

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product Name : PEG/Ion 400™  
Product Number : HR2-460  
Product type : Liquid  
REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses : For research use only. Not for drug, household, or other use.

**1.3 Details of the supplier of the Safety Data Sheet**

Company : Hampton Research  
34 Journey  
Aliso Viejo, CA 92656-3317  
United States  
Telephone : 949 425 1321  
Telephone technical support is available 8:00 a.m. to 4:30 p.m. USA Pacific Standard Time.  
Fax : 949 425 1611  
Fax Technical Support is available 24 hours a day.  
e-mail : tech@hrmail.com  
e-mail Technical Support is available 24 hours a day.

**1.4 Emergency telephone number**

Emergency phone : 949 425 1321  
For **CHEMTREC** Assistance : 800 424 9300  
For **CHEMTREC** Assistance : 703 527 3887 (International)

**SECTION 2: Hazards Identification****2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

see SECTION 16

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

see SECTION 16

**Additional information:**

Relevant R-phrase(s), S-phrase(s), GHS pictogram(s), Hazard statement(s), and Precautionary statement(s) please see SECTION 16

## (CONTINUED) - SECTION 2: Hazards Identification

### 2.2 Label elements

Hazard pictogram	: Not applicable
Signal word	: Not applicable
Hazard statement(s)	: Not applicable
Precautionary statement(s)	: Not applicable
Supplemental Hazard Statements	: Not applicable

2.3 Other hazards : none

## SECTION 3: Composition/information on ingredients

Not applicable

## SECTION 4: First Aid Measures

### 4.1 Description of first aid measures

#### General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

### 4.3 Indication of any immediate medical attention and special treatment needed

#### Notes to physician

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

#### Specific treatments

No specific treatment.

## SECTION 5: Fire Fighting Measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Unsuitable extinguishing media

None known

### 5.2 Special hazards arising from the substance or mixture

No data available

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further Information

No data available

## SECTION 6: Accidental Release Measures

### 6.1 Personal Precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see SECTION 8 and 13.

## SECTION 7: Handling and Storage

### 7.1 Personal Precautions

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

See Section 8 for additional information on hygiene measures. For precautions see section 16.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end uses

A part from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Components with workplace control parameters

Consult a physician. Show this safety data sheet to the doctor in attendance.

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Environmental Exposure Controls

See SECTION 6

## SECTION 9: Physical and Chemical Properties

No data available

## SECTION 10: Stability and Reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

No data available

## (CONTINUED) - SECTION 10: Stability and Reactivity

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

## SECTION 11: Toxicological Information

No data available

## SECTION 12: Ecological Information

No data available

## SECTION 13: Disposal Considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transportation Information

### 14.1 UN number

ADR/RID: 3316

IMDG: 3316

IATA: 3316

### 14.2 UN proper shipping name

ADR/RID: CHEMICAL KIT

IMDG: CHEMICAL KIT

IATA: Chemical kit

### 14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

### 14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

### 14.5 Environmental hazards

ADR/RID: No

IMDG Marine pollutant: No

IATA: No

## (CONTINUED) - SECTION 14: Transportation Information

### 14.6 Special precautions for user

No data available

## SECTION 15: Regulatory Information

This safety data sheet complies with the requirements of Regulation (EC) No 1907/2006.

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

No data available

### 15.2 Chemical Safety Assessment

No data available

## SECTION 16: Other Information

Kit Components							
Substance Name	[CAS]	R-Phrase	S-Phrase	GHS Pictogram	Hazard Statement	Precautionary Statement	WKG
Ammonium acetate	631-61-8						
Ammonium chloride	12125-02-9	22-36	22	GHS07	H302-H319-H401	P264-P270-P273-P280-P301 + P312 + P330-P305 + P351 + P338	1
Ammonium citrate dibasic	3012-65-5	36/37	26	GHS07	H319	P261-P305 + P351 + P338	3
Ammonium citrate tribasic	3458-72-8	36/37/38	26-36				3
Ammonium formate	540-69-2	36/37/38	26-36	GHS07	H315-H319-H335	P261-P305 + P351 + P338	1
Ammonium nitrate	6484-52-2	8-36/37/38	17-26-36	GHS03, GHS07	H272-H315-H319-H335	P220-P261-P305 + P351 + P338	1
Ammonium phosphate dibasic	7783-28-0	36/37/38	26-36	GHS07	H315-H319-H335	P261-P305 + P351 + P338	1
Ammonium phosphate monobasic	7722-76-1						1
Ammonium sulfate	7783-20-2				H412	P273+P501	1
Ammonium tartrate dibasic	3164-29-2						3
Cadmium chloride hydrate	654054-66-7	45-46-60-61-25-26-48/23/25-50/53	53-45-60-61	GHS06, GHS08	H301-H330-H340-H350-H360FD-H372	P264-P280-P284-P305 + P351 + P338-P337 + p313	3
Calcium acetate hydrate	114460-21-8	36/37/38	26	GHS07	H226-H314-H315-H318-H319	P264-P280-P302+P352-P305+P351+P338-P332+P313-P337+P313-P362	1
Calcium chloride dihydrate	10035-04-8	36	22-24	GHS07	H315-H319	P305 + P351 + P338	1
DL-Malic acid	6915-15-7			GHS07	H319	P264-P280-P305 + P351 + P338-P337 + P313	3
Ethylammonium nitrate		8-36/37/38	17-26-36	GHS03, GHS07	H272-H315-H319-H335	P220-P261-P305+P351+P338	
Lithium acetate dihydrate	6108-17-4						1
Lithium chloride	7447-41-8	22-36/37/38	26-36/37/39	GHS07	H302-H315-H319-H335	P261-P305 + P351 + P338	3
Lithium citrate tribasic tetrahydrate	6080-58-6	36/37/38	26-36				1

**(CONTINUED) - SECTION 16: Other Information**

<b>Kit Components</b>							
<b>Substance Name</b>	<b>[CAS]</b>	<b>R-Phrase</b>	<b>S-Phrase</b>	<b>GHS Pictogram</b>	<b>Hazard Statement</b>	<b>Precautionary Statement</b>	<b>WKG</b>
Lithium nitrate	7790-69-4	8	24/25	GHS03	H272	P220	1
Lithium sulfate monohydrate	10102-25-7	22		GHS07			1
Magnesium acetate tetrahydrate	16674-78-5						3
Magnesium chloride hexahydrate	7791-18-6						1
Magnesium formate dihydrate	557-39-1						3
Magnesium nitrate hexahydrate	13446-18-9						1
Magnesium sulfate hydrate	22189-08-8						1
Nickel(II) chloride hexahydrate	7791-20-0	49-61-23/25-38-42/43-48/23-50/53-68	53-45-60-61	GHS06, GHS08, GHS09	H301 + H331-H315-H317-H334-H341-H350i-H360D-H372-H410	P201-P202-P261-P272-P273-P280-P301 + P310+P330-P302+P352-P304+P340+P311-P308+P313	3
Polyethylene glycol 400	25322-68-3						1
Potassium acetate	127-08-2						1
Potassium chloride	7447-40-7						1
Potassium citrate tribasic monohydrate	6100-05-6						1
Potassium formate	590-29-4						2
Potassium phosphate dibasic	7758-11-4						1
Potassium phosphate monobasic	7778-77-0						1
Potassium sodium tartrate tetrahydrate	6381-59-5						3
Potassium thiocyanate	333-20-0	20/21/22-32-52/53	13-36/37-46-61	GHS07	H302-H312-H332-H412	P273-P280	
Sodium acetate trihydrate	6131-90-4						1
Sodium chloride	7647-14-5						1
Sodium citrate tribasic dihydrate	6132-04-3						1
Sodium formate	141-53-7						1
Sodium malonate	141-82-2	22-41	26-36/39	GHS05, GHS07	H302-H318	P280-P305 + P351 + P338	1
Sodium nitrate	7631-99-4	8-22-36/37/38	17-26	GHS03, GHS07	H272-H302-H315-H319-H335	P220-P261-P305 + P351 + P338	3
Sodium phosphate monobasic monohydrate	10049-21-5						1
Sodium tartrate dibasic dihydrate	6106-24-7						3
Sodium thiocyanate	540-72-7	20/21/22-32-52/53	13-36/37-46-61	GHS07	H302-H312-H332-H412	P273-P280	1
Succinic acid	110-15-6			GHS055	H318	P280-P305 + P351 + P338	1
Tacsimate							
Tetraethylammonium bromide	71-91-0	36/37/38	26-36	GHS07	H315-H319-H335	P261-P305 + P351 + P338	3
Zinc acetate dihydrate	5970-45-6	22-36-50/53	26-60-61	GHS05, GHS07, GHS09	H302-H318--H400-H411	P264-P270-P273-P280-P301 + P312 + P330-P305 + P351 + P338 + P310-P391-P501	3

## (CONTINUED) - SECTION 16: Other Information

### Relevant R-phrases, S-phrases, GHS Pictogram(s), Hazard statement(s), and Precautionary statement(s)

#### Risk Phrase(s)

- R 8 : Contact with combustible material may cause fire
- R 20/21/22 : Harmful by inhalation, in contact with skin and if swallowed
- R 22 : Harmful if swallowed
- R 23/25 : Toxic by inhalation and if swallowed
- R 25 : Toxic if swallowed
- R 26 : Very toxic by inhalation
- R 32 : Contact with acids liberates very toxic gas
- R 36 : Irritating to the eyes
- R 36/37 : Irritating to eyes and respiratory system
- R 36/37/38 : Irritating to eyes, respiratory system and skin
- R 38 : Irritating to the skin
- R 41 : Risk of serious damage to eyes
- R 42 : May cause sensitization by inhalation
- R 42/43 : Irritating to eyes, respiratory system and skin
- R 45 : May cause cancer
- R 46 : May cause heritable genetic damage
- R 48/23 : Toxic: Danger of serious damage to health by prolonged exposure through inhalation
- R 48/23/25 : Toxic: Danger of serious damage to health by prolonged exposure through inhalation and if swallowed
- R 49 : May cause cancer by inhalation
- R 50/53 : Very toxic to aquatic organisms, may cause long term effects in the aquatic environment
- R 52/53 : Harmful to aquatic organisms, may cause long term effects in the aquatic environment
- R 60 : May impair fertility
- R 61 : May cause harm to the unborn child
- R 68 : Possible risk of irreversible effects

#### Safety Phrase(s)

- S 13 : Keep away from food, drink and animal feeding stuff
- S 17 : Keep away from combustible material
- S 22 : Do not breath dust
- S 24 : Avoid contact with skin
- S 24/25 : Avoid contact with skin and eyes
- S 26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- S 36 : Wear suitable protective clothing
- S 36/37 : Wear suitable protective clothing and wear suitable gloves
- S 36/37/39 : Wear suitable protective clothing and wear suitable gloves and wear eye/face protection
- S 36/39 : Wear suitable protective clothing and wear eye/face protection
- S 45 : In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)
- S 46 : If swallowed, seek medical advice immediately (show label where possible)
- S 53 : Avoid exposure - obtain special instruction before use
- S 60 : This material and/or its container must be disposed of as hazardous waste
- S 61 : Avoid release to the environment. Refer to special instructions on SDS



## (CONTINUED) - SECTION 16: Other Information

### Relevant R-phrases, S-phrases, GHS Pictogram(s), Hazard statement(s), and Precautionary statement(s)

#### GHS Pictogram

GHS03	:	Oxidizing		GHS05	:	Corrosion	
GHS06	:	Acute toxicity		GHS07	:	Acute toxicity	
GHS08	:	Health Hazard		GHS09	:	Environment	

#### Hazard statement(s)

H226	:	Flammable liquid and vapor.
H272	:	May intensify fire; oxidizer.
H301	:	Toxic if swallowed.
H301 + H331	:	Toxic if swallowed and toxic if inhaled
H302	:	Harmful if swallowed.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H330	:	Fatal if inhaled.
H332	:	Harmful if inhaled.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation. May cause genetic defects.
H340	:	May cause genetic defects.
H341	:	Suspected of causing genetic defects.
H350i	:	May cause cancer by inhalation
H360D	:	May damage the unborn child.
H360FD	:	May damage fertility. May damage the unborn child.
H372	:	Causes damage to organs through prolonged or repeated exposure
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

#### Precautionary statement(s)

P201	:	Obtain special instructions before use.
P202	:	Do not handle until all safety precautions have been read and understood.
P220	:	Keep/Store away from clothing/.../combustible materials.
P261	:	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	:	Wash skin thoroughly after handling.
P270	:	Do not eat, drink or smoke when using this product.
P272	:	Contaminated work clothing should not be allowed out of the workplace.

## (CONTINUED) - SECTION 16: Other Information

### Hazard statement(s)

- P273 : Avoid release to the environment.
- P280 : Wear protective gloves/protective clothing/eye protection/face protection.
- P284 : Wear respiratory protection.
- P301 + P310 : IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P301 + P312 + P330 : IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell. Rinse mouth
- P302 + P352 : IF ON SKIN: wash with plenty of soap and water.
- P304 + P340 + P311 : IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.  
Call a POISON CENTER or doctor/physician.
- P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313 : IF exposed or concerned: Get medical advice/attention.
- 
- P310 : Immediately call a POISON CENTER or doctor/physician.
- P312 : Call a POISON CENTER or doctor/physician if you feel unwell.
- P332 + P313 : IF SKIN irritation occurs: Get medical advice/attention.
- P337 + P313 : IF eye irritation persists: Get medical advice/attention.
- P362 : Take off contaminated clothing and wash before reuse.
- P391 : Collect spillage.
- P501 : Dispose of contents/container to.....SEE SECTION 13

### DISCLAIMER

- For R&D use only. Not for drug, household, or other use.

### WARRANTY

• The above information is believed to be correct but does no purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of this product. Hampton Research Corp., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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