SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 *Product identifiers*

Product name: **BENZOYL CHLORIDE**

CAS-No.: **98-88-4**

Product Number: **A66266**

1.2 *Relevant identified uses of the substance or mixture and uses advised against*

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 *Details of the supplier of the safety data sheet*

Company : Philip Harris Ltd., 2 Gregory Street, Hyde, Cheshire, SK14 4HR, UNITED KINGDOM

Telephone: +44 (0)845 1200 506 Fax: +44 (0)161 367 2140

Email: enquiries@philipharris.co.uk

1.4 *Emergency telephone number*

Emergency Phone #: **+44 (0)845 1200 506**

2. HAZARDS IDENTIFICATION

2.1 *Classification of the substance or mixture*

According to Regulation (EC) No1272/2008: Skin corrosion (Category 1B)

According to European Directive 67/548/EEC as amended: Causes burns.

2.2 *Label elements*

Pictogram 

Signal word Danger

Hazard statement(s)

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

Hazard symbol(s)

C Corrosive

R-phrase(s)

R34 Causes burns.

S-phrase(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 *Other hazards* – no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 *Substances*

Benzoyl chloride

Formula:	**C_6H_5COCl**
Molecular Weight:	**140.57g/mol**
CAS-No.:	**98-88-4**
EC-No.:	**202-710-8**
Index-No.:	**607-012-00-0**

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.

In case of skin contact:

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

In case of eye contact:

Rinse thoroughly with plenty of water for at least 15 minutes.

If swallowed:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 *Most important symptoms and effects, both acute and delayed*

no data available

4.3 *Indication of immediate medical attention and special treatment needed*

no data available

5. FIRE-FIGHTING 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*

Container explosion may occur under fire conditions.

5.3 *Precautions for fire-fighters*

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 *Further information*

Water hydrolyzes material liberating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas.

6. ACCIDENTAL RELEASE MEASURES

6.1 *Personal precautions, protective equipment and emergency procedures*

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

6.2 *Environmental precautions*

Do not let product enter drains.

6.3 *Methods and materials for containment and cleaning up*

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 *Reference to other sections*

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 *Precautions for safe handling*

Avoid inhalation of vapour or mist. Keep away from sources of ignition. Take measures to prevent the build up of electrostatic charge.

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.

Store under inert gas. Moisture sensitive.

7.3 *Specific end uses*

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 *Control parameters*

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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).

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: 2 at 1 g/L

e) Melting/freezing point: -1 °C Melting point/range: no data available

f) Initial boiling point and boiling range: 198 °C

g) Flash point: 72 °C - closed cup

h) Evaporation rate: no data available

i) Flammability (solid, gas): no data available

j) Upper/lower flammability or explosive limits: 1.2-4.9% (V)

k) Vapour pressure: 1 hPa at 32 °C

l) Vapour density: 4.85- (Air = 1.0)

m) Relative density: 1.211 g/mL at 25 °C

n) Water solubility: 2 g/L

o) Partition coefficient: n-octanol/water: no data available

p) Autoignition temperature: 569 °C

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

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*

Exposure to moisture.

10.5 *Incompatible materials*

Strong oxidizing agents, Strong bases, Alcohols

10.6 *Hazardous decomposition products*

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

11.1 *Information on toxicological effects*

Acute toxicity

LD50 Oral - rat-1,900 mg/kg. LC50 Inhalation- rat-2h -1,870 mg/m^3. LD50 Dermal - rabbit-790mg/kg

Skin corrosion/irritation

Skin - rabbit - Severe skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - rabbit - Severe eye irritation

Respiratory or skin sensitization

May cause sensitization by inhalation.

Germ cell mutagenicity

no data available

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. 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

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Potential health effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion May be harmful if swallowed. Causes burns.

Skin May be harmful if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure

spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Lachrymation, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Additional Information

RTECS: DM6600000

12. ECOLOGICAL INFORMATION

12.1 *Toxicity*

Toxicity to fish LC50 - *Pimephales promelas* (fathead minnow) - 34.1 mg/L - 96 h

LC0 - *Danio rerio* (zebra fish) - 7.5 mg/L - 96 h

12.2 *Persistence and degradability*

Biodegradability aerobic: Result: 95 % - Readily biodegradable. Method: Closed Bottle test

12.3 *Bioaccumulative potential*

no data available

12.4 *Mobility in soil*

no data available

12.5 *Results of PBT and vPvB assessment*

no data available

12.6 *Other adverse effects*

no data available

13. DISPOSAL CONSIDERATIONS

13.1 *Waste treatment methods*

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 *UN-Number*

ADR/RID:	1736	IMDG:	1736	IATA:	1736

14.2 *UN proper shipping name*

ADR/RID: BENZOYL CHLORIDE

IMDG: BENZOYL CHLORIDE

IATA: BENZOYL CHLORIDE

14.3 *Transport hazard class(es)*

ADR/RID:	8	IMDG:	8	IATA:	8

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 users*

EMS-No: F-A, S-B

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

15.2 *Chemical Safety Assessment*

no data available

16. OTHER INFORMATION

H314 Causes severe skin burns and eye damage.

Skin Corr. Skin corrosion

C Corrosive

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R34 Causes burns.

R43 May cause sensitization by skin contact.