



# SAFETY DATA SHEET

Revision date: 15-Nov-2017

Version: 2.1

Page 1 of 9

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

### Product Identifier

**Material Name:** Tofacitinib Citrate Modified Release Tablets

**Trade Name:** Xeljanz XR  
**Chemical Family:** Janus kinase 3 (JAK3) inhibitor

### Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

**Intended Use:** Pharmaceutical product

### Details of the Supplier of the Safety Data Sheet

Pfizer Inc  
Pfizer Pharmaceuticals Group  
235 East 42nd Street  
New York, New York 10017  
1-800-879-3477

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Contact E-Mail: pfizer-MSDS@pfizer.com

## 2. HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

#### GHS - Classification

Reproductive Toxicity: Category 1B

### Label Elements

**Signal Word:** Danger  
**Hazard Statements:** H360Df - May damage the unborn child. Suspected of damaging fertility

**Precautionary Statements:** P202 - Do not handle until all safety precautions have been read and understood  
P281 - Use personal protective equipment as required  
P308 + P313 - IF exposed or concerned: Get medical attention/advice  
P405 - Store locked up  
P501 - Dispose of contents/container in accordance with all local and national regulations



## SAFETY DATA SHEET

Material Name: Tofacitinib Citrate Modified Release Tablets  
Revision date: 15-Nov-2017

Page 2 of 9  
Version: 2.1

**Other Hazards** An Occupational Exposure Value has been established for one or more of the ingredients (see Section 8).

**Note:** This document has been prepared in accordance with standards for workplace safety, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warning included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Hazardous

Ingredient	CAS Number	EU EINECS/ELINCS List	GHS Classification	%
Magnesium stearate	557-04-0	209-150-3	Not Listed	*
Tofacitinib citrate	540737-29-9	Not Listed	Acute Tox.4 (H302) Repr.1B (H360Df)	8-10

Ingredient	CAS Number	EU EINECS/ELINCS List	GHS Classification	%
Black ink	NOT ASSIGNED	Not Listed	Not Listed	*
Cellulose acetate	9004-35-7	Not Listed	Not Listed	*
Hydroxyethyl cellulose	9004-62-0	Not Listed	Not Listed	*
Hydroxypropyl cellulose	9004-64-2	Not Listed	Not Listed	*
Opadry Pink	MIXTURE	Not Listed	Not Listed	*
Polyvinyl pyrrolidone-Vinyl acetate copolymer	25086-89-9	Not Listed	Not Listed	*
Sorbitol	6706-59-8	Not Listed	Not Listed	*

**Additional Information:** Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety.  
In accordance with 29 CFR 1910.1200, the exact percentage composition of this mixture has been withheld as a trade secret. \* Proprietary

For the full text of the CLP/GHS abbreviations mentioned in this Section, see Section 16

### 4. FIRST AID MEASURES

#### Description of First Aid Measures

**Eye Contact:** Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.

**Skin Contact:** Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention.

**Ingestion:** Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention immediately.

**Inhalation:** Remove to fresh air and keep patient at rest. Seek medical attention immediately.

#### Most Important Symptoms and Effects, Both Acute and Delayed

**Symptoms and Effects of Exposure:** For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information.

## SAFETY DATA SHEET

Material Name: Tofacitinib Citrate Modified Release Tablets  
Revision date: 15-Nov-2017

Page 3 of 9  
Version: 2.1

**Medical Conditions** None known  
**Aggravated by Exposure:**

**Indication of the Immediate Medical Attention and Special Treatment Needed**  
**Notes to Physician:** None

### 5. FIRE FIGHTING MEASURES

**Extinguishing Media:** Extinguish fires with CO<sub>2</sub>, extinguishing powder, foam, or water.

#### Special Hazards Arising from the Substance or Mixture

**Hazardous Combustion Products:** Formation of toxic gases is possible during heating or fire. May include oxides of carbon nitrogen

**Fire / Explosion Hazards:** Fine particles (such as dust and mists) may fuel fires/explosions.

#### Advice for Fire-Fighters

During all firefighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal Precautions, Protective Equipment and Emergency Procedures

Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure.

#### Environmental Precautions

Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

#### Methods and Material for Containment and Cleaning Up

**Measures for Cleaning / Collecting:** Contain the source of spill if it is safe to do so. Collect spilled material by a method that controls dust generation. A damp cloth or a filtered vacuum should be used to clean spills of dry solids. Clean spill area thoroughly.

**Additional Consideration for Large Spills:** Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Cleanup operations should only be undertaken by trained personnel.

### 7. HANDLING AND STORAGE

#### Precautions for Safe Handling

Minimize dust generation and accumulation. If tablets or capsules are crushed and/or broken, avoid breathing dust and avoid contact with eyes, skin, and clothing. When handling, use appropriate personal protective equipment (see Section 8). Wash hands and any exposed skin after removal of PPE. Releases to the environment should be avoided. Review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure or environmental releases. Potential points of process emissions of this material to the atmosphere should be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

#### Conditions for Safe Storage, Including any Incompatibilities

**Storage Conditions:** Store as directed by product packaging.

**Specific end use(s):** Pharmaceutical drug product

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Control Parameters

Refer to available public information for specific member state Occupational Exposure Limits.

#### Magnesium stearate

Lithuania OEL - TWA

5 mg/m<sup>3</sup>

## SAFETY DATA SHEET

Material Name: Tofacitinib Citrate Modified Release Tablets  
Revision date: 15-Nov-2017

Page 4 of 9  
Version: 2.1

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Sweden OEL - TWAs 5 mg/m<sup>3</sup>

Tofacitinib citrate  
Pfizer OEL TWA-8 Hr: 15 µg/m<sup>3</sup>, Skin

#### Exposure Controls

##### Engineering Controls:

Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes. Keep airborne contamination levels below the exposure limits listed above in this section.

##### Personal Protective Equipment:

Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE). Contact your safety and health professional or safety equipment supplier for assistance in selecting the correct protective clothing/equipment based on an assessment of the workplace conditions, other chemicals used or present in the workplace and specific operational processes.

##### Hands:

Impervious disposable gloves (e.g. Nitrile, etc.) (double recommended) if skin contact with drug product is possible and for bulk processing operations. (Protective gloves must meet the standards in accordance with EN374, ASTM F1001 or international equivalent.)

##### Eyes:

Wear safety glasses or goggles if eye contact is possible. (Eye protection must meet the standards in accordance with EN166, ANSI Z87.1 or international equivalent.)

##### Skin:

Wear impervious protective clothing to prevent skin contact – consider use of disposable clothing where appropriate. (Protective clothing must meet the standards in accordance with EN13982, ANSI 103 or international equivalent.)

##### Respiratory protection:

Under normal conditions of use, if the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL (e.g. particulate respirator with a full mask, P3 filter). (Respirators must meet the standards in accordance with EN136, EN143, ASTM F2704-10 or international equivalent.)

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Tablets	<b>Color:</b>	Pink
<b>Odor:</b>	No data available.	<b>Odor Threshold:</b>	No data available.
<b>Molecular Formula:</b>	Mixture	<b>Molecular Weight:</b>	Mixture

<b>Solvent Solubility:</b>	No data available
<b>Water Solubility:</b>	No data available
<b>pH:</b>	No data available.
<b>Melting/Freezing Point (°C):</b>	No data available
<b>Boiling Point (°C):</b>	No data available.
<b>Partition Coefficient: (Method, pH, Endpoint, Value)</b>	

#### Tofacitinib citrate

Predicted 7.4 Log D -2.56

#### Sorbitol

No data available

#### Hydroxyethyl cellulose

No data available

#### Polyvinyl pyrrolidone-Vinyl acetate copolymer

No data available

#### Magnesium stearate

No data available

#### Hydroxypropyl cellulose

No data available

#### Opadry Pink

## SAFETY DATA SHEET

Material Name: Tofacitinib Citrate Modified Release Tablets  
Revision date: 15-Nov-2017

Page 5 of 9  
Version: 2.1

### 9. PHYSICAL AND CHEMICAL PROPERTIES

No data available

**Black ink**

No data available

**Cellulose acetate**

No data available

**Decomposition Temperature (°C):** No data available.

**Evaporation Rate (Gram/s):** No data available

**Vapor Pressure (kPa):** No data available

**Vapor Density (g/ml):** No data available

**Relative Density:** No data available

**Viscosity:** No data available

**Flammability:**

**Autoignition Temperature (Solid) (°C):** No data available

**Flammability (Solids):** No data available

**Flash Point (Liquid) (°C):** No data available

**Upper Explosive Limits (Liquid) (% by Vol.):** No data available

**Lower Explosive Limits (Liquid) (% by Vol.):** No data available

### 10. STABILITY AND REACTIVITY

**Reactivity:** No data available

**Chemical Stability:** Stable under normal conditions of use.

**Possibility of Hazardous Reactions**

**Oxidizing Properties:** No data available

**Conditions to Avoid:** Fine particles (such as dust and mists) may fuel fires/explosions.

**Incompatible Materials:** As a precautionary measure, keep away from strong oxidizers

**Hazardous Decomposition Products:** No data available

### 11. TOXICOLOGICAL INFORMATION

**Information on Toxicological Effects**

**General Information:** The information included in this section describes the potential hazards of the individual ingredients.

**Short Term:** Active ingredient may be harmful if swallowed.

**Long Term:** Repeat-dose studies in animals have shown a potential to cause adverse effects on lymphatic system, blood and blood forming organs.

**Known Clinical Effects:** Based on clinical trials in humans, possible adverse effects following exposure to this compound may include: nausea, headache, immune-mediated disorders, and hematological effects.

**Acute Toxicity: (Species, Route, End Point, Dose)**

**Tofacitinib citrate**

Rat Oral Minimum Lethal Dose 500 mg/kg

Non-human Primate Oral Maximum Asymptomatic Dose 40mg/kg

**Magnesium stearate**

Rat Oral LD50 > 2000 mg/kg

Rat Inhalation LC50 > 2000 mg/m<sup>3</sup>

**Acute Toxicity Comments:** A greater than symbol (>) indicates that the toxicity endpoint being tested was not achievable at the highest dose used in the test.

## SAFETY DATA SHEET

Material Name: Tofacitinib Citrate Modified Release Tablets  
Revision date: 15-Nov-2017

Page 6 of 9  
Version: 2.1

### 11. TOXICOLOGICAL INFORMATION

#### Irritation / Sensitization: (Study Type, Species, Severity)

##### **Tofacitinib citrate**

Skin Sensitization - LLNA Mouse Negative  
Eye Irritation Rabbit Non-irritating  
Skin Irritation Rabbit Non-irritating

#### Repeated Dose Toxicity: (Duration, Species, Route, Dose, End Point, Target Organ)

##### **Tofacitinib citrate**

6 Week(s) Rat Oral 1 mg/kg/day NOEL Erythroid cells, Lymphatic system  
1 Month(s) Monkey Oral 10 mg/kg/day NOEL Lymphatic system, Immune system, Erythroid cells  
39 Week(s) Monkey Oral 10 mg/kg/day NOEL Bone Marrow, Erythroid cells, Lymphatic system  
6 Month(s) Rat Oral 1 mg/kg/day NOEL Lymphatic system, Erythroid cells  
39 Week(s) Monkey Oral 2 mg/kg/day NOEL Blood, Blood forming organs, Spleen, Thymus  
1 Month(s) Mini Pig Dermal 10 mg/cm<sup>2</sup>/day NOEL None identified  
3 Month(s) Mini Pig Dermal 10 mg/cm<sup>2</sup>/day NOEL Spleen

#### Reproduction & Development Toxicity: (Duration, Species, Route, Dose, End Point, Effect(s))

##### **Tofacitinib citrate**

Embryo / Fetal Development Rat Oral 30 mg/kg/day NOEL Fetotoxicity  
Embryo / Fetal Development Rabbit Oral 100 mg/kg/day NOEL  
Embryo / Fetal Development Rabbit Oral 10 mg/kg/day NOEL Developmental toxicity  
Fertility & Embryonic Development (Male/Female) Rat Oral 10 mg/kg/day NOEL Maternal Toxicity  
Fertility & Embryonic Development-Females Rat Oral 1.0 mg/kg/day NOEL Fertility

#### Genetic Toxicity: (Study Type, Cell Type/Organism, Result)

##### **Tofacitinib citrate**

*In Vitro* Bacterial Mutagenicity (Ames) *Salmonella*, *E. coli* Negative  
*In Vitro* Cytogenetics Human Lymphocytes Positive with activation  
Mammalian Cell Mutagenicity Chinese Hamster Ovary (CHO) cells Negative  
*In Vivo* Micronucleus Rat Bone Marrow Negative  
*In Vivo* Unscheduled DNA Synthesis Rat Hepatocyte Negative

#### Carcinogenicity: (Duration, Species, Route, Dose, End Point, Effect(s))

##### **Tofacitinib citrate**

2 Year(s) Rat Female Oral 10 mg/kg/day NOEL Benign tumors  
2 Year(s) Rat Male Oral 10 mg/kg/day LOEL Benign tumors  
6 Month(s) Mouse Oral 200 mg/kg/day NOEL Not carcinogenic

#### Carcinogen Status:

None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA.

### 12. ECOLOGICAL INFORMATION

#### **Environmental Overview:**

Environmental properties have not been thoroughly investigated. Releases to the environment should be avoided.

## SAFETY DATA SHEET

Material Name: Tofacitinib Citrate Modified Release Tablets  
Revision date: 15-Nov-2017

Page 7 of 9  
Version: 2.1

### Toxicity:

#### Aquatic Toxicity: (Species, Method, End Point, Duration, Result)

##### Tofacitinib citrate

Activated sludge OECD EC50 3 Hours 592.9 mg/L

*Mysidopsis bahia* (Mysid Shrimp) OECD LC50 96 Hours > 1.0 mg/L

*Cyprinodon variegatus* (Sheepshead Minnow) OECD LC50 96 Hours > 1.0 mg/L

**Aquatic Toxicity Comments:** A greater than (>) symbol indicates that acute ecotoxicity was not observed at the maximum solubility. Since the substance is insoluble in aqueous solutions above this concentration, an acute ecotoxicity value (i.e. LC/EC50) is not achievable.

**Persistence and Degradability:** No data available

### Bio-accumulative Potential:

#### **Partition Coefficient: (Method, pH, Endpoint, Value)**

##### Tofacitinib citrate

Predicted 7.4 Log D -2.56

**Mobility in Soil:** No data available

## 13. DISPOSAL CONSIDERATIONS

### Waste Treatment Methods:

Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater.

## 14. TRANSPORT INFORMATION

The following refers to all modes of transportation unless specified below.

Not regulated for transport under USDOT, EUADR, IATA, or IMDG regulations.

## 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

Black ink

CERCLA/SARA 313 Emission reporting

Not Listed

## SAFETY DATA SHEET

Material Name: Tofacitinib Citrate Modified Release Tablets  
Revision date: 15-Nov-2017

Page 8 of 9  
Version: 2.1

### 15. REGULATORY INFORMATION

California Proposition 65	Not Listed
EU EINECS/ELINCS List	Not Listed
<b>Cellulose acetate</b>	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	Not Listed
<b>Hydroxyethyl cellulose</b>	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	Not Listed
<b>Hydroxypropyl cellulose</b>	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	Not Listed
<b>Magnesium stearate</b>	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	209-150-3
<b>Opadry Pink</b>	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
EU EINECS/ELINCS List	Not Listed
<b>Polyvinyl pyrrolidone-Vinyl acetate copolymer</b>	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	Not Listed
<b>Sorbitol</b>	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
EU EINECS/ELINCS List	Not Listed
<b>Tofacitinib citrate</b>	
CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
EU EINECS/ELINCS List	Not Listed



## SAFETY DATA SHEET

Material Name: Tofacitinib Citrate Modified Release Tablets  
Revision date: 15-Nov-2017

Page 9 of 9  
Version: 2.1

### 16. OTHER INFORMATION

#### Text of CLP/GHS Classification abbreviations mentioned in Section 3

Acute toxicity, oral-Cat.4; H302 - Harmful if swallowed  
Reproductive toxicity-Cat.1B; H360Df - May damage the unborn child. Suspected of damaging fertility

**Data Sources:** Pfizer proprietary drug development information. Safety data sheets for individual ingredients.

**Reasons for Revision:** Updated Section 2 - Hazard Identification. Updated Section 1 - Identification of the Substance/Preparation and the Company/Undertaking. Updated Section 8 - Exposure Controls / Personal Protection.

**Revision date:** 15-Nov-2017  
Product Stewardship Hazard Communication

**Prepared by:** Pfizer Global Environment, Health, and Safety Operations

Pfizer Inc believes that the information contained in this Material Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time.

**End of Safety Data Sheet**