SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product Name	:	Crystal Screen 2™
Product Number	:	HR2-112
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

Refer to Section 16

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

Refer to Section 16

SECTION 12: Ecological Information

Refer to Section 16

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**
(+/-)-2-Methyl-2,4-pentanediol	107-41-5	36/38		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
1,6-Hexanediol	629-11-8						1
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 formate	540-69-2	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
BICINE	150-25-4						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
Cadmium sulfate hydrate	150-25-4	45-46-60-61-25-26-48/23/25-50/53	53-45-60-61	GHS06, GHS08, GHS09	H301-H330-H340-H350-H360-H372-H410	P201-P260-P273-P284-P301 + P310-P310	3
Cesium chloride	7647-17-8						2
Cobalt(II) chloride hexahydrate	7791-13-1	49-60-22-42/43-50/53-68	53-45-60-61	GHS07, GHS08, GHS09	H302-H317-H334-H341-H350i-H360F-H410	P201-P261-P273-P280-P308 + P313-P501	3
Ethanol	64-17-5	11	7-16	GHS02	H225	P210	1
Ethylene glycol	107-21-1	22		GHS07	H302		1
Ethylene imine polymer	9002-98-6	22-51/53	61	GHS07, GHS09	H302-H411	P273	2
Glycerol	56-81-5						1
HEPES	7365-45-9						1
Hexadecyltrimethylammonium bromide	57-09-0	22-37/38-41-50/53	26-39-60-61	GHS05, GHS07, GHS09	H302-H315-H318-H335-H410	P261-P273-P280-P305 + P351 + P338-P501	3

(CONTINUED) - SECTION 16: Other Information

Kit Components							
Substance Name	**[CAS]**	**R-Phrase**	**S-Phrase**	**GHS Pictogram**	**Hazard Statement**	**Precautionary Statement**	**WKG**
Imidazole	288-32-4	61-22-34	53-26-36/37/39-45	GHS05, GHS07, GHS08	H302-H314-H360D	P201-P280-P305 + P351 + P338-P310	1
Iron(III) chloride hexahydrate	10025-77-1	22-36-41	26-36	GHS05, GHS07	H290-H302-H315-H318	P280-P305 + P351 + P338	1
Jeffamine® M-600®	77110-54-4	21/22-36/38	26-36/37	GHS07	H302 + H312-H315-H319	P280-P305 + P351 + P338	3
Lithium sulfate monohydrate	10102-25-7	22		GHS07			1
Magnesium chloride hexahydrate	7791-18-6						1
Magnesium sulfate heptahydrate	10034-99-8						1
MES monohydrate	145224-94-8	36/37/38	26-36	GHS07	H315-H319-H335	P261-P305 + P351 + P338	3
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-P261-P273-P280-P301 + P310-P311	3
Polyethylene glycol 400	25322-68-3						1
Polyethylene glycol 1,000	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 phosphate monobasic	7778-77-0						1
Potassium sodium tartrate tetrahydrate	6381-59-5						3
Sodium acetate trihydrate	6131-90-4						1
Sodium chloride	7647-14-5						1
Sodium citrate tribasic dihydrate	6132-04-3						1
Sodium phosphate monobasic monohydrate	10049-21-5						1
tert-Butanol	75-65-0	11-20-36/37	9-16-46	GHS02, GHS07	H225-H319-H332-H335	P210-P261-P305 + P351 + P338	1
Tris	77-86-1						2
Zinc sulfate heptahydrate	7446-20-0	22-41-50/53	22-26-39-46-60-61	GHS05, GHS07, GHS09	H302-H318-H410	P273-P280-P305 + P351 + P338-P501	3
For additional information, please refer to the individual Material Safety Data Sheets(s).							

(CONTINUED) - SECTION 16: Other Information

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

Risk Phrase(s)

R 11	:	Highly Flammable
R 19	:	May form explosive peroxides
R 20	:	Harmful by inhalation
R 21/22	:	Harmful 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 34	:	Causes burns
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 36/38	:	Irritating to eyes and skin
R 37/38	:	Irritating to respiratory system and skin
R 38	:	Irritating to the skin
R 40	:	Limited evidence of a carcinogenic effect
R 41	:	Risk of serious damage to eyes
R 42/43	:	May cause sensitization by inhalation and skin contact
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 adverse effects in the aquatic environment
R 51/53	:	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 or dizziness
R 68	:	Possible risk of irreversible effects

Safety Phrase(s)

S 7	:	Keep container tightly closed
S 9	:	Keep container in 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
S 36/37/39	:	Wear suitable protective clothing, gloves and eye/face protection
S 39	:	Wear eye/face protection
S 45	:	In case of accident or if you feel unwell, seel medical advice immediately (show label where possible)
S 46	:	If swallowed, seek medical advice immediately and show this container or label

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

(Contin.) Safety Phrase(s)

S 53 : Avoid exposure - obtain soecial 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

GHS02 : Flammable liquids

GHS07 : Acute Toxicity
Eye Irrit. 2
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.

H290 : May be corrosive to metals.

H301 : Toxic if swallowed.

H301 + H331 : Toxic if inhaled / swallowed.

H302 : Harmful if swallowed.

H302 + H312 : Harmful if swallowed or in contact with skin.

H314 : Causes severe skin burns and eye damage.

H315 : Causes skin irritation.

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.

H336 : May cause drowsiness or dizziness.

H340 : May cause genetic defects.

H341 : Suspected of causing genetic defects.

H350 : May cause cancer.

H350i : May cause cancer by inhalation.

H351 : Suspected of causing cancer.

H360 : May damage fertility or the unborn child.

H360D : May damage the unborn child.

H360F : May damage fertility.

H360FD : May damage fertility. May damage the unborn child.

H372 : Causes damage to organs through prolonged or repeated exposure.

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.

(CONTINUED) - SECTION 16: Other Information

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.

P310 : Immediately call a POISON CENTER or doctor/physician.

P311 : 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.

P501 : Dispose of contents/container to a licensed disposal company.

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

WARRANTY

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