIVITY

Stability

Stable under storage condition.
Sublimation is occurred under the over 50deg.C temperature condition.

Hazardous reactivity

Aluminum, Iron and Copper materials are corroded by contact with this material.

Condition to avoid

Avoid contact with Aluminum, Iron and Copper materials.

Hazardous decomposition byproducts

NOx is formed when this material burning.

Hazardous information

Acute toxicity

LD_{50}(rat-oral) 24,600mg/kg
LD_{50}(rat-oral) >5,000mg/kg
LD_{50}(rat-dermal) <2,500mg/kg

Skin corrosion/irritation

Causes mild skin irritation.

Serious eye damage/eye irritation

Causes eye irritation.

Sensitization, respiratory/skin

May causes an allergic skin reaction.

Germ Cell Mutagenicity

Negative: mouse chronic mutagenicity test.

Carcinogenicity

IARC-group 3
ACGIH-A3

Toxic to Reproduction

Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity, single exposure

No data known.

Specific Target Organ Toxicity, repeated exposure

May cause damage to the liver through prolonged or repeated exposure.

Aspiration Hazard

No data known.
12. ECOLOGICAL INFORMATION

Biodegradability BOD decomposition rate: 0%

Bioaccumulation potential BCF <= 3.1

Mobility in soil Decrease in soil depends on soil plants. DT50 in soil from 2 to 20 days, depends on a nature of soil, temperature and relative humidity.  

Ecotoxicity to aquatic life
- Rainbow traut ( Oncorhynchus mykiss ) LC50(96h) > 1,000mg (4)
- Orange-red variety (Oryzias latipes) TLm(48h) >= 2,970ppm (3)
- Algae (Scenedesmus subspicatus ) LC50(72h) = 2.3mg/L (4)
- Daphnia (Daphnia magna ) EC50(48h) = 1.5mg/L (5)
- N-RST/53: Toxicity to aquatic life may cause a long term disadvantageous effect. (4)

13. DISPOSAL CONSIDERATIONS

The material should dispose as industrial waste matters. Comply with all federal, state and local regulations. Do not dump this product into sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATION

INTERNATIONAL RULE
UN Classification
SEA TRANSPORT (IMDG)
Class : 9 (Environmentally hazardous Substances)
Packing Gr. : III
UN No. : UN3077

Before transport, make sure there is no leakage of the material from the container, and put the container on board with care so that it may not have thumbing, falling and getting damaged. Take possible care to prevent the load from collapsing.

15. REGULATORY INFORMATION

National legislation (JAPAN)

Chemical Substances Chemical Substances Control Law
The Fire Law Secondary monitoring substance Not applicable
The Labor Health & Safety law Name notice substance: No.23
PRTR Law Secondary designated substance No.4
Shipping Safety Law Dangerous goods ship transport and storage rule:
Class 9 - Environmentally hazardous Substances UN No.3077 packing group-III
Aviation Law Not applicable
Foreign Exchange and Foreign Trade Law Heterocyclic compound (hetero element is only Nitrogen) HS2933
16. OTHER INFORMATION
The contents of the data sheets were prepared based on the materials, data and
information currently available and are subject to be revised based on new knowledge.
Also, the precautions are written for ordinary handling cases and thus safety measures
suited to the use and method should be adopted when special handling is required.
Also the contents of the description are for supplying information and not for the guarantee.

<Chemical substances registration>

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
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<tr>
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<td>DSL</td>
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<td>EU (EINECS)</td>
<td>200-521-5</td>
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<tr>
<td>AUSTRALIA(AICS)</td>
<td>Registered</td>
</tr>
<tr>
<td>CHINA(EChemical)</td>
<td>Registered</td>
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<tr>
<td>KOREA(ECL)</td>
<td>KE-34006</td>
</tr>
</tbody>
</table>

<Reference>
1) 2009 ACGIH TLVs and BEIs
2) IARC "Overall Evaluations of Carcinogenicity to Humans" Vol.79,2001
3) YOKOHAMA national university, Department of technology, Technology of safe lab.
4) MSDS: Nufarm S.A. (Ver.1.2 2008/10/10)
5) National Institute of Technology and Evaluation GHS Classification Data base

<Standard of composition>
JIS Z 7250(2005);MSDS
Globally Harmonized System of Classification and Labelling of Chemicals(2nd revised ed.)

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