Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 05/04/2018 **Version number 1** **Supersedes: N/A**

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

1.1 Product identifier

Trade name Cetamine F 3100
Article number: 48023

Article number: 48023

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture

Formulation additive
Water treatment
Water conditioner
Corrosion inhibitors

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

FREMONT INDUSTRIES, LLC
A Kurita Company
4400 Valley Industrial Blvd. N.
P.O. Box 67
Shakopee, MN 55379-0067

1.4 Emergency telephone number:

Emergency number: (952) 445-4121
CHEMTREC: (800) 424-9300

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4	H302	Harmful if swallowed.
Skin Corr. 1C	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.
Repr. 2	H361f	Suspected of damaging fertility.
STOT SE 3	H335	May cause respiratory irritation.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008

The product is classified and labeled according to the CLP regulation.

Hazard pictograms

GHS05 GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:

2-aminoethanol
Cyclohexylamine
(Z)-N-9-octadecenylpropane-1,3-diamine

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Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H361f Suspected of damaging fertility.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 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/doctor.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Name	Product identifier	%
2-aminoethanol	(CAS No) 141-43-5	5-10
Cyclohexylamine	(CAS No) 108-91-8	5-10
Z-N-9-octadecenylpropane-1,3-diamine	(CAS No) 7173-62-8	1-3

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Instantly remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest, provide artificial respiration.
Take affected persons into the open air.

After inhalation:

Supply fresh air and call for doctor for safety reasons.
In case of unconsciousness, bring patient into stable side position for transport.

After skin contact:

Immediately wash with soap and water and rinse thoroughly.
Seek medical treatment.

After eye contact:

Rinse opened eye for 15 minutes under running water.
Call a doctor immediately.

After swallowing:

Rinse out mouth and then drink plenty of water (approx. 500 ml).
Do not induce vomiting; instantly call for medical help.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage.
Prolonged contact may cause dryness, redness, burns, blistering and ulceration. Can be partially absorbed by the skin.
Splashes cause strong tearing, pain, may cause permanent visual impairment.
Ingestion causes pain, burns, abdominal pain, possible general impact (shock).

Danger Danger of gastric perforation.

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4.3 Indication of any immediate medical attention and special treatment needed

If swallowed, gastric irrigation.
Wash eyes with physiological sodium chloride solution.
No specific antidote is known. Treatment of the symptoms.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:
Use fire fighting measures that suit the environment.
CO2, extinguishing powder or water jet. Fight larger fires with foam.
For safety reasons unsuitable extinguishing agents: Water with a full water jet.

5.2 Special hazards arising from the substance or mixture

Fire can cause release of: Carbon monoxide (CO)
Nitrogen oxides (NOx)
Under certain fire conditions, traces of other toxic gases cannot be excluded.

5.3 Advice for firefighters

Protective equipment:
Wear full protective suit.
Wear alkaline resistant protective clothing.
Put on breathing apparatus.
Additional information:
Cool endangered containers with water spray jet.
Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions

Do not allow concentrated solutions to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Use neutralizing agent.
Dispose of contaminated material as waste according to section 13.

6.4 Reference to other sections

See section 7 for information on safe handling
See section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Do not spray / Prevent formation of aerosols.

Information about protection against explosions and fires:
No special measures required.

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7.2 Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and containers:
Provide alkali-resistant floor.
Use polyolefin containers.
Store only in the original container.
Provide floor trough without outlet.
Unsuitable materials: steel, light- and brass alloys

Information about storage in one common storage facility:
Do not store together with acids.
Store away from oxidizing agents.

Further information about storage conditions:
Store container in a well ventilated position.
Protect from freezing.
Product quality requires storage between 0°C and 40°C

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:
No further data: see section 7.

8.1 Control parameters

2-aminoethanol (141-43-5)	
ACGIH TWA (ppm)	3 ppm
OSHA PEL (TWS) (mg/m^3)	6 mg/m^3
OSHA PEL (TWS) (ppm)	3 ppm

Cyclohexylamine (108-91-8)	
ACGIH TWA (ppm)	10 ppm
OSHA PEL (TWS) (mg/m^3)	40 mg/m^3 Vacated
OSHA PEL (TWS) (ppm)	10 ppm Vacated

Z-N-9-octadecenylpropane-1,3-diamine (7173-62-8)	
ACGIH TWA (ppm)	OELs not established
OSHA PEL (TWS) (mg/m^3)	OELs not established
OSHA PEL (TWS) (ppm)	OELs not established

8.2 Exposure controls

Personal protective equipment : Gloves. Protective goggles. Face shield. Protective clothing. Respiratory protection of the dependent type.

Hand protection : Protective gloves made of rubber.

Eye protection : Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Corrosion-proof clothing.

Respiratory protection : An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information:

Appearance:	
Form:	Fluid
Color:	Yellowish
Smell:	Amine-like
Odor threshold:	Not determined
pH-value at 20°C:	~12.4 (100%)
Change in condition:	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Flash point:	>60°C The product does not sustain combustion (EN ISO 9038).
Inflammability (solid, gaseous)	Not applicable
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Self-inflammability:	Product is not self-igniting
Danger of explosion:	Product is not explosive.
Critical values for explosion:	
Lower:	Not applicable
Oxidizing properties	None
Steam pressure:	Not determined
Density at 20°C	~1.01 g/cm^3
Evaporation rate	Not determined
Solubility in / Miscibility with Water:	Fully miscible
Partition coefficient (n-octanol/water):	Not determined
Viscosity:	
Dynamic:	Not determined

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazardous reactions if stored and handled according to instructions.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

Corrosive action on metals.
Reacts with strong acids.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

May react vigorously with strong acids.

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10.6 Hazardous decomposition products

No dangerous decomposition products known.
Danger of toxic pyrolysis products.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed.

LD/LC50 values that are relevant for classification:

141-43-5 2-aminoethanol

Oral	LD50	1515 mg/kg (rat)
Dermal	LD50	2504 mg/kg (rabbit) (OECD 402)
Inhalative	LC50 (6h)	>1.3 mg/L (rat)

108-91-8 cyclohexylamine

Oral	LD50	150-1660 mg/kg (rat)
Dermal	LD50	275-1000 mg/kg (rabbit)

7173-62-8 (Z)-N-9-octadecenylpropane-1,3-diamine

Oral	LD50	500 mg/kg (rat)

Components	Type	Value	Species
Product	ATEmix	oral	>300-2000 mg/kg
Product	ATEmix	dermal	>2000 mg/kg
Product	ATEmix	inhaled	>20 mg/L, 4h

Primary irritant effect:

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitization

Based on available data, the classification criteria are not met.

Repeated dose toxicity

108-91-8 cyclohexylamine

Oral LOAEL 15 mg/kg bw/day (rat) (113 weeks, 7 days/week)

7173-62-8 (Z)-N-9-octadecenylpropane-1,3-diamine

Oral NOAEL, systemic toxicity 0.4 mg/kg bw/day (rat) (per day, subchronic)

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Suspected of damaging fertility.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

141-43-5 2-aminoethanol

LC50 (96 h)	349 mg/L (Cyprinus carpio) (source: ECHA)
EC50 (3 h)	>1000 mg/L (Sludge, municipal, adapted) (OECD 209)
EC50 (48 h)	65 mg/L (daphnia magna) (Dir. 84/449/EWG, C.2, static)
EC50 (72 h)	22 mg/L (Scenedesmus subspicatus) (Dir. 92/69/EWG, C.3)
	2.5 mg/L (Selenastrum capricornutum) (OECD 201)
EC50 (16 h)	110 mg/L (Pseudomonas putida) (DIN 38412, part 8)
EC20 (30 min)	>1000 mg/L (Sludge, municipal, adapted) (DIN EN ISO 8192-OECD 209-88/302/EWG, T.C)
NOEC	1.2 mg/L (Oryzias latipes) (OECD draft, 30 d)
	0.85 mg/L (daphnia magna) (OECD 211)
	1 mg/L (Selenastrum capricornutum) (OECD 201, 72 h)

108-91-8 cyclohexylamine

LC50	19 mg/L (Oryzias latipes) (OECD 204, 14 d)
EC50 (48 h)	36.3 mg/L (daphnia magna) (OECD 202)
IC50 (96 h)	29.3 mg/L (Pseudokirchneriella subcapitata) (OECD 201)
NOEC	1.6 mg/L (daphnia magna) (21 d)

7173-62-8 (Z)-N-9-octadecenylpropane-1,3-diamine

LC50 (96 h)	0.148 mg/L (Brachydanio rerio) (OECD 203)
EC50	25.1 mg/L (activated sludge)
EC50 (48 h)	0.013-0.025 mg/L (daphnia magna) (OECD 202)
EC50 (72 h)	>0.01-0.1 mg/L (desmodesmus subspicatus) (OECD 201)
M-factor	10 (acute)
	1 (chronic)
NOEC	>0.001-0.01 mg/L (daphnia magna) (OECD 211, 21 d)

12.2 Persistence and degradability

A part of the components is not easily biodegradable.

Other information:

Easy elimination possible by flocculation or adsorption by sludge.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:

According to recipe contains the following heavy metals and compounds according to EC guideline NO. 76/464 EC:

None

General notes:

The product may not be released into the aquatic environment without preliminary treatments (biological purification plant).

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects

No further relevant information available.

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SECTION 13: Disposal considerations

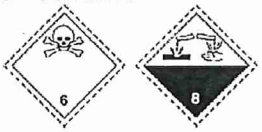
13.1 Waste treatment methods
Waste treatment methods:
Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Waste disposal recommendations:
Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

Uncleaned packaging
Recommendation
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
Dispose of packaging according to regulations on the disposal of packagings.
Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

In accordance with DOT

Transport document description	:	UN2927, TOXIC LIQUIDS, CORROSIVE, ORGANIC, N.O.S. (CYCLOHEXYLAMINE), 6.1 (8), PGII
UN-No.(DOT)	:	2927
DOT NA no.	:	UN2927
Proper Shipping Name (DOT)	:	Toxic liquids, corrosive, organic, n.o.s. (Cyclohexylamine)
Department of Transportation (DOT) Hazard Classes	:	6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Hazard labels (DOT)	:	6.1 - Poison inhalation hazard 8 - Corrosive 
Packing group (DOT)	:	II - Medium Danger
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	No information available
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	No information available
DOT Vessel Stowage Location	:	B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	:	40 - Stow "clear of living quarters"

Additional information
Other information : No supplementary information available.

Transport by sea
No additional information available

Air transport
No additional information available

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SECTION 15: Regulatory information

15.1. US Federal regulations

Cetamine F 3100	
All chemical substances in this product are listed in the EPA (Environmental Protection Agency) TSCA (Toxic Substances Control Act) Inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard

2-aminoethanol (141-43-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Cyclohexylamine (108-91-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists):	10000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb

Z-N-9-octadecenylpropane-1,3-diamine (7173-62-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Cyclohexylamine (108-91-8)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

15.2.2. National regulations

Cyclohexylamine (108-91-8)
Listed on the AICS (the Australian Inventory of Chemical Substances) Listed on Inventory of Existing Chemical Substances (IECSC) Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory. Listed on KECI (Chemical Inventory of Korea)

15.3. US State regulations

Cyclohexylamine (108-91-8)
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List

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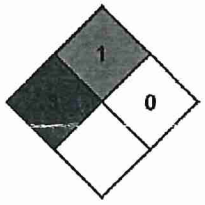
SECTION 16: Other information

Indication of changes	:	05/04/2018 - New SDS Created.
Other information	:	Author: BB
NFPA health hazard	:	3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
NFPA fire hazard	:	1 - Must be preheated or exposed to relatively high temperature before ignition can occur.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating		
Health	:	3
Flammability	:	1
Physical	:	0
Personal Protection	:	

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