

# Methyl 4-tert-butylbenzoate

sc-228550



The Power to Question

## Material Safety Data Sheet

Hazard Alert Code  
Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

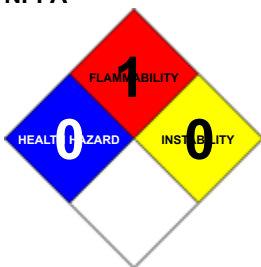
### PRODUCT NAME

Methyl 4-tert-butylbenzoate

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

### EMERGENCY

ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

C12-H16-O2, (CH3)3CC6H4CO2CH3

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

|              | Min | Max |
|--------------|-----|-----|
| Flammability | 1   |     |
| Toxicity     | 0   |     |
| Body Contact | 0   |     |
| Reactivity   | 1   |     |
| Chronic      | 0   |     |

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4



### CANADIAN WHMIS SYMBOLS

None

## EMERGENCY OVERVIEW

### RISK

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

■ The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion".

This is because of the lack of corroborating animal or human evidence.

##### EYE

■ Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

##### SKIN

■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

■ The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis.

The material is unlikely to produce an irritant dermatitis as described in EC Directives .

■ Open cuts, abraded or irritated skin should not be exposed to this material.

■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.

Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

##### INHALED

■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models).

Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

■ Inhalation hazard is increased at higher temperatures.

#### CHRONIC HEALTH EFFECTS

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME                        | CAS RN     | %   |
|-----------------------------|------------|-----|
| methyl 4-tert-butylbenzoate | 26537-19-9 | >98 |

## Section 4 - FIRST AID MEASURES

##### SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

##### EYE

If this product comes in contact with eyes

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

##### SKIN

If skin or hair contact occurs

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

##### INHALED

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

#### NOTES TO PHYSICIAN

- Treat symptomatically.

### Section 5 - FIRE FIGHTING MEASURES

|                            |               |
|----------------------------|---------------|
| Vapour Pressure (mmHG)     | Not available |
| Upper Explosive Limit (%)  | Not available |
| Specific Gravity (water=1) | 0.995         |
| Lower Explosive Limit (%)  | Not available |

#### EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

#### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

#### GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.

#### FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

### Section 6 - ACCIDENTAL RELEASE MEASURES

#### MINOR SPILLS

Environmental hazard - contain spillage.

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

#### MAJOR SPILLS

Environmental hazard - contain spillage.

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

### RECOMMENDED STORAGE METHODS

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

The following materials had no OELs on our records

- methyl 4-tert-butylbenzoate CAS26537-19-9

### PERSONAL PROTECTION



### RESPIRATOR

•Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 1432000 & 1492001, ANSI Z88 or national equivalent)

### EYE

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

### HANDS/FEET

Wear general protective gloves, eg. light weight rubber gloves.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity
- Neoprene gloves

### OTHER

No special equipment needed when handling small quantities.

OTHERWISE

- Overalls.
- Barrier cream.
- Eyewash unit.

### ENGINEERING CONTROLS

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Floats on water.

|                           |                   |                                |                 |
|---------------------------|-------------------|--------------------------------|-----------------|
| State                     | Liquid            | Molecular Weight               | 192.25          |
| Melting Range (°F)        | Not available     | Viscosity                      | Not Available   |
| Boiling Range (°F)        | 252- 255 (9mm Hg) | Solubility in water (g/L)      | Partly miscible |
| Flash Point (°F)          | >230              | pH (1% solution)               | Not applicable. |
| Decomposition Temp (°F)   | Not available.    | pH (as supplied)               | Not applicable  |
| Autoignition Temp (°F)    | Not available     | Vapor Pressure (mmHG)          | Not available   |
| Upper Explosive Limit (%) | Not available     | Specific Gravity (water=1)     | 0.995           |
| Lower Explosive Limit (%) | Not available     | Relative Vapor Density (air=1) | >1              |
| Volatile Component (%vol) | Not available     | Evaporation Rate               | Not available   |

### APPEARANCE

Liquid; does not mix well with water.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

### STORAGE INCOMPATIBILITY

- Avoid reaction with oxidising agents

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

methyl 4-tert-butylbenzoate

### TOXICITY AND IRRITATION

#### METHYL 4-TERT-BUTYLBENZOATE

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

No significant acute toxicological data identified in literature search.

Daily skin painting with solutions of 4-tert-butylbenzoic acid (PTBBA) produced damage to the kidneys, liver, lungs and testes of rats. Feeding trials produced kidney and liver damage. Cutting fluid containing 17.5, 25, 70 or 140 mg/kg body weight PTBBA was applied to the backs of male rats once a day, 5 days a week for 13 weeks.

## Section 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 This material and its container must be disposed of as hazardous waste.  
 Avoid release to the environment.  
 Refer to special instructions/ safety data sheets.

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.  
 † Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.  
 A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

## Section 14 - TRANSPORTATION INFORMATION



DOT:

|                         |        |   |                                 |
|-------------------------|--------|---|---------------------------------|
| Symbols:                | G      | Hazard class or Division:                         | 9                               |
| Identification Numbers: | UN3082 | PG:   | III                             |
| Label Codes:            | 9      | Special provisions:                               | 8, 146, 335, IB3, T4, TP1, TP29 |
| Packaging: Exceptions:  | 155    | Packaging: Non-bulk:                              | 203                             |
| Packaging: Exceptions:  | 155    | Quantity limitations:<br>Passenger aircraft/rail: | No limit                        |

Quantity Limitations: Cargo No limit Vessel stowage: Location: A  
aircraft only:

Vessel stowage: Other: None

Hazardous materials descriptions and proper shipping names:  
Environmentally hazardous substance, liquid, n.o.s

**Air Transport IATA:**

|                     |      |                    |      |
|---------------------|------|--------------------|------|
| ICAO/IATA Class:    | 9    | ICAO/IATA Subrisk: | None |
| UN/ID Number:       | 3082 | Packing Group:     | III  |
| Special provisions: | A97  |                    |      |

Cargo Only

|   |      |   |         |
|---|------|---|---------|
| Packing Instructions:                   | 964  | Maximum Qty/Pack:                       | 450 L   |
| Passenger and Cargo                     |      | Passenger and Cargo                     |         |
| Packing Instructions:                   | 964  | Maximum Qty/Pack:                       | 450 L   |
| Passenger and Cargo<br>Limited Quantity |      | Passenger and Cargo<br>Limited Quantity |         |
| Packing Instructions:                   | Y964 | Maximum Qty/Pack:                       | 30 kg G |

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. \*(CONTAINS METHYL 4-TERT-BUTYLBENZOATE)

**Maritime Transport IMDG:**

|                     |         |                     |         |
|---------------------|---------|---------------------|---------|
| IMDG Class:         | 9       | IMDG Subrisk:       | None    |
| UN Number:          | 3082    | Packing Group:      | III     |
| EMS Number:         | F-A,S-F | Special provisions: | 274 335 |
| Limited Quantities: | 5 L     | Marine Pollutant:   | Yes     |

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains methyl 4-tert-butylbenzoate)

### Section 15 - REGULATORY INFORMATION

No data for methyl 4-tert-butylbenzoate (CAS: , 26537-19-9)

### Section 16 - OTHER INFORMATION

**Denmark Advisory list for selfclassification of dangerous substances**

| Substance                     | CAS          | Suggested codes        |
|-------------------------------|--------------|------------------------|
| methyl 4- tert- butylbenzoate | 26537- 19- 9 | Mut3; R68 N;<br>R50/53 |

*Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.*

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

*This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or*

*criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.*  
[www.chemwatch.net](http://www.chemwatch.net)

Issue Date: Sep-17-2010

Print Date:Nov-22-2011