



**Safety Data Sheet**  
**Zurnai™**  
**1.5 mg/0.5 mL Auto-Injector**

Revision Date: 11/20/2024

**Section 1. Identification**

**Product identifier**

**Product Identity**

Zurnai™ (nalmefene injection)  
1.5 mg/0.5 mL Auto-Injector

**Other means of identification**

Not Applicable

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

Pharmaceutical. See package insert for more information.  
For intramuscular and subcutaneous use only.

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

**Company Name**

Purdue Pharmaceuticals L.P.  
One Stamford Forum  
201 Tresser Boulevard  
Stamford, Connecticut 06901-3431

**Emergency**

**24 hour Emergency Telephone No.**

Chemtrec  
Within USA and Canada: (303) 389-1805  
Outside USA and Canada: +1 (303) 389-1805

**Customer Service:**

(888) 726-7535

**Section 2. Hazard(s) identification**

**Classification under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).**

Skin sensitizer category 1;H317

May cause an allergic skin reaction.

Respiratory sensitization, category 1;H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Label elements**



**Danger**

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Prevention**

P261 Avoid breathing dust, fume, gas, mist, vapors, spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves, eye protection, and face protection.

P284 In case of inadequate ventilation, wear respiratory protection.



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**Response**

P302+352 IF ON SKIN: Wash with plenty of soap and water.  
P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P333+313 If skin irritation or a rash occurs: Get medical advice or attention.  
P342+311 If experiencing respiratory symptoms: Call a POISON CENTER, doctor or physician.  
P362+364 Take off contaminated clothing and wash it before reuse.

**Storage**

No GHS storage statements

**Disposal**

P501 Dispose of contents or container in accordance with local and national regulations.

**Other hazards**

This product contains no PBT/vPvB/vPvM chemicals.  
This product contains no endocrine disrupting chemicals.

**Section 3. Composition/information on ingredients**

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).

| Ingredient/Chemical Designations  | Weight % | GHS Classification   | Notes |
|---|----------|--|-------|
| Magnesium chloride, hexahydrate<br>CAS Number: 7791-18-6<br>Synonyms: No available information  | 1 - 5    | Not Classified   | ----- |
| Nalmefene Hydrochloride<br>CAS Number: 58895-64-0<br>Synonyms: 17-(Cyclopropylmethyl)-4, 5alpha-epoxy- 6-methylenemorphinan-3, 14-diol hydrochloride, (5a)-17-(Cyclopropylmethyl)-4,5-epoxy-6-methylene-morphinan-3,14-diol hydrochloride | 0.1 - 1  | Acute toxicity(oral), category 4;H302<br>Acute toxicity(dermal), category 4;H312<br>Skin sensitizer category 1;H317<br>Acute toxicity(inhalation), category 4;H332<br>Respiratory sensitization, category 1;H334 | ----- |

The actual concentration or concentration range is withheld as a trade secret.  
\*PBT/vPvB - PBT, vPvM or vPvB-substance.  
The full texts of the phrases are shown in Section 16.

**Section 4. First aid measures**

**Description of first aid measures**

**General** In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person.

**Inhalation** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

**Eyes** Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

**Ingestion** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.



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**Most important symptoms and effects, both acute and delayed**

|                   |  |
|-------------------|--|
| <b>Overview</b>   | No specific symptom data available.<br>Treat symptomatically. See section 2 for further details. |
| <b>Inhalation</b> | May cause allergy or asthma symptoms or breathing difficulties if inhaled.                       |
| <b>Skin</b>       | May cause an allergic skin reaction.   |

**Section 5. Fire-fighting measures**

**Extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

Hazardous decomposition: No hazardous decomposition data available.

Avoid breathing dust, fume, gas, mist, vapors, spray.

**Advice for fire-fighters**

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

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**Section 6. Accidental release measures**

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

Put on appropriate personal protective equipment (see section 8).

**Environmental precautions**

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

**Methods and material for containment and cleaning up**

Prevent further leakage or spillage if safe to do so. For small spills, soak up material with absorbent, e.g., paper towels. For large spills, cordon off spill area and minimize the spreading of spilled material. Soak up material with absorbent. Collect spilled material, absorbent, and rinse water into suitable containers for proper disposal in accordance with applicable waste disposal regulations (see Section 13).

Pick up and transfer to properly labeled containers.

**Section 7. Handling and storage**

**Precautions for safe handling**



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Handle containers carefully to prevent damage and spillage.

See section 2 for further details. - [Prevention]

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

Incompatible materials: No data available.

See section 2 for further details. - [Storage]

**Specific end use(s)**

No data available.

**Section 8. Exposure controls / personal protection**

**Control parameters**

**Exposure**

| CAS No.    | Ingredient                      | Source | Value                |
|------------|---------------------------------|--------|----------------------|
| 7791-18-6  | Magnesium chloride, hexahydrate | OSHA   | No Established Limit |
|            |                                 | ACGIH  | No Established Limit |
|            |                                 | NIOSH  | No Established Limit |
| 58895-64-0 | Nalmefene Hydrochloride         | OSHA   | No Established Limit |
|            |                                 | ACGIH  | No Established Limit |
|            |                                 | NIOSH  | No Established Limit |

**Exposure controls**

**Respiratory**

Not required for normal handling of packed product. Respirators/ PAPR may be required for certain laboratory and manufacturing tasks if engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (where the exposure limits have not been established). Workplace risk assessments should be completed before specifying and implementing respirator usage. All respirators must conform to specifications for efficiency and performance indicated by OSHA Standard 29 CFR 1910.134.

**Eyes**

In laboratory, medical or industrial settings, safety glasses with side shields are highly recommended. The use of goggles, or full-face protection may be required depending on the industrial exposure setting. Contact a health and safety professional for specific information.

**Skin**

In laboratory, medical or industrial settings, double gloves, lab coat, apron, and sleeve covers are recommended. The use of additional personal protective equipment such as shoe coverings, gauntlets, hoods or head coverings may be necessary. Contact a health and safety professional for specific information.

**Engineering Controls**

None required for normal handling of packaged product. The health hazard risks of handling this material are dependent on factors, such as physical form and quantity. Site-specific risk assessments should be conducted to determine the appropriate exposure control measures. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels as low as reasonably achievable.



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**Other Work Practices** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

## Section 9. Physical and chemical properties

### Information on basic physical and chemical properties

|  |  |
|--|--|
| <b>Physical State</b>                                  | Liquid   |
| <b>Color</b>   | Clear to colorless to light yellow   |
| <b>Odor</b>  | None   |
| <b>Melting point / freezing point</b>                  | Not Available  |
| <b>Initial boiling point and boiling range</b>         | Not Available  |
| <b>Flammability (solid, gas)</b>                       | Not Applicable   |
| <b>Upper/lower flammability or explosive limits</b>    | <b>Lower Explosive Limit:</b> Not Available<br><b>Upper Explosive Limit:</b> Not Available |
| <b>Flash Point</b>                                     | Not Available  |
| <b>Auto-ignition temperature</b>                       | Not Available  |
| <b>Decomposition temperature</b>                       | Not Available  |
| <b>pH</b>  | Not Available  |
| <b>Viscosity (cSt)</b>                                 | Not Available  |
| <b>Solubility in Water</b>                             | Not Available  |
| <b>Partition coefficient n-octanol/water (Log Kow)</b> | Not Available  |
| <b>Vapor pressure (Pa)</b>                             | Not Available  |
| <b>Relative Density</b>                                | Not Available  |
| <b>Vapor Density</b>                                   | Not Available  |
| <b>Evaporation rate (Ether = 1)</b>                    | Not Available  |
| <b>VOC Content</b>                                     | Not Available  |

### Other information

No other relevant information.

## Section 10. Stability and reactivity

**Reactivity** - Hazardous Polymerization will not occur.

**Chemical stability** - Stable under normal circumstances.

**Possibility of hazardous reactions** - No data available.

**Conditions to avoid** - No data available.

**Incompatible materials** - No data available.

**Hazardous decomposition products** - No hazardous decomposition data available.



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**Section 11. Toxicological information**

**Acute toxicity**

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

| Ingredient                                    | Oral LD50, mg/kg             | Skin LD50, mg/kg   | Inhalation Vapor LC50, mg/L/4hr | Inhalation Dust/Mist LC50, mg/L/4hr | Inhalation Gas LC50, ppm |
|---|------------------------------|--------------------|---------------------------------|-------------------------------------|--------------------------|
| Magnesium chloride, hexahydrate - (7791-18-6) | 8,100.00, Rat - Category: NA | No data available. | No data available.              | No data available.                  | No data available.       |
| Nalmefene Hydrochloride - (58895-64-0)        | No data available.           | No data available. | No data available.              | No data available.                  | No data available.       |

**Carcinogen Data**

| CAS No.    | Ingredient                      | Source | Value   |
|------------|---------------------------------|--------|---|
| 7791-18-6  | Magnesium chloride, hexahydrate | OSHA   | Regulated Carcinogen: No;                             |
|            |                                 | NTP    | Known: No; Suspected: No;                             |
|            |                                 | IARC   | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; |
|            |                                 | ACGIH  | No Established Limit                                  |
| 58895-64-0 | Nalmefene Hydrochloride         | OSHA   | Regulated Carcinogen: No;                             |
|            |                                 | NTP    | Known: No; Suspected: No;                             |
|            |                                 | IARC   | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; |
|            |                                 | ACGIH  | No Established Limit                                  |

| Classification                | Category | Hazard Description   |
|-------------------------------|----------|--|
| Acute toxicity (oral)         | ---      | Not Applicable   |
| Acute toxicity (dermal)       | ---      | Not Applicable   |
| Acute toxicity (inhalation)   | ---      | Not Applicable   |
| Skin corrosion/irritation     | ---      | Not Applicable   |
| Serious eye damage/irritation | ---      | Not Applicable   |
| Respiratory sensitization     | 1        | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitization            | 1        | May cause an allergic skin reaction.                                       |
| Germ cell mutagenicity        | ---      | Not Applicable   |
| Carcinogenicity               | ---      | Not Applicable   |
| Reproductive toxicity         | ---      | Not Applicable   |
| STOT-single exposure          | ---      | Not Applicable   |
| STOT-repeated exposure        | ---      | Not Applicable   |
| Aspiration hazard             | ---      | Not Applicable   |

**Possible routes of entry:** No data available.

**Symptoms and effects, both acute and delayed:**

No specific symptom data available.

Treat symptomatically.

**Skin**                      May cause an allergic skin reaction.



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**Section 12. Ecological information**

**Toxicity**

No additional information provided for this product. See Section 3 for chemical specific data.

**Aquatic Ecotoxicity**

| Ingredient                                    | 96 hr LC50 fish, mg/L | 48 hr EC50 crustacea, mg/L | ErC50 algae, mg/L  |
|---|-----------------------|----------------------------|--------------------|
| Magnesium chloride, hexahydrate - (7791-18-6) | No data available.    | No data available.         | No data available. |
| Nalmefene Hydrochloride - (58895-64-0)        | No data available.    | No data available.         | No data available. |

**Persistence and degradability**

There is no data available on the preparation itself.

**Bioaccumulative potential**

Not Available

**Mobility in soil**

No data available.

**Results of PBT and vPvB assessment**

This product contains no PBT/vPvB/vPvM chemicals.

**Other adverse effects**

No data available.

**Section 13. Disposal considerations**

**Waste treatment methods**

Waste should not be released to sewers. Observe all federal, state, and local regulations when disposing of this substance.

**Section 14. Transport information**

|                                     | <b>DOT (Domestic Surface Transportation)</b>                                | <b>IMO / IMDG (Ocean Transportation)</b>                        | <b>ICAO/IATA</b>   |
|-------------------------------------|---|---|--|
| <b>UN number</b>                    | Not Regulated   | Not Regulated   | Not Regulated  |
| <b>UN proper shipping name</b>      | Not Regulated   | Not Regulated   | Not Regulated  |
| <b>Transport hazard class(es)</b>   | <b>DOT Hazard Class:</b> Not Applicable<br><b>Sub Class:</b> Not Applicable | <b>IMDG:</b> Not Applicable<br><b>Sub Class:</b> Not Applicable | <b>Air Class:</b> Not Applicable<br><b>Sub Class:</b> Not Applicable |
| <b>Packing group</b>                | Not Applicable  | Not Applicable  | Not Applicable   |
| <b>Environmental hazards</b>        | Marine Pollutant: No  |   |  |
| <b>Special precautions for user</b> | - Not Applicable  |   |  |



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**Section 15. Regulatory information**

**Regulatory Overview** The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).

**Toxic Substance Control Act (TSCA)**

| CAS Number   | Ingredient                      | Toxic Substance Control Act (TSCA) | Comments | Status |
|--------------|---------------------------------|------------------------------------|----------|--------|
| 0007791-18-6 | Magnesium chloride, hexahydrate | No                                 |          |        |
| 0058895-64-0 | Nalmefene Hydrochloride         | No                                 |          |        |

**EPCRA 302 Extremely Hazardous:**

Hydrochloric acid

**EPCRA 313 Toxic Chemicals:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Carcinogens (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Developmental Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Female Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Male Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 Label Warning:**

This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**Section 16. Other information**

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.





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H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Disclaimer: The information presented herein is supplied as a guide to those who handles or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

**Authored by:** Quantum SDS

**Reviewed by:** IES Engineers

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