



# Safety Data Sheet

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## 1. PRODUCT AND COMPANY IDENTIFICATION

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H.A.R.E. SQ Negative Tone Photoresist

Revision Date: 06/19/2018

Supplier:

KemLab  
254 W Cummings Park  
Woburn, MA 01801

For non-emergency information contact: 781-281-0174

Emergency telephone      PERS-ER      US/Canada: 1-800-633-8253  
International: 1-801-629-0667

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## 2. HAZARDS IDENTIFICATION

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**Hazard Pictograms:**



**Signal Word:**

Danger

**Hazard Category:**

Acute tox, oral Cat 4  
Serious eye damage/eye irritation Cat 1  
Specific target organ tox, single exp. Cat 3 (narcotic effects)  
Sensitization, skin Cat 1  
Skin corrosion/irritation Cat 2

**Hazard Statements:**

H302: Harmful if swallowed  
H318: Causes serious eye damage  
H336: May cause drowsiness or dizziness  
H317: May cause an allergic skin reaction  
H315: Causes skin irritation

**Precautionary Statements:**

P261: Avoid breathing dust/fume/gas/mist/vapours/spray  
P264: Wash thoroughly after handling  
P270: Do not eat, drink or smoke when using this product  
P271: Use only outdoors or in a well-ventilated area

P280: Wear protective gloves/protective clothing/eye protection/face protection  
 P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
 P310: Immediately call a POISON CENTER or doctor/physician

**Hazards not otherwise classified:**

Not applicable, none known.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Component	CAS-No.	Concentration
Epoxy Resin	28906-96-9	> 40 - 75 %
Gamma Butyrolactone	96-48-0	< 20 - 60 %
Propylene Carbonate	108-32-7	< 5.0 %
Bis[4-(diphenylsulfonio)phenyl]sulfide bis(hexafluoroantimonate)	89452-37-9	< 5.0 %

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### 4. FIRST AID MEASURES

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**Inhalation:** Remove from exposure. If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.

**Skin contact:** Wash skin with water. Continue washing for at least 15 minutes. Obtain medical attention if blistering occurs or redness persists.

**Eye contact:** Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

**Ingestion:** Wash out mouth with water. Have victim drink 1-3 glasses of water to dilute stomach contents. Induce vomiting if person is conscious. Immediate medical attention is required. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing.

**Notes to physician:** Treat symptomatically.

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### 5. FIRE-FIGHTING MEASURES

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**Suitable extinguishing media:** Use water spray, foam, dry chemical or carbon dioxide. Keep containers and surroundings cool with water spray.

**Special protective equipment for fire-fighters:** Wear full protective clothing and self-contained breathing apparatus.

**Further information:** Pressure may build up in closed containers with possible liberation of combustible vapors.

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## 6. ACCIDENTAL RELEASE MEASURES

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### Personal precautions

Wear suitable protective clothing.  
Wear respiratory protection.  
Eliminate all ignition sources.

### Environmental precautions

Prevent the material from entering drains or water courses.  
Do not discharge directly to a water source.  
Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

### Methods for cleaning up

Contain spills immediately with inert materials (e.g., sand, earth).  
Transfer into suitable containers for recovery or disposal.  
Finally flush area with plenty of water.

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## 7. HANDLING AND STORAGE

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### Handling

Use local exhaust ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed.

### Storage

**Storage conditions:** Store in original container. Keep away from heat and sources of ignition.  
Storage area should be: cool, dry, well ventilated, out of direct sunlight

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Exposure limit(s)

Exposure limits are listed below, if they exist.

**Eye protection:** Goggles

**Hand protection:** Butyl rubber or nitrile gloves. Other chemical resistant gloves may be recommended by your safety professional.

**Skin and body protection:** Normal work PPE wear.

**Respiratory protection:** Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

**Engineering measures:** Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	Clear to pale yellow liquid
<b>Form</b>	liquid
<b>Color</b>	Clear to pale yellow
<b>Odor</b>	faint
<b>Boiling point/boiling range</b>	205 °C ( 400 °F)
<b>Flash point</b>	98 °C ( 208 °F)
<b>Upper/Lower explosion limits</b>	Upper: 16%(V), Lower: 1.4% (V)
<b>Vapour pressure</b>	1.5 mmHg at 20 °C (68 °F)
<b>Relative vapour density</b>	2.97 (air = 1) Heavier than air
<b>Water solubility</b>	Slightly soluble
<b>Relative density</b>	1.0 – 1.2
<b>Evaporation rate</b>	Slower than ether
<b>VOC's</b>	200 - 600 g/l

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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<b>Hazardous reactions</b>	Stable under normal conditions
<b>Conditions to avoid</b>	Exposure to sunlight. Heat, flames and sparks. contact with incompatible materials
<b>Materials to avoid</b>	Strong: oxidizing agents, acids, bases, reducing agents
<b>Hazardous decomposition products</b>	Combustion will generate:, oxides of carbon, nitrogen oxides (NOx), phenols, Hydrogen fluoride, oxides of antimony, oxides of sulfur
<b>Hazardous polymerization</b>	Will not occur

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information on this product or its components appear in this section when such data is available.*

Component: Gamma butyrolactone

<b>Acute oral toxicity</b>	LD50 rat 1540 mg/kg
<b>Acute inhalation toxicity</b>	LC50 rat 4 h at 5100 mg/l
<b>Acute dermal toxicity</b>	LD50 guinea pig >5,000 mg/kg

**Mutagenicity**

No component known to be mutagenic

**Carcinogenicity**

No component known to be carcinogenic

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**12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information on this product or its components appears in this section when such data is available.*

**Ecotoxicity effects**

Component: Gamma butyrolactone

<b>Toxicity to fish</b>	LC50 golden orfe - >220 mg/l - 96 h
<b>Toxicity to aquatic invertebrates</b>	EC50 Daphnia magna 48 h >500 mg/l

**Biodegradability**

Biotic/Aerobic – Exposure time 13d Result: 90% readily biodegradable

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**13. DISPOSAL CONSIDERATIONS**

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**Environmental precautions:** Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

**Disposal**

Dispose in accordance with all local, state (provincial), and federal regulations. Send waste to an approved waste disposal facility. Empty containers may contain hazardous residues. This material and its container must be disposed of in a safe way.

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**14. TRANSPORT INFORMATION**

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Proper shipping name:	Not Regulated
UN-Number:	Not regulated
Hazard Class:	Not regulated
Packing group:	Not regulated

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## 15. REGULATORY INFORMATION

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### Hazard Rating

	Health	Fire	Reactivity
<b>NFPA</b>	2	1	0

### SARA TITLE III: Section 311/312 Categorizations

Acute Health hazard, Chronic health hazard

### SARA TITLE III: Section 313 Information (40CFR372)

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

**US. Toxic Substances Control Act (TSCA):** All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

### California (Proposition 65)

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

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## 16. OTHER INFORMATION

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Prepared by: KemLab

Revision Date: 06/19/2018

**Disclaimer:** *The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.*