SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
Product name : tert-Butyl Acetate
CAS-No. : 540-88-5

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company : Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi-10002
INDIA
Telephone : +91 11 49404040
Email : care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 2), H225
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word Danger Flammable
Hazard statement(s) H225 Highly flammable liquid and vapour.
Precautionary statement(s) P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Supplemental Hazard information (EU)
EUH066
Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

3.1 Substances
Formula: C_6H_{12}O_2
Molecular weight: 116.16 g/mol
CAS-No.: 540-88-5
EC-No.: 208-760-7
Index-No.: 607-026-00-7

No components need to be disclosed according to the applicable regulations.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

   Appropriate engineering controls
   Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

   Personal protective equipment

      Eye/face protection
      Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

      Skin protection
      Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

      Body Protection
      Impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

      Respiratory protection
      Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: liquid
   Colour: colourless

b) Odour
   No data available

c) Odour Threshold
   No data available

d) pH
   No data available

e) Melting point/freezing point
   Melting point/range: < -57.99 °C

f) Initial boiling point and boiling range
   97 - 98 °C - lit.

g) Flash point
   4 °C - closed cup

h) Evaporation rate
   No data available

i) Flammability (solid, gas)
   No data available

j) Upper/lower flammability or explosive limits
   Lower explosion limit: 1.5 - 1.7 %(V)

k) Vapour pressure
   42 mmHg at 20 °C

l) Vapour density
   4.65

m) Relative density
   0.866 g/cm3 at 20 °C

n) Water solubility
   ca.6.7 g/l at 23 °C - OECD Test Guideline 105 - soluble

o) Partition coefficient: n-octanol/water
   log Pow: 1.64 at 21.7 °C

p) Auto-ignition temperature
   589 °C
   at 1015 hPa

q) Decomposition temperature
   No data available

r) Viscosity
   < 1 mm2/s at 25 °C -

s) Explosive properties
   No data available

t) Oxidizing properties
   No data available

9.2 Other safety information

Surface tension
   64 mN/m at 20 °C

Relative vapour density
   4.65

SECTION 10: Stability and reactivity

10.1 Reactivity
   No data available

10.2 Chemical stability
   Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
   No data available
10.4 **Conditions to avoid**
Heat, flames and sparks.

10.5 **Incompatible materials**
Oxidizing agents

10.6 **Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

**SECTION 11: Toxicological information**

11.1 **Information on toxicological effects**

**Acute toxicity**
- LD50 Oral - Rat - male - 4,100 mg/kg (tert-Butyl acetate)
- LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg (tert-Butyl acetate)

**Skin corrosion/irritation**
- Skin - Rabbit (tert-Butyl acetate)
  Result: No skin irritation - 4 h

**Serious eye damage/eye irritation**
- Eyes - Rabbit (tert-Butyl acetate)
  Result: No eye irritation - 72 h

**Respiratory or skin sensitisation**
- Guinea pig (tert-Butyl acetate)
  Did not cause sensitisation on laboratory animals.
  (Buehler Test)

**Germ cell mutagenicity**
- No data available (tert-Butyl acetate)
  reverse mutation assay (tert-Butyl acetate)
  S. typhimurium
  Result: negative
  Mutagenicity (micronucleus test) (tert-Butyl acetate)
  Rat - male and female
  Result: negative

**Carcinogenicity**
- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**
- No data available (tert-Butyl acetate)

**Specific target organ toxicity - single exposure**
- No data available (tert-Butyl acetate)

**Specific target organ toxicity - repeated exposure**
- No data available

**Aspiration hazard**
- No data available (tert-Butyl acetate)

**Additional Information**
- Repeated dose toxicity - Mouse - male and female - inhalation (vapour) (tert-Butyl acetate)
  RTECS: AF7400000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated (tert-Butyl acetate)
SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
Toxicity to fish - semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 240 mg/l - 96 h(tert-Butyl acetate)
(OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates
Toxicity to daphnia and other aquatic invertebrates - static test EC50 - Daphnia magna (Water flea) - 350 mg/l - 48 h(tert-Butyl acetate)
(OECD Test Guideline 202)

12.2 Persistence and degradability
Biodegradability
Biodegradability - aerobic - Exposure time 28 d(tert-Butyl acetate)
Result: 50 % - Inherently biodegradable.
(OECD Test Guideline 301D)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(tert-Butyl acetate)

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1123 IMDG: 1123 IATA: 1123

14.2 UN proper shipping name
ADR/RID: BUTYL ACETATES IMDG: BUTYL ACETATES IATA: Butyl acetates

14.3 Transport hazard class(es)
ADR/RID: 3 IMDG: 3 IATA: 3

14.4 Packaging group
ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out
SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
EUH066  Repeated exposure may cause skin dryness or cracking.
H225   Highly flammable liquid and vapour.

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.