

**Safety Data Sheet**  
 per OSHA HazCom 2012

## 1 Identification

**Product identifier**

**Product name:** Toremifene

**Stock number:** J63803

**CAS Number:**  
 89778-26-7

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

**Identified use:** SU24 Scientific research and development

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

**Manufacturer/Supplier:**

Alfa Aesar  
 Thermo Fisher Scientific Chemicals, Inc.  
 30 Bond Street  
 Ward Hill, MA 01835-8099  
 Tel: 800-343-0660  
 Fax: 800-322-4757  
 Email: tech@alfa.com  
 www.alfa.com

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

**Emergency telephone number:**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

## 2 Hazard(s) identification

**Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

**Hazards not otherwise classified** No information known.

**Label elements**

**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

**Hazard pictograms**



GHS05 GHS07

**Signal word** Danger

**Hazard statements**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

**Precautionary statements**

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

P264 Wash thoroughly after handling.

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/doctor/...

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**WHMIS classification**

D2B - Toxic material causing other toxic effects



**Classification system**

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

(Hazardous Materials Identification System)

HEALTH	2	Health (acute effects) = 2
FIRE	1	Flammability = 1
REACTIVITY	1	Physical Hazard = 1

Flammability = 1

Physical Hazard = 1

**Other hazards**

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3 Composition/information on ingredients

**Chemical characterization: Substances**

**CAS# Description:**

89778-26-7 Toremifene

## 4 First-aid measures

**Description of first aid measures**

**After inhalation**

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

Seek immediate medical advice.

**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 medical treatment.

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**Information for doctor**

**Most important symptoms and effects, both acute and delayed** No further relevant information available.  
**Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**5 Fire-fighting measures**

**Extinguishing media**

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

**Special hazards arising from the substance or mixture**

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

**Advice for firefighters**

**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

**Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.

**Methods and material for containment and cleaning up:** Dispose of contaminated material as waste according to section 13.

**Prevention of secondary hazards:** No special measures required.

**Reference to other sections**

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**

**Precautions 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 information known.

**Conditions for safe storage, including any incompatibilities**

**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.

**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

**Specific end use(s)** No further relevant information available.

**8 Exposure controls/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.

**Control parameters**

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** No data

**Exposure controls**

**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.

Maintain an ergonomically appropriate working environment.

**Breathing equipment:** Use suitable respirator when high concentrations are present.

**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

**Penetration time of glove material (in minutes)** Not determined

**Eye protection:** Tightly sealed goggles

**Body protection:** Protective work clothing.

**9 Physical and chemical properties**

**Information on basic physical and chemical properties**

**General information**

**Appearance:**

**Form:** Powder  
**Color:** White to off-white  
**Odor:** Not determined  
**Odor threshold:** Not determined.

**pH-value:** Not applicable.

**Change in condition**

**Melting point/Melting range:** 108-110 °C (226-230 °F)

**Boiling point/Boiling range:** Not determined

**Sublimation temperature / start:** Not determined

**Flammability (solid, gaseous)** Not determined.

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Auto igniting:** Not determined.

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**Danger of explosion:** Not determined.  
**Explosion limits:**  
**Lower:** Not determined  
**Upper:** Not determined  
**Vapor pressure:** Not applicable.  
**Density:** Not determined  
**Relative density:** Not determined.  
**Vapor density:** Not applicable.  
**Evaporation rate:** Not applicable.  
**Solubility in / Miscibility with Water:** Not determined  
**Partition coefficient (n-octanol/water):** Not determined.  
**Viscosity:**  
**dynamic:** Not applicable.  
**kinematic:** Not applicable.  
**Other information:** No further relevant information available.

### 10 Stability and reactivity

**Reactivity:** No information known.  
**Chemical stability:** Stable under recommended storage conditions.  
**Thermal decomposition / conditions to be avoided:** Decomposition will not occur if used and stored according to specifications.  
**Possibility of hazardous reactions:** No dangerous reactions known  
**Conditions to avoid:** No further relevant information available.  
**Incompatible materials:** Oxidizing agents  
**Hazardous decomposition products:**  
 Carbon monoxide and carbon dioxide  
 Nitrogen oxides

### 11 Toxicological information

**Information on toxicological effects**  
**Acute toxicity:**  
 Harmful if swallowed.  
 The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

**LD/LC50 values that are relevant for classification:**

Oral | LD50 | 1700 mg/kg (rat)

**Skin irritation or corrosion:** May cause irritation  
**Eye irritation or corrosion:** Causes serious eye damage.  
**Sensitization:** No sensitizing effects known.  
**Germ cell mutagenicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.  
**Carcinogenicity:** No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.  
**Reproductive toxicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.  
**Specific target organ system toxicity - repeated exposure:** No effects known.  
**Specific target organ system toxicity - single exposure:** No effects known.  
**Aspiration hazard:** No effects known.  
**Subacute to chronic toxicity:** No effects known.  
**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

### 12 Ecological information

**Toxicity**  
**Aquatic toxicity:** No further relevant information available.  
**Persistence and degradability:** No further relevant information available.  
**Bioaccumulative potential:** No further relevant information available.  
**Mobility in soil:** No further relevant information available.  
**Ecotoxicological effects:**  
**Remark:** Very toxic for aquatic organisms  
**Additional ecological information:**  
**General notes:**  
 Do not allow material to be released to the environment without proper governmental permits.  
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
 Danger to drinking water if even extremely small quantities leak into the ground.  
 Also poisonous for fish and plankton in water bodies.  
 May cause long lasting harmful effects to aquatic life.  
 Avoid transfer into the environment.  
 Very toxic for aquatic organisms  
**Results of PBT and vPvB assessment**  
**PBT:** Not applicable.  
**vPvB:** Not applicable.  
**Other adverse effects:** No further relevant information available.

### 13 Disposal considerations

**Waste treatment methods**  
**Recommendation:** Consult state, local or national regulations to ensure proper disposal.  
**Uncleaned packagings:**  
**Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

<b>UN-Number</b>	
<b>DOT</b>	NA3077
<b>IMDG, IATA</b>	UN3077
<b>UN proper shipping name</b>	
<b>DOT</b>	Environmentally hazardous substances, solid, n.o.s. (Toremifene)
<b>IMDG, IATA</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Toremifene)

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**Transport hazard class(es)**

DOT, IMDG



Class  
Label  
Class  
Label  
IATA

9 Miscellaneous dangerous substances and articles.  
9  
9 (M7) Miscellaneous dangerous substances and articles  
9



Class  
Label

9 Miscellaneous dangerous substances and articles.  
9

Packing group  
DOT, IMDG, IATA

III

**Environmental hazards:**

**Special marking (ADR):**

Symbol (fish and tree)

**Special marking (IATA):**

Symbol (fish and tree)

**Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

**Transport/Additional information:**

DOT

**Marine Pollutant (DOT):**

No

**UN "Model Regulation":**

UN3077, Environmentally hazardous substances, solid, n.o.s. (Toremifene), 9, III

**15 Regulatory information**

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

**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

**Hazard pictograms**



GHS05 GHS07

**Signal word** Danger

**Hazard statements**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

**Precautionary statements**

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

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P310 Immediately call a POISON CENTER/doctor/...

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/...if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations**

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.

**SARA Section 313 (specific toxic chemical listings)** Substance is not listed.

**California Proposition 65**

**Prop 65 - Chemicals known to cause cancer** Substance is not listed.

**Prop 65 - Developmental toxicity** Substance is not listed.

**Prop 65 - Developmental toxicity, female** Substance is not listed.

**Prop 65 - Developmental toxicity, male** Substance is not listed.

**Information about limitation of use:** For use only by technically qualified individuals.

**Other regulations, limitations and prohibitive regulations**

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.** Substance is not listed.

**The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.**

Substance is not listed.

**Annex XIV of the REACH Regulations (requiring Authorisation for use)** Substance is not listed.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**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 SDS:** Global Marketing Department

**Date of preparation / last revision** 11/24/2015 / -

**Abbreviations and acronyms:**

RID: Règlement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)

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USA

**Product name: Toremifene**

IARC: International Agency for Research on Cancer  
EPA: Environmental Protection Agency (USA)

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USA