C O N T E N T S

IDENTIFICATION

MSDS Record Number: 5617451
Product Name(s): ANILINE
Product Identification: MSDS NUMBER: A6660
PRODUCT CODE: 9110, 3583, 3584, 4378
Date of MSDS: 2005-08-16
Currency Note: This MSDS was acquired from the supplier on 2007-09-06.

MANUFACTURER/SUPPLIER INFORMATION

Company: MALLINCKRODT BAKER INC

MATERIAL SAFETY DATA

Effective Date: 08/16/05

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MSDS MATERIAL SAFETY DATA SHEET

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865

Emergency Telephone Number: 908-859-2151

NOTE: Use CHEMTREC and CANUTEC phone numbers only in the event of a chemical emergency.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

M A L L I N C K R O D T J. T. B A K E R

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ANILINE

1. Product Identification
Synonyms: Aminobenzene; aniline oil; phenylamine; aniline technical special
CAS No: 62-53-3
Molecular Weight: 93.12
Chemical Formula: C6H5NH2
Product Codes: J.T. Baker:
9110
Mallinckrodt:

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No</th>
<th>Percent</th>
<th>Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aniline</td>
<td>62-53-3</td>
<td>99 - 100%</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview

DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. COMBUSTIBLE LIQUID AND VAPOR. MAY CAUSE METHEMOGLOBINEMIA. AFFECTS BLOOD, CARDIOVASCULAR SYSTEM, CENTRAL NERVOUS SYSTEM, LIVER AND KIDNEYS.

SAP-T-DATA(tm) Ratings (Provided here for your convenience)

| Health Rating: 3 - Severe (Poison) |
| Flammability Rating: 2 - Moderate |
| Reactivity Rating: 2 - Moderate |
| Contact Rating: 3 - Severe (Life) |
| Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER |
| Storage Color Code: Red (Flammable) |

Potential Health Effects

Inhalation:
Toxic. Affects ability of blood to carry oxygen. Symptoms may include bluish discoloration of lips and tongue, severe headache, nausea, confusion, dizziness, shock, respiratory paralysis, death.

Ingestion:
Toxic. Lethal dose may be as little as one gram. Symptoms of ingestion parallel those of inhalation exposure.

Skin Contact:
May be absorbed through skin. Symptoms of skin absorption parallel those from inhalation exposure. May cause skin irritation. Local contact may cause dermatitis.

Eye Contact:
Vapor is an eye irritant. May cause tearing, blurred vision. Splashes may cause corneal damage.

Chronic Exposure:
Aniline is a blood toxin, causing hemoglobin to convert to methemoglobin, resulting in cyanosis. Lengthy or repeated exposures may result in decreased appetite, anemia, weight loss, nervous system affects, and kidney, liver and bone marrow damage. Any exposure may cause an allergic skin reaction.

Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance. A NIOSH study reported an excess bladder cancer risk in workers exposed to aniline in combination with other dyestuffs and intermediates, although it is not clear which of these materials, or combinations, were responsible for the higher incidence of bladder cancer. Based on the results of this study, historical epidemiology evidence which shows no correlation of pure aniline with bladder cancer, and experimental test results, it was concluded that aniline, most likely, is not responsible for the increased incidence of bladder tumors in the NIOSH study.
4. First Aid Measures
   Inhalation:
   If inhaled, remove to fresh air. If not breathing, give artificial
   respiration. If breathing is difficult, give oxygen. Do not give mouth to
   mouth resuscitation. CALL A PHYSICIAN IMMEDIATELY.
   Ingestion:
   Induce vomiting immediately as directed by medical personnel. Never give
   anything by mouth to an unconscious person.
   Skin Contact:
   In case of contact, immediately flush skin with plenty of water for at
   least 15 minutes while removing contaminated clothing and shoes. Wash
   clothing before reuse. Thoroughly clean shoes before reuse. Get medical
   attention immediately.
   Eye Contact:
   Immediately flush eyes with plenty of water for at least 15 minutes,
   lifting lower and upper eyelids occasionally. Get medical attention
   immediately.

5. Fire Fighting Measures
   Fire:
   Flash point: 70C (158F) CC
   Autoignition temperature: 615C (1139F)
   Flammable limits in air % by volume:
   LEL: 1.3; UEL: 11.0
   Combustible liquid and vapor. Flammable when exposed to heat or flame.
   Contact with strong oxidizers may cause fire or explosion.
   Explosion:
   Above flash point, vapor-air mixtures are explosive within flammable
   limits noted above. Sealed containers may rupture when heated.
   Fire Extinguishing Media:
   Dry chemical, foam, carbon dioxide, or water spray.
   Special Information:
   In the event of a fire, wear full protective clothing and NIOSH-approved
   self-contained breathing apparatus with full facepiece operated in the
   pressure demand or other positive pressure mode. Use water spray to
   blanket fire, cool fire exposed containers, and to flush non-ignited
   spills or vapors away from fire.

6. Accidental Release Measures
   Ventilate area of leak or spill. Remove all sources of ignition. Wear
   appropriate personal protective equipment as specified in Section 8.
   Isolate hazard area. Keep unnecessary and unprotected personnel from
   entering. Contain and recover liquid when possible. Use non-sparking
   tools and equipment. Collect liquid in an appropriate container or absorb
   with an inert material (e.g., vermiculite, dry sand, earth), and place
   in a chemical waste container. Do not use combustible materials, such as
   saw dust. Do not flush to sewer! US Regulations (CERCLA) require
   reporting spills and releases to soil, water and air in excess of
   reportable quantities. The toll free number for the US Coast Guard
   National Response Center is (800) 424-8802.
   J. T. Baker SOLUSORB(R) solvent adsorbent is recommended for spills of
   this product.

7. Handling and Storage
   Protect against physical damage. Store in a cool, dry well-ventilated
   location, away from any area where the fire hazard may be acute. Outside
   or detached storage is preferred. Separate from incompatibles. Containers
   should be bonded and grounded for transfers to avoid static sparks.
Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection
Airborne Exposure Limits:
-OSHA Permissible Exposure Limit (PEL): 5 ppm (TWA) skin
-ACGIH Threshold Limit Value (TLV): 2 ppm (TWA) skin
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.
Personal Respirators (NIOSH Approved):
If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus. Breathing air quality must meet the requirements of the OSHA respiratory protection standard (29CFR1910.134).
Skin Protection:
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Eye Protection:
Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.
Other Control Measures:
Provide clean work clothes daily to workers who regularly use this material. Wash hands before eating and do not eat, drink, or smoke in workplace.

9. Physical and Chemical Properties

Appearance: Colorless, oily liquid. Darkens on exposure to light or air.
Odor: Weakly amine.
Melting Point: -6.2°C (21°F)
Boiling Point: 184°C (363°F)
Vapor Density (Air=1): 3.22 at 3.5 gm in 100 gm water @ 20°C (68°F).
Specific Gravity: 1.022 @ 68°F (20°C)
Evaporation Rate (BuAc=1): < 1
pH: 8.1 (0.2 M solution)
% Volatiles by volume @ 21°C (70°F): 100

10. Stability and Reactivity
Stability:
Stable under ordinary conditions of use and storage. Discolors on exposure to light.
Hazardous Decomposition Products:
Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides. Hazardous Polymerization: Will not occur.
Incompatibilities:
Strong acids and strong oxidizers, albumin, solutions of iron, zinc, aluminum, toluene diisocyanate, and alkalis. Ignites spontaneously in the presence of red fuming nitric acid, and with sodium.
Conditions to Avoid:
Heat, flames, ignition sources and incompatibles.

11. Toxicological Information
Oral rat LD50: 250 mg/kg; skin rabbit LD50: 820 mg/kg; inhalation mouse LC50: 175 ppm (7 hours); irritation skin rabbit: 20 mg/24H moderate; irritation eye rabbit 102 mg severe. Investigated as a tumorigen, mutagen, and reproductive effector. Carcinogenic determination: limited evidence in experimental animals (IARC 27, 54, 1982). Aniline is listed by the International Agency for Research on Cancer (IARC) in Category 3, i.e., "Cannot be classified as to its carcinogenicity in humans." (IARC, Supplement 4, 1982).

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<th>Anticipated</th>
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12. Ecological Information
Environmental Fate:
When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material may leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material is expected to readily biodegrade. When released into water, this material is expected to have a half-life between 10 and 30 days. This material has an experimentally-determined bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily degraded by photolysis. When released into the air, this material is expected to have a half-life of less than 1 day. When released into the air, this material is not expected to adversely affect the ozone layer.

Environmental Toxicity:
This material is expected to be very toxic to terrestrial life. This material is expected to be very toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l. The EC50/48-hour values for daphnia are less than 1 mg/l.

13. Disposal Considerations
Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.
Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information
Domestic (Land, D.O.T.)

Proper Shipping Name: ANILINE
Hazard Class: 6.1
UN/NA: UN1547 Packing Group: II
Information reported for product/size: 4L
International (Water, I.M.C.)

Proper Shipping Name: ANILINE
Hazard Class: 6.1
UN/NA: UN1547 Packing Group: II
Information reported for product/size: 4L

15. Regulatory Information

\Chemical Inventory Status - Part 1\-----------------------------
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\Chemical Inventory Status - Part 2\-----------------------------
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\Federal, State & International Regulations - Part 1\---------
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\Federal, State & International Regulations - Part 2\---------
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<td>U012</td>
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Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: No (Pure / Liquid)

Prop 65: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Australian Hazchem Code: 3X
Australian Poison Schedule: S6

WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings:
Health: 3 Flammability: 2 Reactivity: 0
Label Hazard Warning:
DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.
CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. COMBUSTIBLE LIQUID AND VAPOR. MAY CAUSE METHEMOGLOBINEMIA. AFFECTS BLOOD, CARDIOVASCULAR SYSTEM, CENTRAL NERVOUS SYSTEM, LIVER AND KIDNEYS.
Label Precautions:
Do not breathe vapor.
Do not get in eyes, on skin, or on clothing.
Keep away from heat and flame.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Label First Aid:
In all cases call a physician immediately. In case of contact, immediately flush eyes or skin with plenty of water for at least 15
minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. IF INHALED, remove to fresh air. If not breathing, give artificial respiration. DO NOT GIVE MOUTH-TO-MOUTH RESUSCITATION. If breathing is difficult, give oxygen. Keep patient warm and at rest.

Product Use:
Laboratory Reagent.

Revision Information:
MSDS Section(s) changed since last revision of document include: 3.

Disclaimer:
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A6660

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