

Clean-N-Clear II

Technical Data Sheet

Decontamination Solution for LED Arrays

Environmentally friendly, non-toxic, biodegradable liquid cleaner used for micro-cleansing of LEDs.

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.



Characteristics:

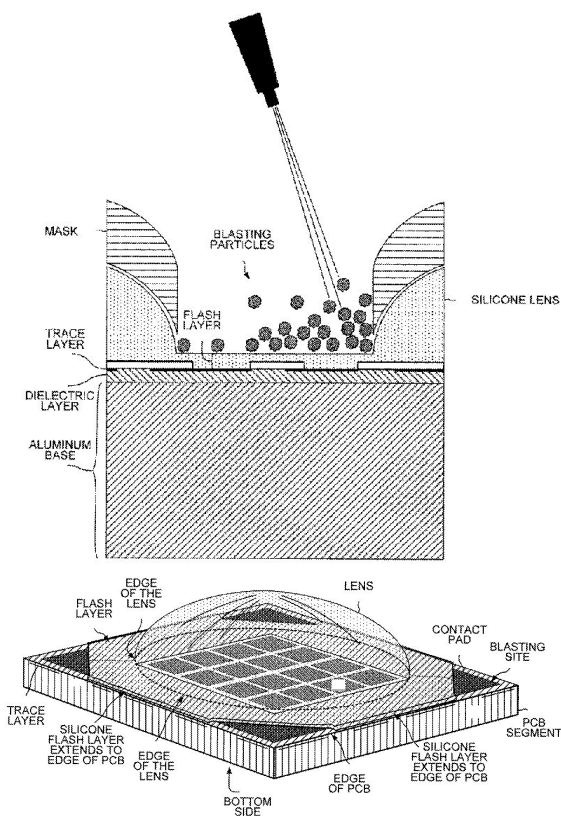
Clean-N-Clear II was formulated to selectively remove amphoteric bicarbonate and alkali carbonate residues from LED arrays. During the array manufacturing process, silicone or urethane flash need to be selectively removed via a targeted blasting process in order to expose the contact pads that were covered during the initial flash layer application. **Clean-N-Clear II** will remove these residues from the array without damaging the silicone or urethane flash layer, contact pad/trace layer (Gold/Silver, Nickel, Copper), solder mask, or the MCPCB (Aluminium). **Clean-N-Clear II** also removes particulate contaminants, chemical and mineral deposits, and other metal and ionic contaminants from the array. **Clean-N-Clear II** contains no environmentally hazardous solvents such as aromatic solvents, TCE, or PERC, or harsh, hazardous acids such as HF/HCl/H₃PO₄/H₂SO₄/HNO₃.

Directions for Use:

Clean-N-Clear II is effective at ambient temperatures. However, it is normally used at 5-20% by volume of water at 25°C to 60°C (77°F to 140°F) for 5 seconds to 2 minutes. The parameters can vary due to the type and extent of soils to be removed. Since amphoteric bicarbonate and alkali carbonates are very slowly soluble in water itself, the use concentration of 20% by volume of water is the optimal concentration to run **Clean-N-Clear II** in order to get the most use and highest loading out of each bath. This 20% by volume of water concentration has been empirically shown to synergistically optimize the dissolving power of the **Clean-N-Clear II** and the natural water solubility of the amphoteric bicarbonate and alkali carbonate contaminants being removed. Please refer to the **Clean-N-Clear II - Titration Procedure** for more information on bath maintenance, control and optimization.

Product Benefits

- Environmentally and worker friendly formula, biodegradable, safe
- High loading, fast, and effective decontamination solution
- Compatible with LED array including flash layers, contact pad/trace layer, solder mask and MCPCB



Physical Properties

Use concentration	5-20% by volume of water
Use concentration (optimal, recommended)	20% by volume of water

Bulk Density	9.1 lbs/gal
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Operating Temps	25°C to 60°C (77°F to 140°F)
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pH, Concentrate	2.2 - 2.4
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pH, @5%	2.4 - 2.6
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VOC (Concentrate)	0 g/L
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Flash Point	None
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Chelates	No
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Soluble in water	Complete
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Biodegradable	Yes
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Corrosive	No
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Availability: 5-gallon and 55-gallon containers, 275-gallon totes and bulk tankers.

Shipment: Non-regulated material, liquid

Storage: Keep out of direct sunlight. Keep from freezing. Store between 40 ° F - 120 ° F.

Disposal: Dispose of in accordance with local, state, and federal regulations. For assistance with disposal contact NuGeneration Technologies at 888-99-NuGen or email: info@nugentec.com.

Regulatory: This product is classified and labeled according to the Globally Harmonized System (GHS).

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EMERGENCY OVERVIEW:

This product may cause irritation to the skin and eyes.

SAFETY:

Please make sure you have read and understand the product label and SDS before using this product. Avoid breathing vapors, spray or mists. Use only with adequate ventilation. Wash thoroughly after handling. Observe label precautions.