



1 – PRODUCT IDENTIFICATION

PRODUCT NAME: THERMAL ELITE 201

PRODUCT USE: Water Treatment

COMPANY:
 Blue Ocean Solids, LLC
 10664 Loveland-Madeira Road, #241
 Loveland, OH 45140
 419-367-3502 www.blueoceansolids.com

24 HOUR EMERGENCY PHONE NUMBER: INFOTRAC: 1-800-535-5053 (NORTH AMERICA)

SDS DATE: 7/1/2020 **SHELF LIFE:** 2 years

2 – HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:



GHS08 Health hazard

Repr. 2. H361 Suspected of damaging fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
 Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4. H302 Harmful if swallowed

LABEL ELEMENTS

GHS LABEL ELEMENTS

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms GHS05, GHS07, GHS08

Signal word Danger

Hazard-determining components of labeling:

- 2-diethylaminoethanol
- Cyclohexylamine
- morpholine

Hazard statements

- Harmful if swallowed.
- Causes severe skin burns and eye damage.
- Suspected of damaging fertility or the unborn child.

Precautionary statements

- Do not breathe dust.
- Wear protective gloves/protective clothing/eye protection/face protection.



Do not eat, drink or smoke when using this product.
 Do not handle until all safety precautions have been read and understood.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF ON SKIN: Wash with plenty of water.

Classification system:

NFPA ratings (scale 0 - 4)



Health = 3
 Fire = 1
 Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = *3
 Fire = 0
 Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 – COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

DANGEROUS COMPONENTS:		
532-32-1	Sodium benzoate	50 – 100%
100-37-8	2-diethylaminoethanol	10 – 25%
110-91-8	Morpholine	10 – 25%
108-91-8	Cyclohexylamine	10 – 25%

4 – FIRST-AID MEASURES

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

DO NOT DELAY!
 Immediately wash with water.
 If skin irritation continues, consult a doctor.

After eye contact:

DO NOT DELAY!
 Check for and remove any contact lenses.
 Rinse opened eye for several minutes under running water. Then consult a doctor.



After swallowing:

DO NOT DELAY!

Drink copious amounts of water and provide fresh air. Immediately call a doctor. Do not induce vomiting; immediately call for medical help.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Information for doctor: Treat symptomatically and supportively.

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 – FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Advice for firefighters

Protective equipment:

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information Cool endangered receptacles with water spray.

6 – ACCIDENTAL RELEASES MEASURES

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep ignition sources away - no smoking.

Environmental precautions: Do not allow to penetrate the ground/soil.

Methods and material for containment and cleaning up:

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 – HANDLING AND STORAGE

Handling:

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.



Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

- Prevent any seepage into the ground.
- Do not store in aluminum, copper, zinc containers.

Information about storage in one common storage facility:

- Store away from oxidizing agents.
- Store away from foodstuffs.

Further information about storage conditions:

- Keep receptacle tightly sealed.
- Store in cool, dry conditions in well-sealed receptacles.
- Protect from heat and direct sunlight.

Specific end use(s) No further relevant information available.

8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Control parameters

Components with limit values that require monitoring at the workplace:

- The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
- At this time, the remaining constituent has no known exposure limits.
- At this time, the other constituents have no known exposure limits.

100-37-8 2-diethylaminoethanol	
PEL	Long-term value: 50 mg/m ³ , 10 ppm Skin
REL	Long-term value: 50 mg/m ³ , 10 ppm Skin
TLV	Long-term value: 9.6 mg/m ³ , 2 ppm Skin
110-91-8 morpholine	
PEL	Long-term value: 70 mg/m ³ , 20 ppm Skin
REL	Short-term value: 105 mg/m ³ , 30 ppm Long-term value: 70 mg/m ³ , 20 ppm Skin
TLV	Long-term value: 71 mg/m ³ , 20 ppm Skin
108-91-8 Cyclohexylamine	
REL	Long-term value: 40 mg/m ³ , 10 ppm
TLV	Long-term value: 41 mg/m ³ , 10 ppm

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Do not inhale gases / fumes / aerosols.



Avoid contact with the eyes and skin.
Do not inhale dust / smoke / mist.
Do not eat, drink, smoke or sniff while working.
Pregnant women should strictly avoid inhalation or skin contact.
A safe system of work must be formulated and followed to ensure that workers who may be pregnant or breastfeeding do not come into direct contact with the product.
Take note of assigned Workplace Exposure Limits.

Breathing equipment:

Use suitable respiratory protective device in case of insufficient ventilation.
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles

Body protection:

Impervious protective clothing
Body protection must be chosen depending on product properties, activity and possible exposure.

9 – PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Solid
Color:	White
Odor:	Amine-like
Odor threshold:	Not determined



pH-value (40 g/l) at 20 °C (68 °F):	11
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	>92 °C (>198 °F)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor Pressure:	Not applicable.
Density:	Not determined.
Relative Density:	Not determined.
Vapor Density:	Not determined.
Evaporation Rate:	Not determined.
Solubility in / Miscibility with Water:	Fully miscible.
Partition Coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
VOC content:	0.0 g/l / 0.00 lb/gl
Other Information	No further relevant information available.
10 – STABILITY AND REACTIVITY	
Reactivity No further relevant information available.	
Chemical stability	
Thermal decomposition / conditions to be avoided:	
No decomposition if used and stored according to specifications.	
To avoid thermal decomposition do not overheat.	
Possibility of hazardous reactions	
The product is a strong base, it reacts violently with acid and is corrosive. Reacts violently with strong oxidants causing fire hazard.	
Reaction with nitrosating agents (e.g. nitrites, nitrous acid, nitrous gases) can release cancerogenic nitrosamines.	
Conditions to avoid No further relevant information available.	
Incompatible materials:	
Strong acids and oxidising agents.	
Substances specifically listed in section 10.3 as incompatible.	
Hazardous decomposition products:	
Nitrogen oxides (NOx)	
Carbon monoxide and carbon dioxide	



11 – TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

on the skin: Caustic effect on skin and mucous membranes.

on the eye:

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

ROUTES OF EXPOSURE: The component substances can variously be absorbed into the body by inhalation, through the skin and by ingestion.

EFFECTS OF SHORT-TERM EXPOSURE: The product is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. May cause effects on the central nervous system.

Carcinogenic categories

IARC (International Agency for Research on Cancer)		
110-91-8	Morpholine	3

NTP (National Toxicology Program)
None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 – ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability The organic portion of the product is biodegradable.

Behavior in environmental systems:

Bioaccumulative potential Product is not expected to bioaccumulate.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.



13 – DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation:

Recommended Hierarchy of Controls:

- Minimize waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 – TRANSPORT INFORMATION

UN-Number

DOT, ADR, IMDG, IATA

UN3263

UN proper shipping name

DOT

Corrosive solid, basic, organic, n.o.s. (Morpholine, Cyclohexylamine)

ADR

3263 Corrosive solid, basic, organic, n.o.s. (Morpholine, Cyclohexylamine)

IMDG, IATA

CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (MORPHOLINE, CYCLOHEXYLAMINE)

Transport hazard class(es)

DOT




Class

8 Corrosive substances

Label

8



ADR, IMDG, IATA	
	
Class	8 Corrosive substances
Label	8
Packing Group	II
DOT, ADR, IMDG, IATA	II
Environmental Hazards:	Not applicable.
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	88
EMS Number:	F-A,S-B
Segregation groups	Alkalis
Stowage Category	B
Segregation Code	SG35 Stow "seperated from" acids.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional Information:	
ADR	
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
IMDG	
Limited quantities (LQ)	0
Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
UN "Model Regulation":	UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (MORPHOLINE, CYCLOHEXYLAMINE), 8, II
15 – REGULATORY INFORMATION	
Safety, health and environmental regulations/legislation specific for the substance or mixture	
Sara	
Section 355 (Extremely hazardous substances):	
108-9108	Cyclohexylamine
Section 313 (Specific toxic chemical listing):	
None of the ingredient is listed.	
TSCA (Toxic Substances Control Act):	
All ingredients are listed.	



Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenity Categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

110-91-8	Morpholine	A4
108-91-8	Cyclohexylamine	A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms GHS05, GHS07, GHS08

Signal word Danger

Hazard-determining components of labeling:

- 2-diethylaminoethanol
- Cyclohexylamine
- morpholine

Hazard statements

- Harmful if swallowed.
- Causes severe skin burns and eye damage.
- Suspected of damaging fertility or the unborn child.

Precautionary statements

- Do not breathe dust.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Do not eat, drink or smoke when using this product.
- Do not handle until all safety precautions have been read and understood.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF ON SKIN: Wash with plenty of water.

National regulations:

Class	Share in %
NK	15.0



Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 – OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of preparation / last revision 7/1/2020

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Repr. 2: Reproductive toxicity – Category 2