



1 – PRODUCT IDENTIFICATION

PRODUCT NAME: THERMAL ELITE 300

PRODUCT USE: Water Treatment

Uses advised against

Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.

Processes involving extreme heat use advised against.

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Any use involving aerosol formation or vapour or dust release in excess of the assigned workplace exposure limits where workers are exposed without suitable respiratory protective equipment (RPE).

Processes involving the use of incompatible substances - refer to section 10.

The product is intended exclusively for industrial and professional use.

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.

LABEL ELEMENTS

GHS LABEL ELEMENTS

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

Hazard pictograms GHS05, GHS08

Signal word Danger

Hazard-determining components of labeling:

- Sodium hydroxide
- Cyclohexylamine
- 2-diethylaminoethanol

Hazard statements

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



Precautionary statements

Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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:		
1310-73-2	Sodium hydroxide	2.5 – 10%
108-91-8	Cyclohexylamine	2.5 – 10%
100-37-8	2-diethylaminoethanol	≤ 2.5%

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.

For safety reasons unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture

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

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

Ensure adequate ventilation

Keep ignition sources away - no smoking.

Wear protective equipment. Keep unprotected persons away.

Environmental precautions:

Do not allow to penetrate the ground/soil.

Do not allow product to reach sewage system or any water course in the undiluted form.

Methods and material for containment and cleaning up:

Send for recovery or disposal in suitable receptacles.

Pick up mechanically.

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

Prevent formation of dust.

Ensure good ventilation/exhaustion at the workplace.



Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

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.
- Do not store together with acids.

Further information about storage conditions: Keep receptacle tightly sealed.

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.

1310-73-2 Sodium hydroxide	
PEL	Long-term value: 2 mg/m ³
REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³
108-91-8 Cyclohexylamine	
REL	Long-term value: 40 mg/m ³ , 10 ppm
TLV	Long-term value: 41 mg/m ³ , 10 ppm
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

Additional Occupational Exposure Limit Values for possible hazards during processing:

1310-73-2 Sodium hydroxide	
PEL	Long-term value: 2 mg/m ³
REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

- Do not eat, drink, smoke or sniff while working.
- Take note of assigned Workplace Exposure Limits.
- Keep away from foodstuffs, beverages and feed.



Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale dust / smoke / mist.

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:	Mild
Odor threshold:	Not determined

pH-value (40 g/l) at 20 °C (68 °F): 11.5



Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	>93 °C (>199.4 °F)
Flammability (solid, gaseous):	Not determined.
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 applicable.
Evaporation Rate:	Not applicable.
Solubility in / Miscibility with Water:	Soluble.
Partition Coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Other Information	NOTE: The physical data presented above are typical values and should not be construed as a specification.

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.

Conditions to avoid No further relevant information available.

Incompatible materials: Strong acids and oxidising agents.

Hazardous decomposition products:

Nitrogen oxides (NOx)

Carbon monoxide and carbon dioxide

Sulfur oxides (SOx)

11 – TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

on the skin: Strong 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:

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.

Contains sulfites. Repeated or prolonged inhalation exposure to sulfites may cause asthma.

The symptoms of asthma often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Anyone who has shown symptoms of asthma due to sulfites or sulfur dioxide should avoid all further contact with this product.

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 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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).

Contact waste processors for recycling information.

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

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 UN1759

UN proper shipping name

DOT Corrosive solids, n.o.s. (Sodium hydroxide, Cyclohexylamine)

ADR 1759 Corrosive solids, n.o.s. (Sodium hydroxide, Cyclohexylamine)

IMDG, IATA CORROSIVE SOLID, N.O.S. (SODIUM HYDROXIDE, CYCLOHEXYLAMINE)

Transport hazard class(es)

DOT



Class 8 Corrosive substances

Label 8

ADR, IMDG, IATA



Class 8 Corrosive substances

Label 8



Packing Group DOT, ADR, IMDG, IATA	II
Environmental Hazards:	Not applicable.
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80
EMS Number:	F-A,S-B
Segregation groups	Alkalis
Stowage Category	B
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)	1 kg
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
UN "Model Regulation":	UN 1759 CORROSIVE SOLIDS, N.O.S. (SODIUM HYDROXIDE, CYCLOHEXYLAMINE), 8, II

15 – REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (Extremely hazardous substances):

None of the ingredient is listed.

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.

Carcinogenicity Categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

110-91-8

Morpholine

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, GHS08

Signal word Danger

Hazard-determining components of labeling:

- Sodium hydroxide
- Cyclohexylamine
- 2-diethylaminoethanol

Hazard statements

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

Precautionary statements

- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Rinse mouth. Do NOT induce vomiting.
- If on skin: Wash with plenty of water.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

• **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)
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
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Repr. 2: Reproductive toxicity – Category 2