

# Material Safety Data Sheet

Product Group: Polyacrylamide

(Anionic, Cationic, Nonionic, and Zwitterionic)

## 1. Identification of the substance / preparation and of the company / undertaking

**Product name** Polyacrilamide

**Symbol(s)**  $(C_3H_5NO)_x$

**Synonyms** Anionic Polyacrylamide, Cationic Polyacrylamide, Nonionic Polyacrylamide, Zwitterionic Polyacrylamide, PAM

**Producer/Distributor** Golgah Co.  
No.42, Alvand Ave., Argentina Sq., 1516618113, Tehran, Iran.  
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Fax.: +98 21 888 80 381  
email: info@golgah.com                      www.golgah.com

**Identification of product** Solid-Powder

**Use** Chemical applications

**Emergency phone number** Local emergency center (Iran): 115  
or +98 21 887 98 459

## 2. Composition\* / Information on ingredients

Substance name	Value(s)	CAS No. / HS Code	R-Phrase(s)	S-Phrase(s)
Polyacrylamide	88.0%	9003-05-8** / 390690	R45, R46, R20/21, R25, R48/23/24/25, R36/38, R43, R62	S53, S45
Ammonium Chloride	2.0%	12125-02-9 / 282710		
Water	10.0%	7732-18-5 / 220110		

\* For additional information on composition and technical specification, refer to our product catalogue.

\*\* CAS No. for acrylamide monomer is 79-06-1

Other CAS No. that are also used to introduce polyacrylamide different copolymers are as following:

Anionic PAM: 25038-45-3

Cationic PAM: 148832-08-0, 69418-26-4

Nonionic PAM: 148832-08-0, 25038-45-3

Zwitterionic PAM: 148832-08-0, 25038-45-3

### 3. Hazards identification

**Aqueous solutions or powders that become wet render surfaces extremely slippery.**

#### Health Effects

**Skin** May cause slight irritation.

**Eyes** May cause irritation with redness and swelling.

**Ingestion** May cause irritation of digestive tract.

**Inhalation** May cause respiratory tract irritation.

**Physical/chemical properties** Corrosive, but not classified as hazardous.

### 4. First Aid measures

**Inhalation** No hazards which require special first aid measures.

**Skin contact** Wash contaminated area with soap or mild detergent and running water.  
Contaminated clothing should be washed before re-use.  
In case of persistence skin irritation, consult a physician.

**Eye contact** Immediately flush eyes and under eyelids with running water for at least 15 minutes. If there is any irritation obtain medical attention immediately.

**Ingestion** This product is not considered toxic.  
Provided patient is conscious, wash out with water. Seek medical attention. Never give anything by mouth to an unconscious person.

**Most important symptoms/effects** None reasonably foreseeable.

**Notes to physicians** Treat symptomatically.

### 5. Fire-Fighting measures

**Fire extinguishing data** Not flammable, not combustible, not explosive, does not burn.

**Extinguishing media** Alcohol resistant foam, dry powder, carbon dioxide, water, water powder and Sand.

**Special protective equipment  
For firefighters** As for all fires involving chemicals: chemical protection suit, gloves and boots, and self-contained breathing apparatus.

**Combustion and thermal decomposition products** Nitrogen oxides (NO<sub>x</sub>) Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>)

## 6. Accidental release measures

- Personal precautions** Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.
- Methods for cleaning up** Do not flush with water. Clean up promptly by sweeping or vacuum. Keep in suitable, closed containers for disposal. After cleaning, flush away traces with water.
- Waste disposal** Do not flush into surface water.

## 7. Handling and storage

- Handling precautions** Avoid contact with skin, eyes, and clothing. Avoid dust formation. Avoid breathing dust or mist. Keep containers closed when not in use.
- Package** Polyacrylamide is packed in inner plastic bags and furtherly in polypropylene woven bags, with each bag containing 25kg. Liquid Polyacrylamide is packed in PE plastic drum and our company will provides special tanks for transportation and storage for the liquid product to the users.
- Storage** Bulk quantities should be stored in ebonite coated, steel, rubber-lined mild steel, FRP or plastic tanks. For small packages, polyethylene or double skinned polyethylene containers are acceptable. Store indoors away from direct heat or sunlight. Avoid wet, damp and humid conditions. Avoid extreme temperatures.

## 8. Exposure controls and personal protection

**Engineering measures to reduce exposure** Ensure adequate ventilation. Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.  
 HTP(8h)=2mg/M3 (Al) Finland  
 TVL=2mg/M3 (Al) (TWA) USA  
 MAK=6(F)mg/M3 (Al) Germany

Component	ACGIH TLV	OSHA PEL (Vacated)	NIOSH IDLH
<b>Ammonium chloride</b>	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>
Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
<b>Ammonium chloride</b>	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>

### Legend

**ACGIH - American Conference of Governmental Industrial Hygienists**

**OSHA - Occupational Safety and Health Administration**

**NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health**

**Recommended Protective Material** Neoprene or rubber

### Personal protection equipment

**Respiratory Protection** For exposures under 10 mg/m<sup>3</sup>, a NIOSH/MSHA approved air-purifying respirator with high efficiency particulate cartridge(s) may be used

**Hand protection** PVC or other plastic material gloves.

**Eye protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Do not wear contact lenses.

**Skin and body protection** Chemical resistant apron or protective suits if splashing or repeated contact with solution is likely.

**Hygiene measures** Wash hands and face before breaks and immediately after handling the product. When using do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Form</b>	White powder
<b>pH (1% solution)</b>	5.0 - 7.0
<b>Boiling point</b>	NA
<b>Odor</b>	None
<b>Water solubility</b>	Miscible in water. When react with water, curing phenomenon occurs.
<b>Additional information</b>	Refer to producer/distributor technical specification data.

## 10. Stability and reactivity

<b>Stability</b>	Stable at ambient temperatures
<b>Materials to avoid</b>	Oxidizing agents may cause exothermic reactions.
<b>hazardous decomposition</b>	No decomposition if stored and applied as directed. Thermal decomposition may produce Nox and Cox

## 11. Toxicological information

### Acute toxicity

<b>Oral</b>	The product is not expected to be toxic. LD50/oral/rat > 5000 mg/kg
<b>Inhalation</b>	The product is not expected to be toxic.

### Irritation

<b>Skin</b>	This material is not irritating to skin.
<b>Eyes</b>	Testing according to Draize technique showed the material produces no corneal or iridial effects and only slight transitory conjunctival effects similar to those which all granular materials have on conjunctivae.

## 12. Ecological information

<b>Ecotoxicity</b>	Toxity to fish: LC50/96 hours > 100 mg/l. (OECD 203) Toxity to daphina: LC50/daphina m./48 hours > 100 mg/l. (OECD 202). Toxicity algae: IC50/Scenedesmus subspicatus/72 hours>100 mg/l.(OECD 201)
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### 13. Disposal considerations

- Waste from residues/unused** Processing, use or contamination of this product may change the waste management options.  
Dispose of as special waste in compliance with local and national regulations.
- Contaminated packaging** Rinse empty containers and use the rinsed-water to prepare the working solution. Can be landfield.  
Dispose of as special waste in compliances with local and national regulations.

### 14. Transport information

- Road, rail and ship** Not classified as dangerous in the meaning of transport regulations.  
Not a hazardous material for transportation.

### 15. Regulatory information

**The product is not a hazardous article and need not to be labeled according to EC-Directives as amended.**

#### International Inventories

- (EINECS (EU)** Existing polymer according to the definition in the 7th amendment to directive 67/548/EEC.
- (TSCA (USA)** Complies with all applicable rules or orders under TSCA.
- Other compliances** DSL, PICCS, ENCS, AICS, IECSC, KECL

### 16. Other information

Notes: The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information. The information given in this data sheet does not constitute or replace the user's own assessment of workplace risk as required by other health and safety legislation.

**Prepared by** Golgah Co.

**Date** 7/14/2016

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