

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

Product Name : PEGRx™ 2 Crystallization Kit  
Product Number : HR2-084  
Product type : Liquid

**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)

**This is a summary MSDS for a kit, for the full MSDS for each of the components listed in section 16 please visit our website.**

**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:**

For full text of R- phrases: see SECTION 16

**2.2 Label elements**

Hazard pictogram : Not applicable  
Signal word : Not applicable

## SECTION 2: Hazards Identification

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

Refer to component MSDS

## 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.

## SECTION 5: Fire Fighting Measures

### 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.

### 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

No data available

## 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

## 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

Refer to component MSDS

## SECTION 12: Ecological Information

Refer to component MSDS

## 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: No

IATA: No

## 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 |
| (+/-)-2-Methyl-2,4-pentanediol | 107-41-5    | 36/38                            | 26-36         | GHS07               | H315-H319                            | P305 + P351 + P338                   | 1   |
| 1,4-Dioxane                    | 123-91-1    | 11-19-36/37-40-66                | 9-16-36/37-46 | GHS02, GHS07, GHS08 | H225-H319-H335-H351                  | P210-P261-P281-P305 + P351 + P338    | 2   |
| 2-Propanol                     | 67-63-0     | 11-36-67                         | 7-16-24/25-26 | GHS02, GHS07        | H225-H319-H336                       | P210-P261-P305 + P351 + P338         | 1   |
| Ammonium acetate               | 631-61-8    |                                  |               |                     | H315-H319-H335                       | P261-P305 + P351 + P338              | 1   |
| Ammonium citrate tribasic      | 3458-72-8   | 36/37/38                         | 26-36         | GHS07               | H315-H319-H335                       | P261-P305 + P351 + P338              | 3   |
| Ammonium sulfate               | 7783-20-2   |                                  |               |                     |                                      |                                      | 1   |
| BICINE                         | 150-25-4    |                                  |               |                     |                                      |                                      | 3   |
| BIS-TRIS                       | 6976-37-0   | 36/37/38                         | 26-36         | GHS07               | H315-H319-H335                       | P261-P305 + P351 + P338              | 3   |
| BIS-TRIS propane               | 64431-96-5  |                                  |               |                     |                                      |                                      | 3   |
| Cadmium chloride hydrate       | 654054-66-7 | 45-46-60-61-25-26-48/23/25-50/53 | 53-45-60-61   | GHS06, GHS08, GHS09 | H301-H330-H340-H350-H360FD-H372-H410 | P201-P260-P273-P284-P301 + P310-P310 | 3   |
| Calcium chloride dihydrate     | 10035-04-8  | 36                               | 26            | GHS07               | H319                                 | P305 + P351 + P338                   | 1   |
| Citric acid                    | 77-92-9     | 41                               | 26-39         | GHS07               | H319                                 | P305 + P351 + P338                   | 1   |
| Dextran sulfate sodium salt    | 9011-18-1   |                                  |               |                     |                                      |                                      | 2   |

**(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> |
| DL-Malic acid                              | 6915-15-7    | 22-37/38-41          | 26-39             | GHS05, GHS07         | H302-H315-H318-H335                                | P261-P280-P305 + P351 + P338         | 1          |
| Ethylene glycol                            | 107-21-1     | 22                   |                   | GHS07                | H302   |                                      | 1          |
| HEPES                                      | 7365-45-9    |                      |                   |                      |  |                                      | 1          |
| Imidazole                                  | 288-32-4     | 22-34                | 26-36/37/39-45    | GHS05, GHS07, GHS08  | H302-H314-H360D                                    | P201-P280-P305 + P351 + P338-P310    | 1          |
| Lithium sulfate monohydrate                | 10102-25-7   | 22                   |                   |                      | H302   |                                      | 1          |
| L-Proline                                  | 147-85-3     |                      |                   |                      |  |                                      | 1          |
| Magnesium chloride hexahydrate             | 7791-18-6    |                      |                   |                      |  |                                      |            |
| Magnesium formate dihydrate                | 557-39-1     |                      | 22-24/25          |                      |  |                                      | 3          |
| MES monohydrate                            | 145224-94-8  | 36/37/38             | 26-36             | GHS07                | H315-H319-H335                                     | P261-P305 + P351 + P338              | 3          |
| Malonic acid                               | 141-82-2     |                      |                   |                      |  |                                      |            |
| n-Octyl-b-D-glucoside                      | 29836-26-8   |                      |                   |                      |  |                                      | 3          |
| Nickel(II) chloride hexahydrate            | 7791-20-0    | 45-25-36/38-43-50/53 | 53-36/37-45-60-61 | GHS06, GHS08, GHS09  | H301-H315-H317-H331-H334-H341-H350i-H360-H372-H410 | P201-P261-P273-P280-P301 + P310-P311 | 3          |
| Polyethylene glycol 200                    | 25322-68-3   |                      |                   |                      |  |                                      |            |
| Polyethylene glycol 400                    | 25322-68-3   |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol 1,000                  | 25322-68-3   |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol 1,500                  | 25322-68-3   |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol 3,350                  | 25322-68-3   |                      |                   |                      |  |                                      |            |
| Polyethylene glycol 4,000                  | 25322-68-3   |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol 6,000                  | 25322-68-3   |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol 8,000                  | 25322-68-3   |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol 10,000                 | 25322-68-3   |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol 20,000                 | 25322-68-3   |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol monomethyl ether 550   | 9004-74-4    |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol monomethyl ether 2,000 | 9004-74-4    |                      |                   |                      |  |                                      | 1          |
| Polyethylene glycol monomethyl ether 5,000 | 9004-74-4    |                      |                   |                      |  |                                      | 1          |
| Potassium formate                          | 590-29-4     |                      |                   |                      |  |                                      | 2          |
| Potassium sodium tartrate tetrahydrate     | 6381-59-5    |                      | 22-24/25          |                      |  |                                      | 3          |
| Succinic acid                              | 110-15-6     | 37/38-41             | 26-36/37/39       |                      | H315-H318-H335                                     | P261-P280-P305 + P351 + P338         | 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> |
| 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          |
| Tris                              | 77-86-1      | 36/37/38        | 26-36           |                      | H315-H319-H335          | P261-P305 + P351 + P338        | 2          |

**Relevant R-phrase(s), S-phrase(s), Hazard code(s), Hazard statement(s), and Precautionary statement(s)****Risk Phrase(s)**

- R 11 : Highly Flammable
- R 19 : May form explosive peroxides
- R 20/22 : Harmful by inhalation and if swallowed
- R 21/22 : Harmful in contact with skin and if swallowed
- R 22 : Harmful if swallowed
- R 25 : Toxic if swallowed
- R 26 : Very Toxic by inhalation
- R 34 : Causes burns
- R 36 : Irritating to the eyes
- R 36/37 : Irritating to eyes and respiratory system
- R 36/38 : Irritating to eyes and skin
- R 36/37/38 : Irritating to eyes, respiratory system and skin
- R 37/38 : Irritating to respiratory system and skin
- R 40 : Limited evidence of a carcinogenic effect
- R 41 : Risk of serious damage to eyes
- R 43 : May cause sensitization by skin contact
- R 45 : May cause cancer
- R 46 : May cause heritable genetic damage
- R 48/23/25 : Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
- R 50/53 : Very Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- R 60 : May impair fertility
- R 61 : May cause harm to the unborn child
- R 66 : Repeated exposure may cause skin dryness or cracking
- R 67 : Vapors may cause drowsiness and dizziness

**Safety Phrase(s)**

- S 7 : Keep container tightly closed
- S 9 : Keep container in a well-ventilated place
- S 16 : Keep away from sources of ignition - No smoking
- S 22 : Do not breathe dust
- 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 and seek medical advice
- S 36/37 : Wear suitable protective clothing and gloves









## (CONTINUED) - SECTION 16: Other Information

### Relevant R-phrases, S-phrases, Hazard code(s), Hazard statement(s), and Precautionary statement(s) (CONTINUED) - Safety Phrase(s)

- S 36/37/39 : Wear suitable protective clothing, gloves and eye/face protection  
S 36/39 : Wear suitable protective clothing and eye/face protection  
S 39 : 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 and show this container or label  
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 safety data sheet

### GHS Pictogram(s)

- |       |   |                   |       |   |   |
|-------|---|-------------------|-------|---|---|
| GHS02 |  | Flammable liquids | GHS07 |  | Acute Toxicity<br>Eye Irrit. 2<br>STOT SE 3 |
| GHS05 |  | Eye Irrit.        | GHS08 |  | Carcinogenicity 1A, 1B                      |
| GHS06 |  | Acute Toxicity    | GHS09 |  | Hazardous to aquatic environment            |

### Hazard statement(s)

- H225 : Highly Flammable liquid and vapour  
H301 : Toxic if swallowed  
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  
H331 : Toxic if inhaled  
H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H335 : May cause respiratory irritation  
H336 : May cause drowsiness or dizziness  
H340 : May cause genetic defects  
H341 : Suspected of causing genetic defects  
H350 : May cause cancer  
H351 : Suspected of causing cancer  
H360 : May damage fertility or the unborn child  
H372 : Causes damage to organs through prolonged or repeated exposure  
H410 : Very toxic to aquatic life with long lasting effects

## (CONTINUED) - SECTION 16: Other Information

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

#### Precautionary statement(s)

- P201 : Obtain special instructions before use.
- P210 : Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
- P260 : Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 : Avoid breathing dust/fume/gas/mist/vapours/spray.
- P273 : Avoid release to the environment.
- P280 : Wear protective gloves/protective clothing/eye protection/face protection.
- P281 : Use personal protective equipment as required.
- P284 : Wear respiratory protection.
- P301 + P310: IF SWALLOWED: Immediately 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.
- P305 + P351 + P338 + P310 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- P311 : Call a POISON CENTER or doctor/physician.

#### DISCLAIMER

For research 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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