

# SAFETY DATA SHEET

## KLARAIID\* CDP1311

### 1. Identification

Product identifier	KLARAIID CDP1311
Other means of identification	Not available.
Recommended use	Coagulant
Recommended restrictions	None known.

#### 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

Physical hazards	Corrosive to metals	Category 1
Health hazards	Serious eye damage/eye irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
OSHA defined hazards	Not classified.	

#### Label elements



Signal word	Warning
Hazard statement	May be corrosive to metals. Causes serious eye irritation. May cause respiratory irritation.
Precautionary statement	
Prevention	Keep only in original container. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye/face protection.
Response	If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor// if you feel unwell. If eye irritation persists: Get medical advice/attention. Absorb spillage to prevent material damage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant/ container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Aluminium chlorhydroxide		12042-91-0	40 - 60
Epichlorohydrin-dimethylamine copolymer		25988-97-0	2.5 - 10

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

**Composition comments** 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.

#### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Wash thoroughly with soap and water. Remove contaminated clothing. Thoroughly wash clothing before reuse. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Keep eyelids apart. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Do not induce vomiting. If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to a victim who is unconscious or is having convulsions. Dilute contents of stomach using 2-8 fluid ounces (60-240ml) of milk or water. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Skin irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<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.

#### 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. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. 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 spillage to prevent material damage. 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

**Precautions for safe handling** Avoid breathing mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Store away from oxidizers. Store in corrosive resistant container with a resistant inner liner. Store in original tightly closed container. Keep only in the original container. Store in a cool, dry place out of direct sunlight. 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

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminium chlorhydroxide (CAS 12042-91-0)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Aluminium chlorhydroxide (CAS 12042-91-0)	TWA	2 mg/m <sup>3</sup>

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

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. Provide eyewash station.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Safety glasses.

#### Skin protection

##### Hand protection

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.

##### Other

Wear suitable protective clothing. Use of an impervious apron is recommended.

#### Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece. 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.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

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

**Color** Colorless to yellow

**Physical state** Liquid

**Odor** Mild

**Odor threshold** Not available.

**pH (concentrated product)** 3.7

**pH in aqueous solution** 4.5 (5% SOL.)

**Melting point/freezing point** 23 °F (-5 °C)

**Initial boiling point and boiling range** > 212 °F (> 100 °C)

**Flash point** > 200 °F (> 93 °C) P-M(CC)

**Evaporation rate** < 1 (Ether = 1)

**Flammability (solid, gas)** Not available.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** 18 mm Hg

Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1 (Air = 1)
Relative density	1.31
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	42 cps
Viscosity temperature	70 °F (21 °C)
Other information	
Percent volatile	0 (Calculated)
Pour point	28 °F (-2 °C)
Specific gravity	1.31

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	No hazards to be especially mentioned.
Possibility of hazardous reactions	Contact with water reactive compounds may cause fire or explosion.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials. None under normal conditions.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Oxides of carbon and nitrogen. Hydrogen chloride.

## 11. Toxicological information

### Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	May cause irritation.
Eye contact	Causes serious eye irritation.

**Symptoms related to the physical, chemical and toxicological characteristics** Skin irritation. May cause respiratory irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### Information on toxicological effects

**Acute toxicity** May cause respiratory irritation.

Product	Species	Test Results
KLARAID CDP1311 (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)
Components	Species	Test Results
Aluminium chlorhydroxide (CAS 12042-91-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg

Components	Species	Test Results
<i>Oral</i> LD50	Rat	> 2000 mg/kg
Epichlorohydrin-dimethylamine copolymer (CAS 25988-97-0)		
<b>Acute</b> <i>Dermal</i> LD50	Rabbit	> 2000 mg/kg

\* 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>	Causes serious eye 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.

#### ACGIH Carcinogens

Aluminium chlorhydroxide (CAS 12042-91-0) A4 Not classifiable as a human carcinogen.

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

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>	May cause respiratory irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not classified.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

<b>Ecotoxicity</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.
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Product	Species	Test Results	
KLARAID CDP1311 (CAS Mixture)			
	LC50	Fathead Minnow	8.3 mg/L, Static Renewal Bioassay, 96 hour
	NOEL	Fathead Minnow	3.1 mg/L, Static Renewal Bioassay, 96 hour
Crustacea	LC50	Daphnia magna	6.3 mg/L, Static Renewal Bioassay, 48 hour
	NOEL	Daphnia magna	3.1 mg/L, Static Renewal Bioassay, 48 hour
Other	LC50	Rainbow Trout	3.2 mg/L, Static Renewal Bioassay, 96 hour
	NOEL	Rainbow Trout	1.6 mg/L, Static Renewal Bioassay, 96 hour

Components	Species	Test Results	
Epichlorohydrin-dimethylamine copolymer (CAS 25988-97-0)			
	EC50	Daphnia Magna	> 10 mg/l, 48 hour
	LC50	Zebra fish (Brachydanio rerio)	> 10 mg/l, 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.

## Persistence and degradability

	No data is available on the degradability of this product.
- COD (mgO <sub>2</sub> /g)	35 (calculated data)
- BOD 5 (mgO <sub>2</sub> /g)	1 (calculated data)
- BOD 28 (mgO <sub>2</sub> /g)	1 (calculated data)
- Closed Bottle Test (% Degradation in 28 days)	6 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days)	1 (calculated data)
- TOC (mg C/g)	15 (calculated data)

## 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

<b>UN number</b>	UN3264
<b>UN proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ALUMINUM CHLOROHYDROL)
<b>Transport hazard class(es)</b>	
Class	8
Subsidiary risk	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	No.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IMDG

<b>UN number</b>	UN3264
<b>UN proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ALUMINUM CHLOROHYDRATE)
<b>Transport hazard class(es)</b>	
Class	8
Subsidiary risk	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
Marine pollutant	No.
<b>EmS</b>	Not available.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IATA; IMDG



## 15. Regulatory information

### US federal regulations

This product is 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.

#### US CWA Section 304(a)(1) Ambient Water Quality Criteria: Listed substance

Aluminium chlorhydroxide (CAS 12042-91-0)

Listed. LISTED ALUMINUM PH 6.5-9.0 US CWA Section 304(a)(1) Ambient Water Quality Criteria: Listed substance

#### 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 - Yes

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312 Hazardous chemical

No

#### SARA 313 (TRI reporting)

Not regulated.

### 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).

### US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

#### US - Massachusetts RTK - Substance List

Not regulated.

#### US - Pennsylvania RTK - Hazardous Substances

Aluminium chlorhydroxide (CAS 12042-91-0)

#### 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**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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

No ingredient listed.

**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**

No ingredient listed.

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

**Issue date** Oct-22-2014

**Revision date** Oct-22-2014

**Version #** 1.0

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

**References:** No data available

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

**Revision Information** Product and Company Identification: Physical States  
Composition / Information on Ingredients: Ingredients  
Toxicological Information: Toxicological Data  
Transport Information: Experimental Data  
GHS: Classification

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

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