



Revision Number: 5

Aimovig™ Safety Data Sheet

Date Issued 04-Sep-2018

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERSTANDING

1.1 Product identifier

Product Name: Aimovig™
Common Name: Erenumab, AMG 334
Chemical Name: anti-human CGRP-R (calcitonin gene-related peptide type 1 receptor)
Synonyms: See above

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

Recommended Use: Pharmaceutical
Uses advised against: No information available

Manufacturer: Amgen Inc.
One Amgen Center Drive
Thousand Oaks, California 91320-1799
1-805-447-7233
1-805-447-1000

Emergency Telephone Number: Chemtrec
NORTH AMERICA 1-800-424-9300,
INTERNATIONAL 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

Pharmaceutical product intended for clinical and commercial manufacturing purposes only. Product contains erenumab, an active pharmaceutical ingredient for prophylactic treatment for migraine headaches. Dosage contents may pose a health hazard only if significant absorption occurs (e.g. inhalation after a major spill or leak). Avoid inhalation, skin contact, eye contact, and accidental ingestions. Does not meet GHS classification criteria and therefore is not classified.

2.1 - Classification of the drug substance or mixture (drug product in final form, not applicable) REGULATION (EC) No 1272/2008

Does not meet GHS classification criteria and therefore is not classified.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
For the full text of the R phrases mentioned in this Section, see Section 16

2.2 Label elements

Does not meet GHS classification criteria and therefore is not classified.

2.3 Other Hazards

No information available



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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Ingredients: See below

Chemical Name: anti-human CGRP-R (calcitonin gene-related peptide type 1 receptor)

CAS-No: 1582205-90-0

Single-use prefilled syringes and single-use prefilled Sureclick® autoinjectors containing 70 mg/mL of erenumab in a formulation containing:

	CAS Number:	Amount
Acetate	127-09-3	25 mM
Sucrose	57-50-1	7.3% (w/v)
Polysorbate 80	9005-64-6	0.010 (w/v)

Single-use prefilled syringes and single-use prefilled Sureclick® autoinjectors containing 140 mg/mL of erenumab in a formulation containing:

	CAS Number:	Amount
Acetate	127-09-3	34 mM
Sucrose	57-50-1	6.5% (w/v)
Polysorbate 80	9005-64-6	0.010 (w/v)

4. FIRST AID MEASURES

4.1 Description of first-aid measures

Eye Contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician if necessary.

Inhalation: Move to fresh air. If symptoms persist, call a physician.

Ingestion: If symptoms persist, call a physician. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Notes to Physician: Treat symptomatically.



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5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Flammable Properties: No information available.

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

5.2 Special hazards arising from the substance or mixture

Hazardous Combustion Products: No information available.

5.3 Advice for firefighters

Protective Equipment and Precautions for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Spill Procedures: If material is released or spilled, cordon off spill area. Take proper precautions to minimize exposure by using appropriate personal protective equipment in cleaning up a spill. If in powder form, wet down spilled material to minimize airborne dispersion. Soak up material with absorbent e.g., paper towels, and wash spill area thoroughly with appropriate cleaning materials. Dispose of collected material in accordance with applicable waste disposal regulations. Avoid release to the environment.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Handling and Storage: Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke in work areas. Use adequate ventilation to minimize exposure. Wash hands, face and other potentially exposed areas immediately after handling this material. Remove contaminated clothing prior to entering eating areas. Clean protective equipment thoroughly after each use. Store in a well ventilated area.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limit: No exposure guidelines established by ACGIH, NIOSH or OSHA. Amgen recommends an occupational exposure limit (OEL) of 2,000 µg/m³ as an 8-hour time weighted average over a 40-hour work week. The OEL is designed as an acceptable airborne concentration of a substance for which it is believed that workers may be repeatedly exposed day after day without adverse health effects. Erenumab has been classified per Amgen's Hazard Classification System as an Occupational Exposure Band 1 compound (1,000 µg/m³ - 5,000 µg/m³).

Engineering Controls: When practicable, handle material in enclosed processes or in processes with effective local exhaust ventilation or within a chemical hood.

8.2 Exposure controls

Personal Protective Equipment

Eye/face Protection: Wear safety glasses with side shields, chemical splash goggles, or safety glasses with side shields and a full-face shield to prevent contact with eyes. The choice of protection should be based on the job activity and potential for exposure to the eyes and face.

Skin Protection: Use gloves or other appropriate personal protective equipment if skin contact with formulation is possible. Wear lab coat or other protective over garment if splashing is possible. The choice of protection should be based on the job activity and potential for skin contact.

Respiratory Protection: When possible, handle material in enclosed processes or containers. If it is properly handled with effective local exhaust ventilation or containment, respiratory protection may not be needed. For procedures involving larger quantities or dust/aerosol generating procedures such as weighing or a large transfer of liquids, an air-purifying respirator with NIOSH approval for dusts and mists may be needed. The choice of protection should be based on the job activity and the potential for exposure.

Other: Wash hands, face and other potentially exposed areas after handling material (especially before eating, drinking or smoking). Clean protective equipment thoroughly after each use.

8.3 Environmental exposure controls

Environmental Exposure Controls Avoid release to the environment.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless to slightly yellow
Physical State:	Liquid
Molecular Weight:	150 kD
Odor:	No information available
Odor Threshold:	No information available
pH:	5.2
Melting Point:	Not applicable
Flash Point:	Not applicable
Evaporation Rate:	No information available
Lower explosive limit:	Not applicable
Upper explosive limit:	Not applicable
Vapor Pressure:	No information available
Vapor Density (air = 1):	No information available
Relative density:	No information available
Water Solubility:	No information available
Partition Coefficient (log Kow):	Not applicable
Viscosity:	No information available

10. STABILITY AND REACTIVITY

10.1 Reactivity	No information available
10.2 Chemical stability	Not applicable
10.3 Possibility of hazardous reactions	Not applicable
10.4 Conditions to avoid	None
10.5 Incompatible materials	None
10.6 Hazardous decomposition products	No information available
10.7 Other information	None

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity:	No information available
Skin corrosion/irritation:	Does not meet GHS Classification Criteria and therefore is not classified.
Serious eye damage/eye irritation:	Does not meet GHS Classification Criteria and therefore is not classified.
Respiratory or skin sensitization:	Does not meet GHS Classification Criteria and therefore is not classified.
Germ cell mutagenicity:	Does not meet GHS Classification Criteria and therefore is not classified.
Carcinogenicity:	Per ICH S6, no carcinogenicity tests were performed.
Reproductive toxicity:	Does not meet GHS Classification Criteria and therefore is not classified.
STOT - single exposure:	Does not meet GHS Classification Criteria and therefore is not classified.
STOT - repeated exposure:	Does not meet GHS Classification Criteria and therefore is not classified.
Aspiration Hazard:	No information available



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12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity effects: No information available

12.2 Persistence and degradability

Persistence/Degradability: No information available

12.3 Bioaccumulative potential

Bioaccumulation/ Accumulation: No information available

12.4 Mobility in soil

Mobility in Environmental Media: No information available

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment: No information available

12.6 Other adverse effects

Other Adverse Effects: No information available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste Disposal Method: Dispose of waste according to prescribed federal, state, local and competent authority guidelines.

14. TRANSPORT INFORMATION

DOT Not regulated by U.S. DOT, IATA, or IMDG.



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15. REGULATORY INFORMATION

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

International Inventories

TSCA:	-
EINECS/ELINCS	-
DSL/NDSL	-
PICCS:	-
ENCS:	-
CHINA:	-
AICS:	-
KECL:	-

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

State Regulations

California Proposition 65: This product does not contain any Proposition 65 chemicals.

15.2 Chemical safety assessment

No CSA has been conducted.

16. OTHER INFORMATION

Text of R phrases mentioned in Section 2

No information available

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The above information is based on data available to us and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it must make their own determination of the effects, properties and protections, which pertain to their particular conditions.

No representation, warranty, or guarantee, express or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the materials, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material because it may be biologically active.