



Anionic Polyacrylamide Emulsion

1 Identification

GHS Product Identifier

Product Name(s)

Aspen Chemicals AC 9319

Recommended use of the chemical and restriction on use

Friction reducer, oil well stimulation

Supplier's details

Aspen Chemicals LLC.

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Tel. (512) 740-4922

Emergency Phone Number

CHEMTREC: +1 800 424 9300

2 Hazard(s) Identification

Classification of the substance or mixture

Acute Toxicity, oral	Category 4
Serious eye damage/eye irritation	Category 2A
Hazardous to the aquatic environment, acute hazard	Category 3

GHS label elements

Warning



Hazard Statements:

H302 Harmful if swallowed
H319 Causes serious eye irritation
H402 Harmful to aquatic life

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Precautionary Statements:

P264 Wash hands thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product
 P273 Avoid release to the environment
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell
 P330 Rinse mouth
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 IF SKIN IRRITATION OCCURS: Get medical advice/attention

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant

Other hazards which do not result in classification

Advice: Product is very slippery when spilled.

This product may contain residual levels of alcohols which, even under normal handling conditions, may smell and irritate the eyes, nose, and throats of some individuals

3 Composition/information on ingredients**Substances / Mixtures**

Chemical Nature: Anionic polyacrylamide in water in oil emulsion

Description	CAS Number	Concentration %
distillates (petroleum) hydrotreated light	64742-47-8	15 - 28
Alcohols, ethoxylated	Proprietary	0 - 5
Ammonium Chloride	12125-02-09	1 - 9

Further information

Ammonium Chloride is not a GHS hazardous component in this product. It is listed because Ammonium Chloride is an EPA Reportable Quantity (RQ) spill hazard substance. See section 14 and 15.

The specific chemical identity of the composition has been withheld as proprietary. The exact percentage (concentration) of the composition has been withheld as proprietary.

4 First-aid measures**Description of necessary first-aid measures**

Inhalation Move to fresh air. If breathing is difficult, contact a physician or poison control center. If symptoms persist, call a physician.

Eye contact Wash eyes immediately with clean water. Wash under the eyelids. Wash for 15 minutes and contact physician.

Skin contact Take off contaminated clothing and shoes. Wash skin thoroughly with water. Wash contaminated clothing before reuse. In case of persistent irritation, call a physician.

Ingestion Call a poison center or doctor immediately. Do not induce vomiting unless directed to do so by a physician or by the poison center. Do not administer any food or oral medication to an unconscious person.

Most important symptoms/effects, acute and delayed

No information

Indication of immediate medical attention and special treatment needed, if necessary

Treatment: All treatments should be based on observed signs and symptoms of distress in the patient.

5 Fire-fighting measures

Suitable extinguishing media

Water Spray, Carbon dioxide (CO₂), Alcohol-resistant foam, Dry chemical

Specific hazards arising from the chemical

Potential for small amounts of Hazardous Combustion Product

When heated to decomposition, nitrogen oxide, hydrogen chloride gas, and/or ammonia gas may be produced.

Special protective actions for fire-fighters

Wear self-contained breathing apparatus and protective suit. Use NIOSH/MSHA approved respiratory protection.

Further information

Cool containers/tanks with water spray.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Where the exposure level is not known, wear approved, positive pressure, self-contained respirator.

Where exposure level is known, wear approved respirator suitable for the level exposure.

For personal protection, see SDS Section 8.

Wear chemical-resistant boots.

Environmental precautions

Avoid discharge or spilling into the environment. Prevent product from entering storm drains and waterways.

Methods and materials for containment and cleaning up

Sweep up to prevent slipping hazard. Soak up with inert material (e.g. sand, silica gel, universal binder, acid binder, sawdust, diatomaceous earth, or vermiculite).

Shovel into suitable container for disposal. After cleaning, flush away traces with water. Use

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detergent if needed.

7 Handling and storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin, eyes and clothing. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Store at room temperature. To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment.
Avoid contact with strong oxidizing agents.

8 Exposure controls/personal protection

Control parameters

Components with workplace control parameters:

Components	CAS No.	Form of exposure	Control Parameters
distillated (petroleum) hydrotreated light	64742-47-8	Vapors	197 ppm; 1200 mg / m ³

Appropriate engineering controls

Dose and handle in closed systems whenever possible. Handle only in a place equipped with local exhaust (or other appropriate exhausts). Remove and wash contaminated clothing before reuse. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks, consumption of food or drink, and immediately after handling the product.

Individual protection measures

When there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

Hand protection

Use chemical-resistant gloves. Please follow instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Take into consideration the specific local conditions under which the product is used, such as danger of cuts, abrasion and the contact time. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Skin and body protection

Protective clothing

Eye protection

Suitable safety goggles or face shield

Environmental exposure controls

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Avoid release to the environment.

9 Physical and chemical properties

Physical and chemical properties

Physical state	thick liquid
Color	white to pale yellow
Odor	mild petroleum odor
pH	6 - 8
Freezing point	$\leq -5\text{ }^{\circ}\text{C} / 23\text{ }^{\circ}\text{F}$
Pour point	$\leq 0\text{ }^{\circ}\text{C} / 32\text{ }^{\circ}\text{F}$
Flash point	$\geq 94\text{ }^{\circ}\text{C} / 201\text{ }^{\circ}\text{F}$ (closed up)
Evaporation rate	< 1 (n-butyl acetate = 1)
Explosive properties:	
Lower explosion limit	no information available
Upper explosion limit	no information available
Vapor pressure	10 (< 77 °F)
Density	0.9 - 1.2 g / cm ³
Bulk density	8.5 - 9.2 lb / gal
Solubility	
Water	dispersible
Partition coefficient:	
n-octanol / water	not applicable
Decomposition temperature	no information available
Oxidizing potential	this substance is not classified as oxidizing
Saturation in air (% vol)	no information available
Surface tension	no information available

10 Stability and reactivity

Reactivity

Stable under recommended storage conditions.

Chemical stability

No decomposition if stored and applied as directed.

Possibility of hazardous reactions

No hazardous polymerization reactions occur.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

Strong oxidizing agents.

Ammonium ion: Avoid contact with alkaline substances and nitrites.

Hazardous decomposition products

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Thermal decomposition can lead to the formation of the following products:

Carbon oxides.
Ammonia.
Nitrogen oxides (NO_x).
SO₂ and SO₃.

11 Toxicological information

Toxicological (health) effects

Acute oral toxicity	Remarks: estimated. Rat: > 5000 mg/kg LD50.
Acute oral toxicity	Distillates (petroleum) hydrotreated light: Rat: > 5000 mg/kg LD50. Remarks: estimated. LC50 Rat, 4h, > 20 mg/kg.
Acute inhalation toxicity	Distillates (petroleum) hydrotreated light: LC50 Rat, 4h, > 5.2 gm/L.
Acute inhalation toxicity	Distillates (petroleum) hydrotreated light: LC50 Rat, 4h, > 5.2 gm/L.
Acute dermal toxicity	Remarks: estimated. LD50 Rabbit, > 2000 mg/kg.
Acute dermal toxicity	Distillates (petroleum) hydrotreated light: LD50 Rabbit, > 2000 mg/kg.
Skin corrosion/irritation	Remarks: toxicological data taken from products / mixtures with similar composition. Irritating to skin.
Eye damage irritation	Remarks: toxicological data taken from products / mixtures with similar composition. Causes serious eye irritation.
Skin sensitization	Based on available data; the classification criteria are not met.
Skin sensitization	Distillates (petroleum) hydrotreated light: The product is not classified as sensitizer.
Germ cell mutagenicity	
Genotoxicity in vitro	Distillates (petroleum) hydrotreated light: no known effect.
Genotoxicity in vivo	Distillates (petroleum) hydrotreated light: not mutagenic.
Carcinogenity	Distillates (petroleum) hydrotreated light: not classified by IARC or NTP.
Reproductive toxicity	Distillates (petroleum) hydrotreated light: does not show teratogenic effects in animal experiments.

12 Ecological information

Ecotoxicity effects

Aquatic toxicity

LC50/96 h/Danio rerio (zebra fish)/OECD Test Guideline 203: > 100 mg/l

Remarks: Information given is based on data obtained from similar substances.

EC50/48 h/Daphnia magna (Water flea)/Immobilization/OECD Test Guideline 202: > 100 mg/l

Remarks: Information given is based on data obtained from similar substances.

IC50/72 h/Green algae (Selenastrum capricornutum)/Growth inhibition/OECD Test Guideline 201: > 100 mg/l

Remarks: Information given is based on data obtained from similar substances.

Toxicity to other organisms

No data available

Persistence and degradability

Biological degradability:

Modified Sturm Test/OECD Test Guideline 301B:

The polymeric ingredient is not readily biodegradable.

Seawater Shake Flask Method/OECD Test Guideline 306/28 d: 13 %

Bioaccumulative potential

Because of the high molecular weight of the polymer diffusion through biological membranes is very

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small. Bioaccumulation is unlikely.
 Partition coefficient: n-octanol/water: Not applicable

Mobility in soil

Water solubility: Limited by viscosity.
 Surface tension: No data available

13 Disposal considerations

Disposal methods

Product: Recycling and reuse of the product is advisable, if permitted by existing regulations. If recycling is not feasible, dispose of the product in compliance with local, regional, national and international regulations.

Contaminated packaging (drums, containers, etc.): Clean thoroughly with running water. Afterwards it can be reused. If the packaging cannot be cleaned properly, it must be disposed of, similarly to the method used to dispose of unused product.

14 Transport information

DOT	(LAND)	Not classified as dangerous with regard to transportation regulations.
IMDG	(SEA)	Not classified as dangerous with regard to transportation regulations.
ICAO/IATA	(AIR)	Not classified as dangerous with regard to transportation regulations.

Special precautions for user

DOT/CFR: Product contains US EPA CERCLA and CWA Hazardous Substance: Ammonium Chloride (CAS: 12125-02-9) having a Reportable Quantity (RQ) of 5000 pounds; (refer to SDS section 3 for amount in product to determine if spilled quantity of product exceeds the Reportable Quantity (RQ) triggering EPA Spill Incident Notification). Hazardous Substances/Reportable Quantities - DOT requirements specific to Hazardous Substances only apply if the quantity in one package equals or exceeds the reportable quantity.
 Refer to section 3, Composition, to determine if RQ will apply.

15 Regulatory information

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

SARA Title III Section 311 Categories

Immediate (Acute) Health Effects: YES.
 Delayed (Chronic) Health Effects: NO.
 Fire Hazard: NO.
 Sudden Release of Pressure Hazard: NO.
 Reactivity Hazard: NO.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.659 - Supplier Notification Required)

While this product does not contain any component CAS number directly listed under SARA 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA), it does contain ammonia chemical(s) that may be source per EPA of aqueous ammonia, a reportable chemical.

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A list of such chemical(s) present in concentrations greater than 1 % is reported below. Please refer to EPA Guidance for Reporting Aqueous Ammonia, EPA 745-R-00-005.

Ammonium chloride (12125-02-9)

ACGIH American conference of governmental industrial hygienist's threshold limit value (TLV) Substances

California Proposition 65

Acrylamide (CAS N. 79-06--1) < 0.05 %

Remarks: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproduction harm.

WARNING: This product can expose you to chemicals including ethylene glycol and ethylene oxide, which are known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Notification Status

All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

All components of this product are included in the United States TSCA Chemical Inventory or are not required to be listed on the United States TSCA Chemical Inventory.

All components of this product are included in the Canada Domestic Substance List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).

16 Other information

HMIS RATING:

HEALTH: 2

FLAMMABILITY: 1

REACTIVITY: 0

NFPA RATING:

HEALTH: 2

FIRE: 1

REACTIVITY: 0

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

This SDS is prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI SDS Standard (Z400.1). Product regulations and the SDS contain all the information required by the Controlled Product Regulation.