IDENTIFICATION

MSDS Record Number: 5617579
Product Name(s): BUTYL ALCOHOL-tert
Product Identification: MSDS NUMBER: B6304
                     PRODUCT CODE: 10905, 9056, 2998, 9057
                     C.A.S. NUMBER: 75-65-0
Date of MSDS: 2007-08-02
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: 08/02/07
Supercedes: 12/10/04

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MSDS MATERIAL SAFETY DATA SHEET
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CHEMTREC: 800-424-9300 (USA)
            703-527-3887
(Outside USA & CANADA)
CANUTEC: 613-996-6666

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.

----------------------------------------------------------------
                        BUTYL ALCOHOL-tert

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1. Product Identification
Synonyms: 2-Methyl-2-propanol; trimethyl carbinol; tert-butanol
CAS No: 75-65-0
Molecular Weight: 74.12
Chemical Formula: (CH3)3COH
Product Codes: J.T. Baker:
               10905, 9056
               Mallinckrodt:
               2998, 9057
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>tert-Butyl Alcohol</td>
<td>75-65-0</td>
<td>99 - 100%</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview

WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED.
AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO EYES AND RESPIRATORY
TRACT. MAY CAUSE IRRITATION TO SKIN. MAY AFFECT LIVER AND KIDNEYS.
SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate (Life)
Flammability Rating: 3 - Severe (Flammable)
Reactivity Rating: 1 - Slight
Contact Rating: 2 - Moderate
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD;
PROPER GLOVES; CLASS B EXTINGUISHER

Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:
Butyl alcohols have produced few cases of poisoning in industry because
of their low volatility. Causes irritation to upper respiratory tract.
Difficult breathing, coughing, headache, dizziness, and drowsiness may
occur. May cause narcosis. May be absorbed into the bloodstream with
symptoms similar to ingestion.

Ingestion:
May produce abdominal pain, vomiting, dullness, headache, muscle
weakness, giddiness, ataxia, confusion, delirium, diarrhea, coma, and
death from respiratory failure. May cause liver, kidney, pulmonary and
cardiac damage. Estimated mean lethal dose is 3 - 7 ounces.

Skin Contact:
May cause irritation with redness and pain.

Eye Contact:
May cause irritation with blurred vision. Causes irritation, redness, and
pain.

Chronic Exposure:
Chronic exposure may cause skin, kidney and liver effects.

Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders, impaired liver or kidney or
respiratory function, or central or peripheral nervous system disorders
may be more susceptible to the effects of the substance.

4. First Aid Measures

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If
breathing is difficult, give oxygen. Call a physician.

Ingestion:
Induce vomiting immediately as directed by medical personnel. Never give
anything by mouth to an unconscious person. Call a physician.

Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes. Call
a physician if irritation develops.

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: 11°C (52°F) CC
Autoignition temperature: 478°C (892°F)
Flammable limits in air % by volume:
lel: 2.4; uel: 8.0
Flammable.
Explosion:
Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Sensível a descargas estáticas.
Fire Extinguishing Media:
Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.
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. This highly flammable liquid must be kept from sparks, open flame, hot surfaces, and all sources of heat and ignition.

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! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.
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. Product may solidify at room temperature. 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):
  100 ppm (TWA)
- ACGIH Threshold Limit Value (TLV):
  100 ppm (TWA)
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, a full facepiece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

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.

9. Physical and Chemical Properties
Appearance:
Colorless liquid. Colorless hygroscopic crystals below melting point

Odor:
Camphor odor.

Solubility:
Miscible in water.

Specific Gravity:
0.78 @ 26°C

pH:
No information found.

% Volatiles by volume @ 21°C (70°F):
100

10. Stability and Reactivity
Stability:
Stable at room temperature in sealed containers.

Hazardous Decomposition Products:
Burning may produce carbon monoxide, carbon dioxide and isobutylene.

Hazardous Polymerization:
Will not occur.

Incompatibilities:
Strong oxidizing agents, hydrogen peroxide + sulfuric acid, mineral acids and alkali metals. May attack some forms of plastics and rubber. Reacts with HCl to form t-butyl chloride, a volatile liquid.

Conditions to Avoid:
Heat, flames, ignition sources and incompatibles.

11. Toxicological Information
Oral rat LD50: 3500 mg/kg. Investigated as a tumorigen, mutagen, reproductive effector.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>NTP Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Butyl Alcohol (75-65-0)</td>
<td>No</td>
</tr>
</tbody>
</table>

12. Ecological Information

Environmental Fate:
When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into the soil, this material may biodegrade to a moderate extent. When released to water, this material is expected to quickly evaporate. When released into water, this material may biodegrade to a moderate extent. This material has an estimated bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into air, this material is expected to have a half-life between 10 and 30 days.

Environmental Toxicity:
No information found.

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: BUTANOLS
Hazard Class: 3
UN/NA: UN1120 Packing Group: II
Information reported for product/size: 52L

International (Water, I.M.O.)

Proper Shipping Name: BUTANOLS
Hazard Class: 3
UN/NA: UN1120 Packing Group: II
Information reported for product/size: 52L

International (Air, I.C.A.O.)

Proper Shipping Name: BUTANOLS
Hazard Class: 3
UN/NA: UN1120 Packing Group: II
Information reported for product/size: 52L

15. Regulatory Information

----------\Chemical Inventory Status - Part 1\-----------------------------
Ingredient TSCA EC Japan Australia
----------
tert-Butyl Alcohol (75-65-0) Yes Yes Yes Yes
----------\Chemical Inventory Status - Part 2\-----------------------------
----------
Ingredient Korea DSL NDSL Phil.
tert-Butyl Alcohol (75-65-0) Yes Yes No Yes
----------\Federal, State & International Regulations - Part 1\-------------
SARA 302- ----- SARA 313-----
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<tr>
<th>Ingredient</th>
<th>BQ</th>
<th>TPQ</th>
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<tr>
<td>tert-Butyl Alcohol (75-65-0)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Federal, State &amp; International Regulations Part 2</td>
<td>KCRA-</td>
<td>-TSCA-</td>
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<td>Ingredient</td>
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<td>CERCLA 261.33</td>
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<tr>
<td>tert-Butyl Alcohol (75-65-0)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>(Pure / Liquid)</td>
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<tr>
<td>Chemical Weapons Convention: No</td>
<td>TSCA 12(b): No</td>
<td>CDTA: No</td>
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<td>SARA 311/312: Acute: Yes Chronic: Yes</td>
<td>Fire: Yes</td>
<td>Pressure: No</td>
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<tr>
<td>Reactivity: No</td>
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</table>

Australian Hazchem Code: 3[Y]E
Australian Poison Schedule: None allocated.
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: 1 Flammability: 3 Reactivity: 0
Label Hazard Warning:
WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO EYES AND RESPIRATORY TRACT. MAY CAUSE IRRITATION TO SKIN. MAY AFFECT LIVER AND KIDNEYS.
Label Precautions:
Keep away from heat, sparks and flame.
Avoid contact with eyes, skin and clothing.
Avoid breathing vapor or mist.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Label First Aid:
If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. In case of skin contact, immediately flush skin with plenty of water for at least 15 minutes. Call a physician if irritation develops.
Product Use:
Laboratory Reagent.
Revision Information:
No Changes.
Disclaimer:
******************************************************************************
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