

SECTION 1 - Chemical Product & Company Identification

Product Name	Crystal Screen Cryo™
Product Number	HR2-122
Company	Hampton Research
Street Address	34 Journey
City, State, Zip, Country	Aliso Viejo, CA 92656, U.S.A.
Technical Phone	949 425 1321
Fax	949 425 1611
Emergency Phone	949 425 1321
For CHEMTREC Assistance, call:	800 424 9300
For International CHEMTREC Assistance, call:	703 527 3887

SECTION 2 - Composition / Information on Ingredient

Substance Name	CAS #	EC No	SARA	RTECS	LD50
(+/-)-2-Methyl-2,4-pentanediol	107-41-5	203-489-0	No	SA0810000	3,700 mg/kg - Rat - Oral
2-Propanol	67-63-0	200-661-7	Yes	NT8050000	5,045 mg/kg - Rat - Oral
Ammonium acetate	631-61-8	211-162-9	Yes	AF3675000	736 mg/kg - Mouse - Intraperitoneal
Ammonium phosphate monobasic	7722-76-1	231-764-5	No	N/A	5,750 mg/kg - Rat - Oral
Ammonium sulfate	7783-20-2	231-984-1	No	BS4500000	2,840 mg/kg - Rat - Oral
Calcium acetate hydrate	114460-21-8	200-540-9	No	AF7525000	75 mg/kg - Mouse - Intraperitoneal
Calcium chloride dihydrate	10035-04-8	233-140-8	No	EV9810000	N/A
Glycerol	56-81-5	200-289-5	No	MA8050000	12,600 mg/kg - Rat - Oral
HEPES sodium	75277-39-3	278-169-7	No	N/A	N/A
Imidazole	288-32-4	206-019-2	No	NI3325000	220 mg/kg - Rat - Oral
Lithium sulfate monohydrate	10102-25-7	233-820-4	No	N/A	N/A
Magnesium acetate tetrahydrate	16674-78-5	205-554-9	No	AI5600000	111 mg/kg - Mouse - Intravenous
Magnesium chloride hexahydrate	7791-18-6	232-094-6	No	OM2975000	8,100 mg/kg - Rat - Oral
Magnesium formate dihydrate	557-39-1	N/A	No	N/A	N/A
Polyethylene glycol 400	25322-68-3	500-038-2	No	TQ3675000	N/A
Polyethylene glycol 1,500	25322-68-3	500-038-2	No	TQ4030000	44,200 mg/kg - Rat - Oral

(CONTINUED) - SECTION 2 - Composition / Information on Ingredient

Substance Name	CAS #	EC No	SARA	RTECS	LD50
Polyethylene glycol 4,000	25322-68-3	500-038-2	No	TQ4050000	50,000 mg/kg - Rat - Oral
Polyethylene glycol 8,000	25322-68-3	500-038-2	No	TQ4105000	> 50,000 mg/kg - Rat - Oral
Potassium phosphate monobasic	7778-77-0	231-913-4	No	TC6615500	4,640 mg/kg - Rabbit - Dermal
Potassium sodium tartrate tetrahydrate	6381-59-5	206-156-8	No	N/A	N/A
Sodium acetate trihydrate	6131-90-4	204-823-8	No	AJ4580000	N/A
Sodium cacodylate trihydrate	6131-99-3	204-708-2	Yes	CH7890000	2,000 mg/kg - Rat - Oral
Sodium citrate tribasic dihydrate	6132-04-3	200-675-3	No	N/A	N/A
Sodium formate	141-53-7	205-488-0	No	LR0350000	11,200 mg/kg - Mouse - Oral
Sodium phosphate monobasic monohydrate	10049-21-5	231-449-2	No	N/A	N/A
TRIS hydrochloride	1185-53-1	214-684-5	No	N/A	N/A
Zinc acetate dihydrate	5970-45-6	209-170-2	No	ZG8750000	794 mg/kg - Rat - Oral

N/A = NOT AVAILABLE

SECTION 3 - Hazards Identification

HMIS RATING

HEALTH HAZARD: 0

FLAMMABILITY: 0

REACTIVITY: 0

NFPA RATING

HEALTH HAZARD: 0

FLAMMABILITY: 0

REACTIVITY: 0

HAZARD RATINGS

0 - LEAST

1 - SLIGHT

2 - MODERATE

3 - HIGH

4 - EXTREME

For additional information on toxicity, please refer to **SECTION 11**.

SECTION 4 - First Aid Measures

ORAL EXPOSURE

- If swallowed, wash out mouth with water provided person is conscious.
- DO NOT INDUCE VOMITING.
- Call a physician.

(CONTINUED) - SECTION 4 - First Aid Measures

INHALATION EXPOSURE

- If inhaled, remove to fresh air.
- If breathing is difficult, GIVE OXYGEN.
- Call a physician.

DERMAL EXPOSURE

- In case of contact, immediately wash skin with soap and copious amounts of water for at least 15 minutes.
- Take off contaminated clothing and shoes immediately.
- Call a physician.

EYE EXPOSURE

- In case of contact with eyes, flush with copious amounts of water for at least 15 minutes.
- Assure adequate flushing by separating the eyelids with fingers.
- Call a physician.

SECTION 5 - Fire Fighting Measures

FLASH POINT

N/A

FLAMMABILITY

N/A

AUTOIGNITION TEMPERATURE

N/A

EXTINGUISHING MEDIA

- Suitable: Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

- Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- Specific Hazard(s): Emits toxic fumes under fire conditions.

SECTION 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTIONS

- Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

- Wash spill site with soap solution. Flush spill area with copious amounts of water.
- Place in appropriate container.
- Ventilate area and wash spill site after material pickup is complete.

SECTION 7 - Handling & Storage

HANDLING

- User Exposure - Ensure adequate inhalation.
 - Avoid inhalation.
 - Avoid contact with eyes, skin, and clothing.
 - Avoid prolonged or repeated exposure.

STORAGE

- Suitable: Keep container tightly closed.

SECTION 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

- Mechanical exhaust required.
- Safety shower and eye bath

PERSONAL PROTECTIVE EQUIPMENT

- Respiratory: Use respirators and components tested and approved under appropriate government standards such as (NIOSH) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dust are desired, use type N95 (US) or type (P1) (EN 143) dust masks.
- Hand: Compatible chemical-resistant gloves.
- Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

- Wash thoroughly before and after handling.

SECTION 9 - Physical / Chemical Properties

APPEARANCE

PHYSICAL STATE: Liquid

PROPERTY

VALUE

AT TEMPERATURE OR PRESSURE

Molecular Weight	N/A
pH	N/A
BP / BP Range	N/A
MP / MP Range	N/A
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Concentration	N/A
SG / Density	N/A
Bulk Density	N/A
Odor Threshold	N/A

(CONTINUED) - SECTION 9 - Physical / Chemical Properties

PROPERTY	VALUE	AT TEMPERATURE OR PRESSURE
Volatile %	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temperature	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temperature	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = NOT AVAILABLE

SECTION 10 - Stability & Reactivity

STABILITY

- Stable: Stable under recommended storage conditions.

HAZARDOUS DECOMPOSITION PRODUCTS

- No data available.

HAZARDOUS EXOTHERMIC REACTIONS

- Will not occur.

HAZARDOUS POLYMERIZATION

- Will not occur.

SECTION 11 - Toxicological Information

ACUTE TOXICITY

- No data available.

IRRITATION AND CORROSION

- No data available.

SECTION 15 - Regulatory Information

OSHA HAZARDS

- N/A

TSCA STATUS

- N/A

EU ADDITIONAL INFORMATION

Substance Name	CAS #	HAZARD Code	R-Phrase	S-Phrase
(+/-)-2-Methyl-2,4-pentanediol	107-41-5	Xi	36/38	26-36
2-Propanol	67-63-0	F, Xi	11-36-67	7-16-24/25-26
Ammonium acetate	631-61-8			
Ammonium phosphate monobasic	7722-76-1			
Ammonium sulfate	7783-20-2			
Calcium acetate hydrate	114460-21-8	Xi	36/37/38	26-36
Calcium chloride dihydrate	10035-04-8	Xi	36	26
Glycerol	56-81-5			
HEPES sodium	75277-39-3		22-24/25	
Imidazole	288-32-4	C	22-34	26-36/37/39-45
Lithium sulfate monohydrate	10102-25-7	Xn	22	
Magnesium acetate tetrahydrate	16674-78-5			22-24/25
Magnesium chloride hexahydrate	7791-18-6			
Magnesium formate dihydrate	557-39-1			
Polyethylene glycol 400	25322-68-3			
Polyethylene glycol 1,500	25322-68-3			
Polyethylene glycol 4,000	25322-68-3			
Polyethylene glycol 8,000	25322-68-3			
Potassium phosphate monobasic	7778-77-0			
Potassium sodium tartrate tetrahydrate	6381-59-5			22-24/25
Sodium acetate trihydrate	6131-90-4			
Sodium cacodylate trihydrate	6131-99-3	T, N	23/25-50/53	20/21-28-45-60-61
Sodium citrate tribasic dihydrate	6132-04-3			
Sodium formate	141-53-7			
Sodium phosphate monobasic monohydrate	10049-21-5			
TRIS hydrochloride	1185-53-1	Xi	36/37/38	26-36
Zinc acetate dihydrate	5970-45-6	Xn, N	22-36-50/53	26-60-61

(CONTINUED) - SECTION 15 - Regulatory Information

UNITED STATES REGULATORY INFORMATION

- SARA LISTED: No
- SARA LISTED: For additional information on toxicity, please refer to **SECTION 2**.
- TSCA INVENTORY ITEM: N/A

CANADA REGULATORY INFORMATION

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

SECTION 16 - Other Information

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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