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

1.1 Product identifiers
Product name : 4- tert-Butyl Phenol

CAS-No. : 98-54-4

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
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Reproductive toxicity (Category 2), H361f
Chronic aquatic toxicity (Category 2), H411

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
Hazard statement(s)
H315 Causes skin irritation.
H318 Causes serious eye damage.
H361f Suspected of damaging fertility.
H411 Toxic to aquatic life with long lasting effects.
Precautionary statement(s)
P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements
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.

SECTION 3: Composition/information on ingredients
3.1 Substances
Formula : C10H14O
Molecular weight : 150.22 g/mol
CAS-No. : 98-54-4
EC-No. : 202-679-0

Hazardous ingredients according to Regulation (EC) No 1272/2008
Component Classification Concentration
4-tert-Butylphenol Skin Irrit. 2; Eye Dam. 1; Repr. <= 100 %
CAS-No. 98-54-4
EC-No. 202-679-0 2; Aquatic Chronic 2; H315, H318, H361f, H411

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
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
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

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed.

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.

Storage class (TRGS 510): Non Combustible Solids

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
Complete suit protecting against chemicals, 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 (EN 143) respirator cartridges as a backup to engineering controls. If th 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. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: powder
   Colour: white

b) Odour
   No data available

c) Odour Threshold
   No data available

d) pH
   No data available

e) Melting point/freezing point
   Melting point/range: 96 - 101 ºC - lit.

f) Initial boiling point and boiling range
   236 - 238 ºC - lit.

g) Flash point
   113 ºC - closed cup

h) Evaporation rate
   No data available

i) Flammability (solid, gas)
   No data available

j) Upper/lower flammability or explosive limits
   No data available

k) Vapour pressure
   1 mmHg at 70 ºC

l) Vapour density
   No data available

m) Relative density
   0.908 g/mL at 25 ºC

n) Water solubility
   No data available

o) Partition coefficient: n-octanol/water
   log Pow: 3.29

p) Auto-ignition temperature
   No data available

q) Decomposition temperature
   No data available

r) Viscosity
   No data available

s) Explosive properties
   No data available

t) Oxidizing properties
   No data available

9.2 Other safety information
   No data available
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
No data available

10.5 Incompatible materials
Bases, Acid chlorides, Acid anhydrides, Oxidizing agents, Brass, Copper

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 - > 2,000 mg/kg(4-tert-Butylphenol)
(OECD Test Guideline 401)
LCLO Inhalation - Rat - 5.6 mg/l(4-tert-Butylphenol)
(OECD Test Guideline 403)
Remarks: Nutritional and Gross Metabolic: Weight loss or decreased weight gain.
Dermal: No data available(4-tert-Butylphenol)
LD50 Intraperitoneal - Mouse - 78 mg/kg(4-tert-Butylphenol)

Skin corrosion/irritation
Skin - Rabbit(4-tert-Butylphenol)
Result: Moderate skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit(4-tert-Butylphenol)
Result: Severe eye irritation - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitisation
Maximisation Test - Guinea pig(4-tert-Butylphenol)
Result: Does not cause skin sensitisation.
(OECD Test Guideline 406)

Germ cell mutagenicity
No data available(4-tert-Butylphenol)

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
Presumed human reproductive toxicant(4-tert-Butylphenol)

Specific target organ toxicity - single exposure
No data available(4-tert-Butylphenol)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available(4-tert-Butylphenol)
Additional Information
RTECS: SJ8925000

Dizziness, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (4-tert-Butylphenol)

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish
LC50 - Pimephales promelas (fathead minnow) - 5.14 mg/l - 96.0 h (4-tert-Butylphenol)

Toxicity to daphnia and other aquatic invertebrates
Immobilization EC50 - Daphnia magna (Water flea) - 4.8 mg/l - 48 h (4-tert-Butylphenol)
(OECD Test Guideline 202)

Toxicity to algae
IC50 - Desmodesmus subspicatus (green algae) - 11.2 mg/l - 72 h (4-tert-Butylphenol)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d (4-tert-Butylphenol)
Result: 60% - Biodegradable
(OECD Test Guideline 301F)
Remarks: The 10 day time window criterion is not fulfilled.

12.3 Bioaccumulative potential

Bioaccumulation Leuciscus idus melanotus - 3 d
- 46 µg/l (4-tert-Butylphenol)

Bioconcentration factor (BCF): 120
Cyprinus carpio (Carp) - 56 d
- 40 mg/l (4-tert-Butylphenol)

Bioconcentration factor (BCF): 20.43

12.4 Mobility in soil

No data available (4-tert-Butylphenol)

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

Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 3077
IMDG: 3077
IATA: 3077
14.2 UN proper shipping name
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4-tert-Butylphenol)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4-tert-Butylphenol)
IATA: Environmentally hazardous substance, solid, n.o.s. (4-tert-Butylphenol)

14.3 Transport hazard class(es)
ADR/RID: 9
IMDG: 9
IATA: 9

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

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

14.6 Special precautions for user

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

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.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H361f Suspected of damaging fertility.
H411 Toxic to aquatic life with long lasting effects.

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.