

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

### 1 Identification

- **Product Identifier**

- **Trade name:** Clean-N-Clear II

- **Product Number:** ngt-CNC2

- **Relevant identified uses of the substance or mixture and uses advised against:**

Use as directed by manufacturer.

- **Product Description**

NuGeneration Technologies' Clean-N-Clear II is an environmentally friendly, non-toxic, biodegradable liquid cleaner used for decontaminating and micro-cleansing LED arrays. Clean-N-Clear II eliminates amphoteric bicarbonate and alkali carbonate residues embedded in silicone and urethane flash layers during the selective, flash layer removal blasting process. Additionally, Clean-N-Clear II eliminates particulate contaminants, chemical and mineral deposits, as well as other metal and ionic contaminants. Clean-N-Clear II is a solvent-free formula.

- **Application of the substance / the mixture:** Industry-specific application.

- **Details of the Supplier of the Safety Data Sheet:**

- **Manufacturer/Supplier:**

NuGeneration Technologies, LLC (dba NuGenTec)

1155 Park Avenue, Emeryville, CA 94608

salesteam@nugentec.com

1-888-996-8436 or 1-707-820-4080 for product information

www.nugentec.com

- **Emergency telephone number:**

PERS Emergency Response: Domestic and Canada - 1-800-633-8253, International 1-801-629-0667

### 2 Hazard(s) Identification

- **Classification of the substance or mixture:**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements:**

- **GHS label elements**

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

- **Hazard pictograms:**



GHS07

- **Signal word:** Warning

- **Hazard statements:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

- **Precautionary statements:**

P264

Wash thoroughly after handling.

P280

Wear protective gloves / eye protection / face protection.

(Contd. on page 2)

US

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II**

- P302+P352      *If on skin: Wash with plenty of water.*
- P305+P351+P338 *If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
- P321              *Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).*
- P332+P313      *If skin irritation occurs: Get medical advice/attention.*
- P337+P313      *If eye irritation persists: Get medical advice/attention.*
- P362+P364      *Take off contaminated clothing and wash it before reuse.*

· **Unknown acute toxicity:**

*This value refers to knowledge of known, established toxicological or ecotoxicological values.*

· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Hazard(s) not otherwise classified (HNOC):** None known

### 3 Composition/Information on Ingredients

· **Non-hazardous components:**

7732-18-5	Water, distilled water, deionized water	Proprietary%
-----------	---	--------------

· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

Proprietary Acid	⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319	Proprietary%
------------------	--	--------------

· **Additional information:**

*The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.*

### 4 First-Aid Measures

· **Description of first aid measures:**

· **After inhalation:**

*Generally the product does not irritate with inhalation.  
Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.  
In case of unconsciousness, place patient securely on side position for transportation.*

· **After skin contact:**

*Wash with soap and water.  
If skin irritation occurs, consult a doctor.*

(Contd. on page 3)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II**

- **After eye contact:**  
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor. If easy to do so, remove contact lenses if worn.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting without medical advice.  
If vomiting does occur, repeat fluid administration  
If swallowed and symptoms occur, consult a doctor.
- **Information for doctor:**
- **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:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture:**  
If incinerated, product may release the following toxic fumes: Oxides of Carbon and Nitrogen (NOx).
- **Advice for firefighters:**
- **Protective equipment:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**  
Avoid contact with skin, eyes and clothing.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.  
Dispose of the collected material according to regulations.
- **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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

Proprietary Surfactant

6.9 mg/m<sup>3</sup>

· **PAC-2:**

Proprietary Surfactant

76 mg/m<sup>3</sup>

(Contd. on page 4)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II**

**· PAC-3:**

Proprietary Surfactant

460 mg/m<sup>3</sup>

### 7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**  
 Ensure good ventilation/exhaustion at the workplace.  
 Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities:**  
 Store away from strong acids, strong bases, strong oxidizing agents and strong reducing agents. Do not mix with Sulfites.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in the original container.
- **Information about storage in one common storage facility:** Not required.
- **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 section 7.
- **Control parameters:**  
 All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.
- **Components with occupational exposure limits:**  
 The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 The usual precautionary measures for handling chemicals should be followed.  
 Keep away from foodstuffs, beverages and feed.  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 5)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and 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:** Not applicable.

· **Eye protection:**



Safety glasses

· **Body protection:** Not required.

### 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Clear to straw
· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.

· **pH-value @ 20 °C (68 °F):** 2.5

· **Change in condition**

· <b>Melting point/Melting range:</b>	Not determined.
· <b>Boiling point/Boiling range:</b>	≥100 °C (≥212 °F)

· **Flash point:** None

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** ≥1,010 °C (≥33.8 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· <b>Lower:</b>	0.0 Vol %
· <b>Upper:</b>	0.0 Vol %

· **Vapor pressure @ 20 °C (68 °F):** ≤23 hPa (≤17.3 mm Hg)

· **Density @ 20 °C (68 °F):** 1.095 g/cm<sup>3</sup> (9.138 lbs/gal)

· **Relative density:** Not determined.

· **Vapor density:** Not determined.

(Contd. on page 6)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II**

- |   |  |
|---|--|
| · <b>Evaporation rate:</b>  | Not determined.                            |
| · <b>Solubility in / Miscibility with:</b><br><b>Water:</b>                 | Fully miscible.                            |
| · <b>Partition coefficient (n-octanol/water):</b>                           | Not determined.                            |
| · <b>Viscosity:</b><br><b>Dynamic @ 20 °C (68 °F):</b><br><b>Kinematic:</b> | 2 mPas<br>Not determined.                  |
| · <b>Solvent content:</b><br><b>VOC content:</b>                            | 0.00 %                                     |
| · <b>Other information:</b>   | No further relevant information available. |

### 10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:**  
Strong acids, strong bases, strong oxidizing agents, strong reducing agents and Sulfites.
- **Hazardous decomposition products:**  
No dangerous decomposition products known.  
Oxides of Carbon and Nitrogen (NOx), if product is incinerated.

### 11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

Proprietary Acid		
Oral	LD50	5,040 mg/kg (Mouse) 5,400 mg/kg (Rat)
Dermal	LD50	>2,000 mg/kg (Rat)
	LC50/48 hrs	440 mg/l (Daphnia)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

(Contd. on page 7)

US

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II**

- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**
  - Group 1 - Carcinogenic to humans
  - Group 2A - Probably carcinogenic to humans
  - Group 2B - Possibly carcinogenic to humans
  - Group 3 - Not classifiable as to its carcinogenicity to humans
  - Group 4 - Probably not carcinogenic to humans

Proprietary Corrosion Inhibitor	3
---------------------------------	---

- **NTP (National Toxicology Program):**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

### 12 Ecological Information

- **Toxicity:**

- **Aquatic toxicity:**

**Proprietary Acid**

EC50	1,534 mg/l (Daphnia)
------	----------------------

- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.
- **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:** Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings**
- **Recommendation:** Dispose of as unused product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material

(Contd. on page 8)

US

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II**

<ul style="list-style-type: none"> <li>· <b>UN proper shipping name:</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> </ul>	<i>Non-Regulated Material</i>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es):</b></li> <li>· <b>DOT, ADR/ADN, ADN, IMDG, IATA</b></li> <li>· <b>Class:</b></li> </ul>	<i>Non-Regulated Material</i>
<ul style="list-style-type: none"> <li>· <b>Packing group:</b></li> <li>· <b>DOT, ADR/ADN, IMDG, IATA</b></li> </ul>	<i>Non-Regulated Material</i>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>	<i>Not applicable.</i>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user:</b></li> </ul>	<i>Not applicable.</i>
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</b></li> </ul>	<i>Not applicable.</i>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<i>Non-Regulated Material</i>

### 15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

- **Section 355 (extremely hazardous substances):**

*None of the ingredients are listed.*

- **Section 313 (Specific toxic chemical listings):**

*None of the ingredients are listed.*

- **TSCA (Toxic Substances Control Act):**

*All ingredients are listed or exempt from listing.*

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

*None of the ingredients are listed.*

- **Chemicals known to cause reproductive toxicity for females:**

*None of the ingredients are listed.*

- **Chemicals known to cause reproductive toxicity for males:**

*None of the ingredients are listed.*

- **Chemicals known to cause developmental toxicity:**

*None of the ingredients are listed.*

- **New Jersey Right-to-Know List:**

*None of the ingredients are listed.*

- **New Jersey Special Hazardous Substance List:**

*None of the ingredients are listed.*

- **Pennsylvania Right-to-Know List:**

*Proprietary Corrosion Inhibitor*

(Contd. on page 9)



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II**

· **Pennsylvania Special Hazardous Substance List:**

Proprietary Corrosion Inhibitor

E

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

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

None of the ingredients are listed.

· **GHS label elements**

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

· **Hazard pictograms:**



GHS07

· **Signal word:** Warning

· **Hazard statements:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

· **Precautionary statements:**

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

P302+P352 If on skin: Wash with plenty of water.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

· **National regulations:**

None of the ingredients are listed.

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

### 16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision:** 10/03/2017 / -

(Contd. on page 10)

US

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/03/2017

**Trade name: Clean-N-Clear II****· Abbreviations and acronyms:***ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road**ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways**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)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety and Health**OSHA: Occupational Safety & Health Administration**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A***· \* Data compared to the previous version altered.**SDS created by MSDS Authoring Services [www.msdsauthoring.com](http://www.msdsauthoring.com) +1-877-204-9106