

# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**MSDS Name:** (2R,3R)-2-(((9H-Fluoren-9-yl)methoxy)carbonyl)amino)-3-(tert-butoxy)butanoic acid

**CAS Number:** 170643-02-4

**Catalog Numbers:** AK-63131

For R&D use only.

**Company Identification:**

Ark Pharm, Inc.

1840 Industrial Drive, Suite 280

Libertyville, IL 60048 USA

Tel: 847-367-3680

Fax: 847-367-3681

## 2. COMPOSITION, INFORMATION ON INGREDIENTS

**Molecular Formula:** C<sub>23</sub>H<sub>27</sub>NO<sub>5</sub>

**Molecular Weight:** 397.464

## 3. HAZARDS IDENTIFICATION EMERGENCY OVERVIEW

### 3.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Acute toxicity, Oral (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2)

Specific target organ toxicity - single exposure (Category 3)

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Harmful if swallowed. Irritating to eyes, respiratory system and skin.

### 3.2 Label elements

**Labelling according Regulation (EC) No 1272/2008 [CLP]**



Pictogram

Signal word

Warning

Hazard statement(s)

H302

Harmful if swallowed.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statement(s)

P261

Avoid breathing dust.

P305 + P351 + P338

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

Supplemental Hazard Statements

None

**According to European Directive 67/548/EEC as amended**

Hazard symbol(s)



R-phrase(s)

R22

Harmful if swallowed.

R36/37/38

Irritating to eyes, respiratory system and skin.

S-phrase(s)

S26

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

S36/37

Wear suitable protective clothing and gloves.

**3.3 Other hazards**

None

## 4. FIRST AID MEASURES

**Eyes:** Flush eyes with plenty of water occasionally lifting the upper and lower lids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water while removing contaminated clothing and shoes.

**Ingestion:** Get medical aid. Wash mouth out with water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

## 5. FIRE FIGHTING MEASURES

**General Information:** As in any fire, wear a self-contained breathing apparatus and full protective gear.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide or chemical foam.

## 6. ACCIDENTAL RELEASE MEASURES

**General Information:** Use proper personal protective equipment.

**Spills/Leaks:** Vacuum or sweep up material and place into suitable disposal container. Avoid generating dusty conditions.

## 7. HANDLING AND STORAGE

**Handling:** Avoid breathing dust, vapor, mist or gas. Avoid contact with eyes, skin.

**Storage:** Storage temperature: 2 - 4 °C and Keep container tightly closed in a dry and well-ventilated place.

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Use adequate ventilation to keep airborne concentrations low.

### Personal Protective Equipment

**Eyes:** Wear chemical safety goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Wear appropriate respirators where necessary.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	No data available.
Melting Point	No data available.
Solubility in water	Slightly soluble.

Vapor Pressure	No data available.
Vapor Density	No data available.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** This product is relatively unstable under normal temperature.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous combustion or Decomposition products:** Carbon monoxide, carbon dioxide, and nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

May be toxic by inhalation, in contact with skin and if swallowed.

## 12. ECOLOGICAL INFORMATION

Not available.

## 13. DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

## 14. TRANSPORT INFORMATION

Not available.

## 15. REGULATORY INFORMATION

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

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

Not available.

**Chemical Safety Assessment:**

Not available.

## 16. ADDITIONAL INFORMATION

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Revision Date 12/30/2011

Print Date 03/24/2013