1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ibuprofen
Product Number : I4883
Brand : Sigma
Supplier : Sigma-Aldrich
   3050 Spruce Street
   SAINT LOUIS MO  63103
   USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555
Preparation Information : Sigma-Aldrich Corporation
   Product Safety - Americas Region
   1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect, Harmful by ingestion., Teratogen

Target Organs

Kidney

GHS Classification
Acute toxicity, Oral (Category 4)

GHS Label elements, including precautionary statements

Pictogram

Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed.

Precautionary statement(s)

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P501 Dispose of contents/container to an approved waste disposal plant.

HMIS Classification

Health hazard: 1
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0

NFPA Rating

Health hazard: 1
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

**Inhalation**  May be harmful if inhaled. May cause respiratory tract irritation.

**Skin**  Harmful if absorbed through skin. May cause skin irritation.

**Eyes**  May cause eye irritation.

**Ingestion**  Harmful if swallowed.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms:** α-Methyl-4-(isobutyl)phenylacetic acid  
(±)-2-(4-Isobutylphenyl)propanoic acid

**Formula:** \( \text{C}_{13}\text{H}_{18}\text{O}_{2} \)

**Molecular Weight:** 206.28 g/mol

<table>
<thead>
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<th>Concentration</th>
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<tbody>
<tr>
<td><strong>Ibuprofen</strong></td>
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<tr>
<td>CAS-No.</td>
<td>15687-27-1</td>
</tr>
<tr>
<td>EC-No.</td>
<td>239-784-6</td>
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### 4. FIRST AID MEASURES

**General advice**  
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**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**  
Flush eyes with water as a precaution.

**If swallowed**  
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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### 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**  
Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**  
Hazardous decomposition products formed under fire conditions. - Carbon oxides

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### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

**Environmental precautions**  
Do not let product enter drains.

**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.

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### 7. HANDLING AND STORAGE

**Precautions for safe handling**  
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

**Respiratory protection**
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand 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.

**Immersion protection**
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 480 min
Material tested: Dermatril® (Aldrich Z677272, Size M)

**Splash protection**
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 30 min
Material tested: Dermatril® (Aldrich Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Eye protection**
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and 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.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Colour</td>
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**Safety data**

<table>
<thead>
<tr>
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<th>Value</th>
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<tbody>
<tr>
<td>pH</td>
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</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Melting point/range: 77 - 78 °C (171 - 172 °F)</td>
</tr>
<tr>
<td>Boiling point</td>
<td>no data available</td>
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</tbody>
</table>
Flash point & no data available 
Ignition temperature & no data available 
Autoignition temperature & no data available 
Lower explosion limit & no data available 
Upper explosion limit & no data available 
Vapour pressure & no data available 
Density & no data available 
Water solubility & no data available 
Partition coefficient: n-octanol/water & no data available 
Relative vapour density & no data available 
Odour & no data available 
Odour Threshold & no data available 
Evaporation rate & no data available

10. STABILITY AND REACTIVITY
   
   **Chemical stability**
   Stable under recommended storage conditions.

   **Possibility of hazardous reactions**
   no data available

   **Conditions to avoid**
   no data available

   **Materials to avoid**
   Strong oxidizing agents

   **Hazardous decomposition products**
   Hazardous decomposition products formed under fire conditions. - Carbon oxides
   Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

   **Acute toxicity**
   **Oral LD50**
   LD50 Oral - rat - 636 mg/kg

   **Inhalation LC50**
   no data available

   **Dermal LD50**
   no data available

   Other information on acute toxicity
   no data available

   **Skin corrosion/irritation**
   no data available

   **Serious eye damage/eye irritation**
   no data available

   **Respiratory or skin sensitization**
   no data available

   **Germ cell mutagenicity**
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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
Possible risk of congenital malformation in the fetus.

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: Harmful if swallowed.
Skin: Harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.

Signs and Symptoms of Exposure
Gastrointestinal disturbance, Nausea, Vomiting, Diarrhoea, Constipation., Dizziness, Headache, Drowsiness

Synergistic effects
no data available

Additional Information
RTECS: MU6640000

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Harmful by ingestion., Teratogen

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
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New Jersey Right To Know Components

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California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
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