

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: Tamoxifen

CAS-No.: 10540-29-1

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

Identified uses : Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Carcinogenicity (Category 1B), H350

Reproductive toxicity (Category 1B), H360

Effects on or via lactation, H362

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pictogram                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Signal word                | Danger                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hazard statement(s)        | H350 May cause cancer.<br>H360 May damage fertility or the unborn child.<br>H362 May cause harm to breast-fed children.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Precautionary statement(s) | P201 Obtain special instructions before use.<br>P202 Do not handle until all safety precautions have been read and understood.<br>P260 Do not breathe dust or mist.<br>P263 Avoid contact during pregnancy/ while nursing.<br>P264 Wash skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P281 Use personal protective equipment as required.<br>P308 + P313 IF exposed or concerned: Get medical advice/ attention.<br>P405 Store locked up.<br>P501 Dispose of contents/ container to an approved waste disposal plant. |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula:  $C_{26}H_{29}NO$   
Molecular weight: 371.53 g/mol  
CAS-No.: 10540-29-1  
EC-No.: 234-118-0

#### Hazardous components

| Component        | Classification                               | Concentration |
|------------------|----------------------------------------------|---------------|
| <b>Tamoxifen</b> |                                              |               |
|                  | Carc. 1B; Repr. 1B; Lact. ; H350, H360, H362 | 90 -100 %     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

|                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                                                                                           |
| Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.       |
| <b>If inhaled</b>                                                                                               |
| If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| <b>In case of skin contact</b>                                                                                  |
| Wash off with soap and plenty of water. Consult a physician.                                                    |
| <b>In case of eye contact</b>                                                                                   |
| Flush eyes with water as a precaution.                                                                          |
| <b>If swallowed</b>                                                                                             |
| Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.             |

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.2 Indication of any immediate medical attention and special treatment needed

No data available

## 5. FIREFIGHTING 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

Carbon oxides, Nitrogen oxides (NOx)

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

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

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 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.

## 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature 2 - 8 °C

Light sensitive.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 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               | 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 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.                                                                                                                |
| Body Protection                   | Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.                                                                                                                                                                                                                                                        |
| Respiratory protection            | Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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). |
| Control of environmental exposure | Prevent further leakage or spillage if safe to do so. Do not let product enter drains.                                                                                                                                                                                                                                                                                                                                        |

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|                                         |                           |
|-----------------------------------------|---------------------------|
| Appearance                              | Form: solid               |
| Odour                                   | No data available         |
| Odour Threshold                         | No data available         |
| pH                                      | No data available         |
| Melting point/freezing point            | 97 - 98 °C (207 - 208 °F) |
| Initial boiling point and boiling range | No data available         |

|                                              |                   |
|----------------------------------------------|-------------------|
| Flash point                                  | Not applicable    |
| Evaporation rate                             | No data available |
| Flammability (solid, gas)                    | No data available |
| Upper/lower flammability or explosive limits | No data available |
| Vapour pressure                              | No data available |
| Vapour density                               | No data available |
| Relative density                             | No data available |
| Water solubility                             | No data available |
| Partition coefficient: n-octanol/water       | No data available |
| Auto-ignition temperature                    | No data available |
| Decomposition temperature                    | No data available |
| Viscosity                                    | No data available |
| Explosive properties                         | No data available |
| 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

No data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

|                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------|
| <b>Acute toxicity</b>                                                                                            |
| LD50 Oral - Rat - 4,100 mg/kg<br>Inhalation: No data available<br>Dermal: No data available<br>No data available |
| <b>Skin corrosion/irritation</b>                                                                                 |
| No data available                                                                                                |
| <b>Serious eye damage/eye irritation</b>                                                                         |
| No data available                                                                                                |
| <b>Respiratory or skin sensitisation</b>                                                                         |
| No data available                                                                                                |
| <b>Germ cell mutagenicity</b>                                                                                    |
| No data available                                                                                                |
| <b>Carcinogenicity</b>                                                                                           |

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

IARC: 1 - Group 1: Carcinogenic to humans (Tamoxifen)

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: Known to be human carcinogen (Tamoxifen)

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

Effects on or via lactation

Presumed human reproductive toxicant

May cause reproductive disorders.

#### Specific target organ toxicity -single exposure

No data available

#### Specific target organ toxicity -repeated exposure

No data available

#### Aspiration hazard

No data available

#### Additional Information

RTECS: KR5919600

Liver - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### 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

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**15. REGULATORY INFORMATION****SARA 302 Components**

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

**SARA 313 Components**

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**

Chronic Health Hazard

**Massachusetts Right To Know Components**

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

**Pennsylvania Right To Know Components**

| Component | CAS-No.    | Revision Date |
|-----------|------------|---------------|
| Tamoxifen | 10540-29-1 |               |

**New Jersey Right To Know Components**

| Component | CAS-No.    | Revision Date |
|-----------|------------|---------------|
| Tamoxifen | 10540-29-1 |               |

**California Prop. 65 Components**

WARNING! This product contains a chemical known to the State of California to cause cancer.

| Component | CAS-No.    | Revision Date |
|-----------|------------|---------------|
| Tamoxifen | 10540-29-1 | 2007-09-28    |

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**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

Carc. Carcinogenicity

H350 May cause cancer.

H360 May damage fertility or the unborn child.

H362 May cause harm to breast-fed children.

Lact. Effects on or via lactation

Repr. Reproductive toxicity

**HMIS Rating**

Health hazard: 1

Chronic Health Hazard: \*

Flammability: 0

Physical Hazard 0

**NFPA Rating**

Health hazard: 0

Fire Hazard: 0

