



# SAFETY DATA SHEET

## KLARAIID\* PC1194

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### 1. Identification

<b>Product identifier</b>	<b>KLARAIID PC1194</b>
<b>Other means of identification</b>	Not available.
<b>Recommended use</b>	Coagulant
<b>Recommended restrictions</b>	Take precautionary measures against static discharge.

#### Company/undertaking identification

GE Betz, Inc.  
4636 Somerton Road  
Trevose, PA 19053  
T 215 355 3300, F 215 953 5524

#### Emergency telephone

(800) 877 1940

### 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>OSHA defined hazards</b>	Not classified.

#### Label elements

<b>Hazard symbol</b>	None.
<b>Signal word</b>	Not available.
<b>Hazard statement</b>	The mixture does not meet the criteria for classification.
<b>Precautionary statement</b>	
<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

The components are not hazardous or are below required disclosure limits.

<b>Composition comments</b>	This product does not contain hazardous ingredients in reportable concentrations. Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.
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### 4. First-aid measures

<b>Inhalation</b>	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
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<b>Skin contact</b>	Do not peel polymer from the skin. Rinse skin with water/shower. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid prolonged exposure. Use care in handling/storage.
<b>Conditions for safe storage, including any incompatibilities</b>	Protect from freezing. Preferably stored between 5-38°C To maintain product quality, do not store in heat or direct sunlight. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store in accordance with local/regional/national/international regulation.

## 8. Exposure controls/personal protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Splash proof chemical goggles.
<b>Skin protection</b>	
<b>Hand protection</b>	Chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

<b>Other</b>	Wear suitable protective clothing. Chemical resistant gloves.
<b>Respiratory protection</b>	If ventilation is insufficient, suitable respiratory protection must be provided. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respiratory protection not required. A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Color</b>	Light yellow to amber
<b>Physical state</b>	Liquid
<b>Odor</b>	Slight
<b>Odor threshold</b>	Not available.
<b>pH (concentrated product)</b>	6
<b>Melting point/freezing point</b>	18 °F (-8 °C)
<b>Initial boiling point and boiling range</b>	212 °F (100 °C)
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	< 1 (Ether = 1)
<b>Flammability (solid, gas)</b>	Not available.

### Upper/lower flammability or explosive limits

<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	18 mm Hg
<b>Vapor pressure temp.</b>	70 °F (21 °C)
<b>Vapor density</b>	< 1 (Air = 1)
<b>Relative density</b>	1.16
<b>Relative density temperature</b>	70 °F (21 °C)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	100 %
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	166 cps
<b>Viscosity temperature</b>	70 °F (21 °C)
<b>Other information</b>	
<b>Percent volatile</b>	0 (Calculated)
<b>Pour point</b>	23 °F (-5 °C)
<b>Specific gravity</b>	1.16

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Contact with water reactive compounds may cause fire or explosion. Hazardous polymerization does not occur.

<b>Conditions to avoid</b>	Avoid contact with strong oxidizers.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Ammonia, hydrogen chloride, oxides of carbon and nitrogen evolved in fire.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Inhalation</b>	May cause irritation to respiratory organs.
<b>Skin contact</b>	Prolonged or repeated contact may cause irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.

**Symptoms related to the physical, chemical and toxicological characteristics** Prolonged and repetitive exposure, depending on the route(s), may develop transient irritation on skin, eyes, ingestion tract, and/or respiratory tract.

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
KLARAID PC1194 (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Inhalation</i>		
LC50	Rat	> 20 mg/l, 4 Hour, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)

\* Estimates for product may be based on additional component data not shown.

<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
	Not listed.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not available.
<b>Specific target organ toxicity - repeated exposure</b>	Not available.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results	
KLARAIID PC1194 (CAS Mixture)	LC50	Bluegill Sunfish	0.39 mg/L, Static Acute Bioassay, 96 hour	
		Ceriodaphnia	0.17 mg/L, Static Acute Bioassay, 48 hour	
		Fathead Minnow	0.67 mg/L, Static Renewal Bioassay, 96 hour	
		Zebra fish (Brachydanio rerio)	10 - 100 mg/l, 96 Hour, Fresh water	
	NOEL	Bluegill Sunfish	0.24 mg/L, Static Acute Bioassay, 96 hour	
		Fathead Minnow	0.31 mg/L, Static Renewal Bioassay, 96 hour	
	Crustacea	EC50	Daphnia magna	10 - 100 mg/l, 48 Hour, Fresh water 0.12 mg/L, Static Renewal Bioassay, 48 hour
			NOEL	Daphnia magna
	Other	IC50	Pseudokirchnerella subcapitata	10 - 100 mg/l, 72 Hour, Fresh water
		LC50	Rainbow Trout	0.16 mg/L, Static Acute Bioassay, 96 hour
NOEL		Rainbow Trout	0.1 mg/L, Static Acute Bioassay, 96 hour	

\* Estimates for product may be based on additional component data not shown.

<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
<b>Environmental fate</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	Not inherently biodegradable. < 70 % degradation in 28 days CO2 Evolution (Modified Sturm Test) (OECD 301B) Testing has shown product not to be readily biodegradable.
- COD (mgO2/g)	460
- BOD 5 (mgO2/g)	27
- BOD 28 (mgO2/g)	61
- Closed Bottle Test (% Degradation in 28 days)	11
- Zahn-Wellens Test (% Degradation in 28 days)	0
- TOC (mg C/g)	200

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

Not regulated as dangerous goods.

Some containers may be DOT exempt, please check BOL for exact container classification.

## IATA

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (POLYAMINE)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
ERG Code	171
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

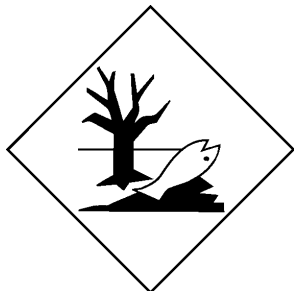
## IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (POLYAMINE), MARINE POLLUTANT
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

## IATA; IMDG



## Marine pollutant



## 15. Regulatory information

### US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

#### SARA 304 Emergency release notification

Not regulated.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
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Epichlorhydrin	106-89-8	100	1000 lbs		
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**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Dimethylamine	124-40-3	0.1 - 1
Epichlorhydrin	106-89-8	0 - 0.1

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**Food and drug administration** 21 CFR 176.170 (components of paper and paperboard in contact with aqueous and fatty foods)

**US state regulations** WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - Massachusetts RTK - Substance List**

Not regulated.

**US - Pennsylvania RTK - Hazardous Substances**

Not regulated.

**US - Rhode Island RTK**

Not regulated.

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

1,3-dichloro-2-propanol (CAS 96-23-1) Listed: October 8, 2010  
Epichlorhydrin (CAS 106-89-8) Listed: October 1, 1987

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

No ingredient listed.

**US - California Proposition 65 - CRT: Listed date/Female reproductive toxin**

No ingredient listed.

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**

Epichlorhydrin (CAS 106-89-8) Listed: September 1, 1996

## 16. Other information, including date of preparation or last revision

**Issue date** Nov-18-2014

**Revision date** Nov-18-2014

**Version #** 1.0

**List of abbreviations** CAS: Chemical Abstract Service Registration Number  
TWA: Time Weighted Average  
STEL: Short Term Exposure Limit  
TLV: Threshold Limit Value  
LD50: Lethal Dose, 50%  
LC50: Lethal Concentration, 50%  
NOEL: No Observed Effect Level  
COD: Chemical Oxygen Demand  
BOD: Biochemical Oxygen Demand  
TOC: Total Organic Carbon  
IATA: International Air Transport Association  
IMDG: International Maritime Dangerous Goods Code  
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.  
ACGIH: American Conference of Governmental Industrial Hygienists  
NFPA: National Fire Protection Association

**References:** No data available

**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. The information in the sheet was written based on the best knowledge and experience currently available.

**Revision Information** Product and Company Identification: Commercial Names  
Composition / Information on Ingredients: Disclosure Overrides  
Physical & Chemical Properties: Multiple Properties  
Toxicological Information: Toxicological Data  
Ecological Information: Ecotoxicity  
Transport Information: Material Transportation Information  
Regulatory Information: Risk Phrases - Labeling  
GHS: Classification

**Prepared by** This SDS has been prepared by GE Water & Process Technologies Regulatory Department (1-215-355-3300).

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