SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture
Product Name: PADCEV™ (enfortumab vedotin-ejfv) for Injection
Chemical Name: Proprietary
Formula: Proprietary
Synonyms: ASP7465, AS2567465-00, ASG-22CE

1.2. Intended Use of the Product

Pharmaceutical research, manufacturing and clinical use. For professional use only. For R&D use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company
Astellas US LLC
2375 Waterview Drive
Northbrook, IL 60062
Tel.: 800-888-7704
www.us.astellas.com

1.4. Emergency Telephone Number

Emergency Number: 800-727-7003
Medical Communications

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification
Repr. 2 H361
STOT RE 1 H372
Comb. Dust

Full text of hazard classes and H-statements: see section 16

2.2. Label Elements

GHS-US/CA Labeling
Hazard Pictograms (GHS-US/CA): 

Signal Word (GHS-US/CA): Danger
Hazard Statements (GHS-US/CA): May form combustible dust concentrations in air.
H361 - Suspected of damaging fertility or the unborn child.
H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements (GHS-US/CA): P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, and eye protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.
Supplemental Information: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Proper grounding procedures to avoid static electricity should be followed. Prevent dust accumulation (to minimize explosion hazard). Avoid generating dust.

2.3. Other Hazards
The toxicological properties of this substance have not been fully investigated. Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US/CA)
14.5% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
14.5% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
14.5% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Synonyms</th>
<th>Product Identifier</th>
<th>% *</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enfortumab vedotin</td>
<td></td>
<td>(CAS-No.) 1346452-25-2</td>
<td>14.5</td>
<td>Repr. 2, H361</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STOT RE 1, H372</td>
</tr>
<tr>
<td>Histidine, L-, monohydrochloride monohydrate</td>
<td>L-Histidine, monohydrochloride, monohydrate / Histidine, monohydrochloride, monohydrate, L- / Histidine-L hydrochloride monohydrate / L-Histidine monohydrochloride monohydrate / (2S)-2-Amino-3-(1H-imidazol-4-yl) propanoic acid hydrate hydrochloride</td>
<td>(CAS-No.) 5934-29-2</td>
<td>3.4</td>
<td>Comb. Dust</td>
</tr>
<tr>
<td>L-Histidine</td>
<td>Glyoxaline-S-alanine / Histidine / Histidine, L- / HISTIDINE / L-{ } Histidine / L-Histidine</td>
<td>(CAS-No.) 71-00-1</td>
<td>2</td>
<td>Comb. Dust</td>
</tr>
<tr>
<td>Polyoxyethylene sorbitan monolaurate</td>
<td>Polysorbate 20 / Sorbitan monolaurate, ethoxylated / Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives / Polyoxyethylene (20) sorbitan monolaurate / PEG-10 SORBITAN LAURATE / PEG sorbitan laurate / Ethoxylated sorbitan monolaurate / Polyethylene glycol sorbitan monolaurate / PEG-40 sorbitan laurate / PEG-75 sorbitan laurate / PEG-44 sorbitan laurate / PEG-80 sorbitan laurate / Polysorbate 21 / PEG-10 sorbitan laurate / Sorbitan monolaurate, ethoxylate / Bioactivator NN</td>
<td>(CAS-No.) 9005-64-5</td>
<td>0.3</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).
**SECTION 4: FIRST AID MEASURES**

4.1. **Description of First-aid Measures**

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** Using proper respiratory protection, move the exposed person to fresh air at once. Encourage exposed person to cough, spit out, and blow nose to remove dust. Immediately call a poison center, physician, or emergency medical service.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

4.2. **Most Important Symptoms and Effects Both Acute and Delayed**

**General:** Pharmaceutical. When handling in workplace settings, in quantities that are most likely above the therapeutic dose, this product may be harmful if absorbed through the eyes, skin, or respiratory tract.

**Inhalation:** Dust may be harmful or cause irritation.

**Skin Contact:** Prolonged exposure may cause skin irritation.

**Eye Contact:** May cause slight irritation to eyes.

**Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

4.3. **Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

**SECTION 5: FIRE-FIGHTING MEASURES**

5.1. **Extinguishing Media**

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. **Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Combustible Dust.

**Explosion Hazard:** Dust explosion hazard in air.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

5.3. **Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon oxides (CO, CO₂). Nitrogen oxides.

**Other Information:** Risk of dust explosion.

5.4. **Reference to Other Sections**

Refer to Section 9 for flammability properties.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

6.1. **Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Do not get in eyes, on skin, or on clothing. Do not breathe dust. Avoid generating dust. Remove ignition sources. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

6.1.1. **For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

6.1.2. **For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.
6.2. Environmental Precautions
Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up
For Containment: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Avoid generation of dust during clean-up of spills.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Contact competent authorities after a spill. Use explosion proof vacuum during cleanup, with appropriate filter. Do not mix with other materials. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Use only non-sparking tools.

6.4. Reference to Other Sections
See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Additional Hazards When Processed: Accumulation and dispersion of dust with an ignition source can cause a combustible dust explosion. Keep dust levels to a minimum and follow applicable regulations.
Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Avoid creating or spreading dust. Keep away from heat, sparks, open flames, hot surfaces. – No smoking.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations. Avoid creating or spreading dust. Use explosion-proof electrical, ventilating, lighting equipment. Proper grounding procedures to avoid static electricity should be followed.
Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.
Incompatible Materials: Strong oxidizers.

7.3. Specific End Use(s)
Pharmaceutical research, manufacturing and clinical use. For professional use only. For R&D use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

8.2. Exposure Controls
Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Materials for Protective Clothing: Chemically resistant materials and fabrics.
Hand Protection: Wear protective gloves.
Eye and Face Protection: Chemical safety goggles.
Skin and Body Protection: Wear suitable protective clothing.
PADCEV™ (enfortumab vedotin-ejfv) for Injection

Safety Data Sheet
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Other Information:** When using, do not eat, drink or smoke.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1. **Information on Basic Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White to off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

10.1. **Reactivity:** Hazardous reactions will not occur under normal conditions.

10.2. **Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

10.4. **Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition. Dust accumulation (to minimize explosion hazard).

10.5. **Incompatible Materials:** Strong oxidizers.

10.6. **Hazardous Decomposition Products:** Thermal decomposition generates: Carbon oxides (CO, CO₂). Nitrogen oxides.

**SECTION 11: TOXICOLOGICAL INFORMATION**

11.1. **Information on Toxicological Effects - Product**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity (Oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute Toxicity (Dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute Toxicity (Inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**LD50 and LC50 Data:** Not available

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enfortumab vedotin for Injection</td>
<td>ADI=120 µg/day</td>
</tr>
</tbody>
</table>

**Skin Corrosion/Irritation:** Not classified

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enfortumab vedotin for Injection</td>
<td>Injection site microscopic findings consisted of increased mitotic figures and single cell necrosis in the epidermis and/or adnexa including hair follicles and sebaceous glands, epidermal</td>
</tr>
</tbody>
</table>

09/22/2020 EN (English US)
acanthosis, perivascular mononuclear infiltrates, and fibrosis. These minimal to mild findings were considered related to antigen expression in the skin and the pharmacology of MMAE, and were generally reversible.

**Eye Damage/Irritation:** Not classified  
**Respiratory or Skin Sensitization:** Not classified  
**Germ Cell Mutagenicity:** Not classified

### Enfortumab vedotin for Injection

**Additional information**

Genotoxicity studies were performed on the cytotoxic agent, MMAE. MMAE was aneugenic in the in vivo rat bone marrow micronucleus study, consistent with the pharmacological effect of MMAE on the mitotic apparatus (disruption of the microtubular network). MMAE had no discernible in vitro genotoxic potential in a reverse mutation test in bacteria (Ames test) or in a L5178Y thymidine kinase (TK)+/- mouse lymphoma mutation assay.

Monomethyl auristatin E (MMAE) is the cytotoxic component of this antibody drug conjugate. MMAE is an antineoplastic agent that blocks microtubule polymerization and inhibits cell division. Maleimide which is a component of linker showed mutagenicity in Ames test and mouse lymphoma assay.

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Causes damage to organs through prolonged or repeated exposure.

### Enfortumab vedotin for Injection

**Additional information**

13-week toxicity study in rats no recovery period: (0.5, 2.0, and 5.0 mg/kg/week, i.v. injection once every week for a total of 12 doses).

Maximum Tolerated Dose: 5 mg/kg

At 0.5 mg/kg/week and above target organ of toxicity included eye, skin/injection site and altered erythrocytic parameters.

At 5 mg/kg/week target organ toxicities and secondary changes included; the liver, the testes, and epididymis.

4-week toxicity study in rats with a 6-week recovery period: (0, 2, 5, 10 mg/kg/week, iv injection, once every week for a total of 4 doses).

NOAEL: < 2 mg/kg

At 2 mg/kg/week and above target organs of toxicity and secondary changes included the testes and epididymis.

At 5 mg/kg/week and above target organs of toxicity and secondary changes included the liver, skin, bone marrow, and altered erythrocytic parameters.

All findings except testicular findings were reversible by the end of the 4-week recovery period.

4-week toxicity study in cynomolgus monkeys with a 6-week recovery period: (0, 1, 3, 6 mg/kg/week, iv infusion, once every week for a total of 4 doses)

NOAEL: 3 mg/kg

At 1 mg/kg/week and above target organs of toxicity were the injection site and skin.

At 3 mg/kg/week and above altered erythrocytic parameters were noted.

At 6 mg/kg lethargy and mortality was observed.
Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

<table>
<thead>
<tr>
<th>Enfortumab vedotin for Injection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional information</td>
</tr>
</tbody>
</table>

Enfortumab vedotin showed embryo-fetal toxicities. Pregnant rats intravenously administered enfortumab vedotin on GD 6 and 13 at 2 and 5 mg/kg resulted in increases in post implantation loss and decreases in the number of viable fetuses. The surviving fetuses had an increased incidence of skeletal variations.

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Dust may be harmful or cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Histidine (71-00-1)</td>
<td></td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
<td>&gt; 15 g/kg</td>
</tr>
<tr>
<td>Polyoxylsorbitan monolaurate (9005-64-5)</td>
<td></td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
<td>&gt; 18000 mg/kg</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Not classified.

12.2. Persistence and Degradability

<table>
<thead>
<tr>
<th>Enfortumab vedotin for Injection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and Degradability</td>
</tr>
</tbody>
</table>

Not established.

12.3. Bioaccumulative Potential

<table>
<thead>
<tr>
<th>Enfortumab vedotin for Injection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative Potential</td>
</tr>
</tbody>
</table>

Not established.

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

14.4. In Accordance with TDG Not regulated for transport
SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Enfortumab vedotin for Injection

| SARA Section 311/312 Hazard Classes | Physical hazard - Combustible dust  
                                      | Health hazard - Reproductive toxicity  
                                      | Health hazard - Specific target organ toxicity (single or repeated exposure) |

L-Histidine (71-00-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Polyoxyethylene sorbitan monolaurate (9005-64-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag
XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

15.2. US State Regulations

Neither this product nor its chemical components appear on any US state lists, or its chemical components are not required to be disclosed.

15.3. Canadian Regulations

L-Histidine (71-00-1)
Listed on the Canadian DSL (Domestic Substances List)

Polyoxyethylene sorbitan monolaurate (9005-64-5)
Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision: 06/19/2019

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Comb. Dust</th>
<th>Combustible Dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repr. 2</td>
<td>Reproductive toxicity Category 2</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity (repeated exposure) Category 1</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)