

SAFETY DATA SHEET

Revision Date 19-Dec-2025

Revision Number 5

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

| | |
|-----------------------------|---|
| Product Name | 4-tert-Butylbenzoyl chloride |
| Cat No. : | AC169100000; AC169100050; AC169100100 |
| CAS No | 1710-98-1 |
| Synonyms | No information available |
| Recommended Use | Laboratory chemicals. |
| Uses advised against | Food, drug, pesticide or biocidal product use. |

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024).

| | |
|--|--------------|
| Flammable liquids | Category 4 |
| Acute oral toxicity | Category 4 |
| Acute dermal toxicity | Category 4 |
| Acute Inhalation Toxicity - Vapors | Category 4 |
| Skin Corrosion/Irritation | Category 1 B |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system. | |

Label Elements

Signal Word

Signal Danger

Hazard Statements

Combustible liquid

Causes severe skin burns and eye damage

May cause respiratory irritation

Harmful if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapors/spray

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep cool

Response

Immediately call a POISON CENTER or doctor

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Skin

Take off contaminated clothing and wash before reuse

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion

Rinse mouth

Do NOT induce vomiting

FireIn case of fire: Use CO₂, dry chemical, or foam to extinguish**Storage**

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Hazards classified under paragraph (d)(1)(ii) of 1910.1200**Hazards resulting from a reaction with other chemicals under normal conditions of use**

Contact with water liberates toxic gas.

3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|--|-----------|----------|
| Benzoyl chloride, 4-(1,1-dimethylethyl)- | 1710-98-1 | <=100 |

4. First-aid measures

| | |
|--|---|
| Eye Contact | Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. |
| Skin Contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. |
| Inhalation | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required. |
| Ingestion | Do NOT induce vomiting. Call a physician immediately. |
| Most important symptoms and effects | Difficulty in breathing. Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Carbon dioxide (CO ₂). Dry chemical. Chemical foam. Water mist may be used to cool closed containers. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | 87 °C / 188.6 °F |
| Method - | No information available |
| Autoignition Temperature | No information available |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Contact with water liberates toxic gas. Water reactive. Produce flammable gases on contact with water. Combustible material. Containers may explode when heated.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Chlorine. Hydrogen chloride gas.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

| Health | Flammability | Instability | Physical hazards |
|---------------|---------------------|--------------------|-------------------------|
| 3 | 2 | 0 | W |

6. Accidental release measures

| | |
|----------------------------------|--|
| Personal Precautions | Remove all sources of ignition. Take precautionary measures against static discharges. |
| Environmental Precautions | See Section 12 for additional Ecological Information. |

Methods for Containment and Clean Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Wear self-contained breathing

apparatus and protective suit. Do not expose spill to water. Remove all sources of ignition.

7. Handling and Storage

Handling

Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Handle product only in closed system or provide appropriate exhaust ventilation. Do not allow contact with water. Don't use. Keep under nitrogen. Keep away from open flames, hot surfaces and sources of ignition.

Storage.

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep from any possible contact with water. Corrosives area. Keep away from water or moist air. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Incompatible Materials. Bases. Strong oxidizing agents. Metals.

8. Exposure controls / personal protection

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type:

Particulates filter conforming to EN 143. Acid gases filter. Type E. Yellow. conforming to EN14387.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical State

Liquid

Color

Light yellow

Odor

No information available

Odor Threshold

No information available

Property

Values

Remarks

• Method

Melting Point/Range

No data available

Softening Point

No data available

Boiling Point/Range

135 °C / 275 °F

@ 20 mmHg

Flash Point

87 °C / 188.6 °F

Method - No information available

Flammability (liquid)

Combustible liquid

On basis of test data

Flammability (solid,gas)

Not applicable

Liquid

Explosion Limits

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

| | |
|---|--------------------------|
| pH | No information available |
| Viscosity | No data available |
| Water Solubility | readily hydrolysed |
| Solubility in other solvents | No information available |
| Partition Coefficient (n-octanol/water) | No data available |
| Vapor Pressure | 1.000 |
| Density / Specific Gravity | Not applicable |
| Bulk Density | 6.78 |
| Vapor Density | Not applicable (liquid) |
| Particle characteristics | Liquid (Air = 1.0) |

Other Information

| | |
|----------------------|--|
| Molecular Formula | C11 H13 Cl O |
| Molecular Weight | 196.68 |
| Explosive Properties | explosive air/vapour mixtures possible |

10. Stability and reactivity

| | |
|----------------------------------|--|
| Reactive Hazard | Yes |
| Stability | Moisture sensitive. Contact with water liberates toxic gas. |
| Conditions to Avoid | Incompatible products. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition. |
| Incompatible Materials | Bases, Strong oxidizing agents, Metals |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO ₂), Chlorine, Hydrogen chloride gas |
| Hazardous Polymerization | No information available. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information**Information on expected route of exposure**

| | |
|------------|---|
| Inhalation | Not an expected route of exposure. |
| Ingestion | May be harmful if swallowed. |
| Eyes | Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness. |
| Skin | Skin Corrosion/Irritation. Avoid contact with skin. Causes burns. Harmful in contact with skin. |

Toxicology data for the components

| | |
|--|--------------------------|
| Toxicologically Synergistic Products | No information available |
| (b) skin corrosion/irritation; | Category 1 B |
| (c) serious eye damage/irritation; | Category 1 |
| (d) respiratory or skin sensitization; | |
| Respiratory | No data available |
| Skin | No data available |

(e) germ cell mutagenicity; No data available

(f) carcinogenicity;

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|--|-----------|------------|------------|------------|------------|------------|
| Benzoyl chloride, 4-(1,1-dimethylethyl)- | 1710-98-1 | Not listed |

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

| | |
|--------------------------------|---------------------------------|
| UN-No | UN2922 |
| Proper Shipping Name | Corrosive liquid, toxic, n.o.s. |
| Hazard Class | 8 |
| Subsidiary Hazard Class | 6.1 |

| | |
|--------------------------------|----------------------------------|
| Packing Group | II |
| TDG | |
| UN-No | UN2922 |
| Proper Shipping Name | Corrosive solid, toxic, n.o.s. |
| Hazard Class | 8 |
| Subsidiary Hazard Class | 6.1 |
| Packing Group | II |
| IATA | |
| UN-No | UN2922 |
| Proper Shipping Name | CORROSIVE LIQUID, TOXIC, N.O.S.* |
| Hazard Class | 8 |
| Subsidiary Hazard Class | 6.1 |
| Packing Group | II |
| IMDG/IMO | |
| UN-No | UN2922 |
| Proper Shipping Name | Corrosive liquid, toxic, n.o.s. |
| Hazard Class | 8 |
| Subsidiary Hazard Class | 6.1 |
| Packing Group | II |

15. Regulatory Information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|--|-----------|------|---|-----------------------------|
| Benzoyl chloride, 4-(1,1-dimethylethyl)- | 1710-98-1 | X | INACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDSL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|--|-----------|-----|------|-----------|-------|------|------|------|-------|------|
| Benzoyl chloride, 4-(1,1-dimethylethyl)- | 1710-98-1 | - | X | 216-973-1 | - | X | X | - | - | - |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations Not applicable

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH Not applicable

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--|-----------|---|---|---|
| Benzoyl chloride, 4-(1,1-dimethylethyl)- | 1710-98-1 | - | - | - |

Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--|-----------|----------------|------------------------------|---------------------------|--|
| Benzoyl chloride, 4-(1,1-dimethylethyl)- | 1710-98-1 | Not applicable | Not applicable | Not applicable | Not applicable |

Contains component(s) that meet a 'definition' of per & poly fluorooalkyl substance (PFAS)?
Not applicable

Other International Regulations

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities | Seveso III Directive (2012/18/EC) - Qualifying Quantities | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-----------|--------|---|---|----------------------------|------------------------------------|
| | | | | | |

| | | for Major Accident Notification | for Safety Report Requirements | | |
|---|-----------|---------------------------------|--------------------------------|----------------|----------------|
| Benzoyl chloride, 4-(1,1-dimethylethyl)- | 1710-98-1 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other Information

Prepared By

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Revision Date

19-Dec-2025

Print Date

19-Dec-2025

Revision Summary

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS