

Univ of Louisville  
Rm 233 Belknap Research Bldg  
2210 S Brook St  
Louisville, KY 40292

07/28/2008

USA

Material Safety Data Sheets

Attached are Material Safety Data Sheets (MSDS's) for the products in your order #005871549.

The following MSDS's are included with this shipment:

A10739      Benzophenone, 99%

Alfa Aesar now offers MSDS documentation in various languages. Also, our MSDS documentation is available on our web site at [www.alfa.com](http://www.alfa.com) and on CDROM.

Please contact us for further information.

# Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 07/28/2008

Reviewed on 01/25/2007

## 1 Identification of substance:

### Product details:

**Product name:** Benzophenone

### Stock number:

A10739  
L02489

### Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company  
Johnson Matthey Catalog Company, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Emergency Phone: (978) 521-6300  
CHEMTREC: (800) 424-9300  
Web Site: www.alfa.com

**Information Department:** Health, Safety and Environmental Department

### Emergency information:

During normal hours the Health, Safety and Environmental Department.  
After normal hours call Chemtrec at (800) 424-9300.

## 2 Composition/Data on components:

### Chemical characterization:

#### Description: (CAS#)

Benzophenone (CAS# 119-61-9), 100%

#### Identification number(s):

**EINECS Number:** 204-337-6

## 3 Hazards identification

### Hazard description:



N Dangerous for the environment

### Information pertaining to particular dangers for man and environment

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Classification system

#### HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1
FIRE	1
REACTIVITY	1

Health (acute effects) = 1

Flammability = 1

Reactivity = 1

## 4 First aid measures

### After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

(Contd. on page 2)

USA

# Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 07/28/2008

Reviewed on 01/25/2007

**Product name: Benzophenone**

(Contd. of page 1)

## **After skin contact**

Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.

## **After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing** Seek immediate medical advice.

## **5 Fire fighting measures**

### **Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

### **Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Carbon monoxide (CO)

### **Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

## **6 Accidental release measures**

### **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

### **Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:** Pick up mechanically.

### **Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## **7 Handling and storage**

### **Handling**

#### **Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

#### **Information about protection against explosions and fires:**

No special measures required.

### **Storage**

#### **Requirements to be met by storerooms and receptacles:**

No special requirements.

#### **Information about storage in one common storage facility:**

Store away from oxidizing agents.

Store away from reducing agents.

#### **Further information about storage conditions:**

Keep container tightly sealed.

(Contd. on page 3)

USA

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 07/28/2008

Reviewed on 01/25/2007

Product name: Benzophenone

(Contd. of page 2)

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

Not required.

Additional information: No data

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information	
Form:	Crystalline
Color:	White
Odor:	Pleasant
Change in condition	
Melting point/Melting range:	48-49°C (118-120°F)
Boiling point/Boiling range:	305°C (581°F)
Sublimation temperature / start:	Not determined
Flash point:	138°C (280°F)
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density at 20°C (68°F):	1.0976 g/cm³

(Contd. on page 4)

USA

AITA Aesar  
A Johnson Matthey Company

AITA Aesar  
A Johnson Matthey Company

AITA Aesar  
A Johnson Matthey Company

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 07/28/2008

Reviewed on 01/25/2007

Product name: Benzophenone

(Contd. of page 3)

Solubility in / Miscibility with Water: Soluble

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Oxidizing agents
Reducing agents

Dangerous reactions No dangerous reactions known

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

Table with 3 columns: Route, LD50, and Value. Rows: Oral LD50 >10000 mg/kg (rat); Dermal LD50 3535 mg/kg (rabbit)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity: Ingestion may cause nausea and vomiting.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

Ecotoxicological effects:

Remark: Very toxic for fish

General notes:

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Do not allow material to be released to the environment without proper governmental permits.

Very toxic for aquatic organisms

13 Disposal considerations

Product:

Recommendation

Consult state, local or national regulations to ensure proper disposal.

(Contd. on page 5)

AITA Aesar A Johnson Matthey Company

AITA Aesar A Johnson Matthey Company

AITA Aesar A Johnson Matthey Company

**Material Safety Data Sheet**  
acc. to OSHA and ANSI

Printing date 07/28/2008

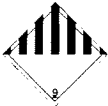
Reviewed on 01/25/2007

**Product name: Benzophenone**

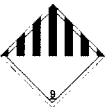
(Contd. of page 4)

**Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**14 Transport information****DOT regulations:**

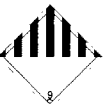
**Hazard class:** 9  
**Identification number:** UN3077  
**Packing group:** III  
**Proper shipping name (technical name):** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benzophenone)  
**Label:** 9

**Land transport ADR/RID (cross-border)**

**ADR/RID class:** 9 (M7) Miscellaneous dangerous substances and articles  
**Danger code (Kemler):** 90  
**UN-Number:** 3077  
**Packaging group:** III  
**Description of goods:** 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benzophenone)

**Maritime transport IMDG:**

**IMDG Class:** 9  
**UN Number:** 3077  
**Label:** 9  
**Packaging group:** III  
**Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benzophenone)

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 9

(Contd. on page 6)

USA

**Alfa Aesar**  
A Johnson Matthey Company

**Alfa Aesar**  
A Johnson Matthey Company

**Alfa Aesar**  
A Johnson Matthey Company

**Material Safety Data Sheet**  
acc. to OSHA and ANSI

Printing date 07/28/2008

Reviewed on 01/25/2007

**Product name:** Benzophenone

(Contd. of page 5)

<b>UN/ID Number:</b>	3077
<b>Label</b>	9
<b>Packaging group:</b>	III
<b>Proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benzophenone)

**15 Regulations****Product related hazard informations:****Hazard symbols:**

N Dangerous for the environment

**Risk phrases:**

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**Safety phrases:**

57 Use appropriate container to avoid environmental contamination.

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

**Information about limitation of use:**

For use only by technically qualified individuals.

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing MSDS:** Health, Safety and Environmental Department.**Contact:** Paul V. Connolly

USA

**Alfa Aesar**  
A Johnson Matthey Company

**Alfa Aesar**  
A Johnson Matthey Company

**Alfa Aesar**  
A Johnson Matthey Company