ADDOLINK 1604  66D

RHEIN CHEMIE CORPORATION
145 Parker Court
Chardon, OH  44024

TRANSPORTATION EMERGENCY
CALL CHEMTREC......... : (800) 424-9300
INTERNATIONAL ........ : (703) 527-3887

NON-TRANSPORTATION
RCC EMERGENCY PHONE   : (440) 285-3547
RCC INFORMATION PHONE: (800) 289-2436

Section 1: Product and Company Identification

Product Name: ADDOLINK 1604  66D
Article Number: 1568543
Product Code: 231470
Chemical Family: Aromatic Diamine
Chemical Name: Isobutyl 4-chloro-3,5-diaminobenzoate
Synonyms: Benzoic acid,3,5-diamino-4-chloro,2-methyl propyl ester
CAS Number: 32961-44-7
Formula: C11H15Cl2O2

Section 2: Composition/Information on Ingredients

HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name/ CAS Number</th>
<th>Exposure Limits</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isobutyl 4-Chloro-3,5-Diaminobenzoate 32961-44-7</td>
<td>OSHA (PEL): Not Established</td>
<td>0%  100%</td>
</tr>
<tr>
<td></td>
<td>ACGIH (TLV): Not Established</td>
<td></td>
</tr>
</tbody>
</table>

Section 3: Hazards Identification

EMERGENCY OVERVIEW

WARNING! Non-regulated.  Color: Dark Brown  Odor: Aromatic
May cause eye, skin, and respiratory tract irritation. Inhalation, skin absorption, or ingestion may result in cyanosis (purplish-blue coloring of skin, fingernails, and lips). Water may cause frothing. Use cold water spray to cool fire-exposed containers to
minimize the risk of rupture. Toxic gases/fumes are given off during burning or thermal decomposition.

**POTENTIAL HEALTH EFFECTS**

**Route(s) of Entry:** Inhalation, Skin Contact, Eye Contact, Skin Absorption

**HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE**

**Inhalation Hazards**

**Acute Inhalation Hazards:** This product may cause irritation of the respiratory tract and mucous membranes of the nose and throat. Vapors from decomposition or thermal processing will also irritate the mucous membranes. As a family, overexposure to aromatic amines through inhalation can cause methemoglobinemia with symptoms of cyanosis, a purplish-blue color of the skin.

**Chronic Inhalation Hazards:** None reported for this product as a whole.

**Skin Hazards**

**Acute Skin Hazards:** May irritate the skin. This product is fat soluble. As a class aromatic diamines can penetrate the skin causing methemoglobinemia with symptoms of cyanosis, a purplish-blue color of the skin.

**Chronic Skin Hazards:** None reported for this product as a whole. However, based on the nature of aromatic diamines repeated and/or prolonged contact may lead to dermatitis or other allergic skin reactions.

**Eye Hazards**

**Acute Eye Hazards:** The aromatic amines are, as a family, irritating to the eyes.

**Chronic Eye Hazards:** None reported for this product as a whole.

**Ingestion Hazards**

**Acute Ingestion Hazards:** Not a likely route of exposure. However, this product is considered harmful if swallowed.

**Chronic Ingestion Hazards:** None reported for this product as a whole. Not a likely route of exposure.

**Carcinogenic Components:**

- **NTP:** None
- **IARC:** None
- **OSHA:** None

**Medical Conditions Aggravated by Exposure:** May aggravate existing skin disorders.

**Section 4: First Aid Measures**

**First Aid for Eye:** In case of contact, flush eyes with large quantities of water for at
least 15 minutes. The eyelids should be held apart during irrigation to ensure thorough flushing of all eye tissue. Get medical attention if irritation develops or persists.

**First Aid for Skin:** Avoid using hot water and hard rubbing. Call a physician immediately. Wash affected areas, including hair, beneath nails and other concealed areas, with Polyethylene Glycol 400. If Polyethylene Glycol 400 is not available, wash immediately with soap and plenty of cold water.

**First Aid for Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. Call a physician immediately. If breathing is difficult, give oxygen.

**First Aid for Ingestion:** Give victim one or two glasses of water or milk. Call a physician immediately. If material is ingested, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

**First Aid Other:** CONTACT WITH THE HOT MELT: Cool immediately with plenty of cool water. Do not remove product crusts which may have formed neither forcibly nor by applying any solvents to the skin involved. In order to obtain medical care for possible burns and for a smooth cleaning of the skin, seek medical advice immediately.

**Note to Physician:** Treat symptomatically. If a blue discoloration of the skin occurs, treat patient for cyanosis and the onset of methemoglobinemia. Treat for symptoms of methemoglobinemia. Absorption of this product into the body leads to the formation of methemoglobin that in sufficient concentrations causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body including scalp and nails is extremely important.

---

**Section 5: Fire Fighting Measures**

**Flash Point:** 419 °F (215 °C) DIN 51758

**Flammable Limits:**

<table>
<thead>
<tr>
<th>Limit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Explosion Limit</td>
<td>Not Established</td>
</tr>
<tr>
<td>(UEL %)</td>
<td></td>
</tr>
<tr>
<td>Lower Explosion Limit</td>
<td>Not Established</td>
</tr>
<tr>
<td>(LEL %)</td>
<td></td>
</tr>
</tbody>
</table>

**Auto-ignition Temperature:** > 932 °F (> 500 °C) DIN 51794

**Extinguishing Media:**

- Water
- Carbon Dioxide
- Dry Chemical
- Foam

**Special Fire Fighting Procedures:** Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. Containers can build up pressure and may rupture when exposed to extreme heat. Material supports combustion. During a fire, irritating
and toxic gases may be generated by thermal decomposition or combustion.

**Unusual Fire/Explosion Hazards:**

None known.

### Section 6: Accidental Release Measures

**Spill or Leak Procedures:**

If solid material is spilled, pick up for disposal. For molten material, allow to solidify and then scrape up for disposal. Clean area with polyethylene glycol and soapy water. Utilize protective clothing and equipment. See Section 8.

### Section 7: Handling and Storage

**Storage Temperature:**

Store at ambient conditions

**Shelf Life:**

Not Determined

**Special Sensitivity:**

Moisture.

**Handling/Storage Precautions:**

Keep container tightly closed when not in use. Avoid exposure to temperatures above 50 C. Do not store or consume food, drink or tobacco in area where they may become contaminated with this material. Avoid contact with skin or clothing. Avoid breathing dusts, vapors or mists. Handle in accordance with good industrial hygiene and safety practices. This product is melted and processed at 100 C. Avoid exposure to temperatures above 120 C.

### Section 8: Exposure Controls/Personal Protection

**Personal Protection Equipment**

**Eye Protection Requirements:**

Chemical safety goggles, full-face shield.

**Skin Protection Requirements:**

Permeation resistant gloves (neoprene, nitrile, or PVC) and impervious clothing (long sleeve shirts) are recommended. Barrier creams may be used but their use should be kept to a minimum.

**Ventilation Requirements:**

Use local exhaust ventilation if dusting or misting is a problem, to maintain air levels below the recommended exposure limit.

**Respirator Requirements:**

Air purifying respirator equipped with a full-face organic vapor and dust/mist cartridge if vapors are near or exceeding the exposure limits listed in Section 2. Observe OSHA regulations for respirator use (29 CFR 1910.134.)

**Additional Protective Measures:**

Safety showers and eyewash stations should be accessible to the work area. Employees working with this product should not eat, drink, or use tobacco products in the work area.
Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Dark Brown</td>
</tr>
<tr>
<td>Odor:</td>
<td>Aromatic</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>Not Established</td>
</tr>
<tr>
<td>pH:</td>
<td>Not Established</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>Not Established</td>
</tr>
<tr>
<td>Melting/Freezing Point:</td>
<td>Approximately 183 °F (84 °C)</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>27 mPa.s @ 194 °F (90 °C) DIN 53211</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>1.16 @ 194 °F (90 °C)</td>
</tr>
<tr>
<td>Bulk Density:</td>
<td>9.68 lb/gal</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>3 - 6 mmHg @ 203 °F (95 °C)</td>
</tr>
<tr>
<td></td>
<td>4.5 - 7.5 mmHg @ 148 °F (120 °C)</td>
</tr>
<tr>
<td>VOC by Weight:</td>
<td>Not Established</td>
</tr>
<tr>
<td>HOC by Weight:</td>
<td>None</td>
</tr>
</tbody>
</table>

Section 10: Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Hazardous Polymerization:</td>
<td>Will not occur</td>
</tr>
<tr>
<td>Substances to Avoid:</td>
<td>Oxidizing materials, isocyanates, and acids.</td>
</tr>
<tr>
<td>Conditions to Avoid:</td>
<td>Product will decompose above 338 F (170 C), Containers may rupture or explode if exposed to heat.</td>
</tr>
<tr>
<td>Decomposition Products:</td>
<td>By fire - CO, CO2, oxides of nitrogen, and other undetermined aliphatic fragments.</td>
</tr>
</tbody>
</table>

Section 11: Toxicological Information

Toxicity Data for ADDOLINK 1604 66D

Toxicity Note: No data available for this product.

Toxicity Data for Isobutyl 4-Chloro-3,5-Diaminobenzoate

Acute oral toxicity: LD50 = > 2,500 mg/kg (Male Rat)

Acute dermal toxicity: LD50 = > 500 mg/kg (Male Rat)

Acute inhalation toxicity: > 2.3 mg/L, 4 hrs, (Male Rat) Not Fatal

Mutagenicity: Positive test results (Ames Salmonella Test) The results could not be replicated by additional tests in mammal cells in vitro and in mammals in vivo.
Section 12: Ecological Information

Ecological Data for ADDOLINK 1604 66D
Ecological Note: No data available for this product.

Ecological Data for Isobutyl 4-Chloro-3,5-Diaminobenzoate
Fish Toxicity: 30 mg/L, 96 hrs. Zebra fish (Brachydanio rerio)

56 mg/L, 96 hrs. Zebra fish (Brachydanio rerio)

Invertebrate Toxicity: 10 mg/L, 24 hrs. Water flea (Daphnia magna)

32 mg/L, 24 hrs. Water flea (Daphnia magna)

Biodegradation: 0 %,

Ecological Note: This product is considered toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Section 13: Disposal Considerations

Waste Disposal Method: Disposal must be in compliance with federal, state and local environmental control regulations. If incinerated, toxic and corrosive combustion gases must be properly handled.

Empty Container Precautions: Empty container retains product residue and can be hazardous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity, or other sources of ignition. Recondition or dispose of empty container in accordance with government regulations.

Section 14: Transportation Information

Technical shipping name: Isobutyl 4-chloro-3,5-diaminobenzoate

Freight Class
Bulk: Chemicals, N.O.I. (NMFC 60000)
Package: Chemicals, N.O.I. (NMFC 60000)

Product Label: Product Label Established

Domestic Surface Transportation (DOT)
Hazard Class or Division: Non-Regulated

Marine Transportation (IMO / IMDG)
Hazard Class Division: Non-Regulated
Number:
**Air Transportation (ICAO / IATA)**

Hazard Class Division: Non-Regulated

---

### Section 15: Regulatory Information

**United States Federal Regulations**

**OSHA Hazcom Standard Rating:** Hazardous

**TSCA Inventory List:** On TSCA Inventory

**CERCLA Hazardous Substance:**

<table>
<thead>
<tr>
<th>Component(s)</th>
<th>Reportable Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**SARA Title III**

**SARA Section 302 Extremely Hazardous Substances:**

<table>
<thead>
<tr>
<th>Component(s)/</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Number</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**SARA Section 311/312 Hazard Categories:** Immediate Health Hazard

**SARA Section 313 Toxic Chemicals:**

<table>
<thead>
<tr>
<th>Component(s)/</th>
<th>Reporting</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Number</td>
<td>Threshold</td>
<td>Min.</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RCRA Status:**

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**State Right-to-Know Information**

<table>
<thead>
<tr>
<th>Component(s)/</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Number</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**State Code Translation Table**

<table>
<thead>
<tr>
<th>State Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA-N</td>
<td>Pennsylvania Non-hazardous</td>
</tr>
<tr>
<td>NJ-N</td>
<td>New Jersey Other - includes predominant ingredients</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component(s)/</th>
<th>CAS Number</th>
<th>State Code</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component(s)/</th>
<th>CAS Number</th>
<th>State Code</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Material Name: ADDOLINK 1604  66D    Article Number: 1568543
### Section 16: Other Information

<table>
<thead>
<tr>
<th>HMIS Rating</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

*=Chronic Health Hazard

RHEIN CHEMIE CORPORATION’s method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by RHEIN CHEMIE CORPORATION as a customer service.

Contact: HES Dept.
Phone: (440) 285-3547
MSDS Number: R36335
Version Date: 01/18/2008
MSDS Version: 1.13

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of RHEIN CHEMIE CORPORATION. The data on this sheet relates only to the specific material designated herein. RHEIN CHEMIE CORPORATION assumes no legal responsibility for use or reliance upon these data.

Indicates Relevant Change Made.