

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

1 Identification

- **Product Identifier**
 - **Trade name: NuKlean NCFR**
 - **Product Number: ng-AKNCFR**
 - **Relevant identified uses of the substance or mixture and uses advised against:**
Use as directed by manufacturer.
 - **Product Description** No-Clean Flux Remover.
 - **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
 - **Emergency telephone number:**
PERS Emergency Response: Domestic and Canada - 1-800-633-8253, International 1-801-629-0667
- www.nugentec.com

2 Hazard(s) Identification

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



GHS05 Corrosion

Skin Corr. 1B 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

- **Signal word:** Danger

- **Hazard-determining components of labeling:**

Proprietary Solvent

- **Hazard statements:**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

- **Precautionary statements:**

P260

Do not breathe dusts or mists.

(Contd. on page 2)

US

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- 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.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.
3 % of the mixture consists of component(s) of unknown toxicity.

- **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

- **Chemical characterization:** Mixtures
- **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

Proprietary Solvent	☠ Skin Corr. 1B, H314; ☠ Acute Tox. 4, H312; Flam. Liq. 4, H227	15-35%
---------------------	---	--------

· **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:**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.

(Contd. on page 3)

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation occurs, consult a doctor.
- **After eye contact:**
Rinse opened eye for at least 15 minutes under running water.
If easy to do so, remove contact lenses if worn.
Get immediate medical attention.
- **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
Seek immediate medical advice.
- **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.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **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.
Do not breathe vapor.
Ensure adequate ventilation.
Keep people at a distance and stay upwind.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to section 13.
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.

(Contd. on page 4)

US

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR**· Protective Action Criteria for Chemicals****· PAC-1:**

None of the ingredients are listed.

· PAC-2:

None of the ingredients are listed.

· PAC-3:

None of the ingredients are listed.

7 Handling and Storage**· Handling****· Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep protective respiratory device available.

· Conditions for safe storage, including any incompatibilities:

Store away from strong acids, strong bases, strong oxidizing agents and strong reducing agents.

· 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.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.

(Contd. on page 5)

US

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

- Store protective clothing separately.
- 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. 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:**



Tightly sealed goggles

- **Body protection:**



Protective work clothing

9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - Form:** Liquid
 - Color:** Light yellow
- **Odor:** Mild
- **Odor threshold:** Not determined.
- **pH-value @ 20 °C (68 °F):** 10.2
- **Change in condition**
 - Melting point/Melting range:** --
 - Boiling point/Boiling range:** ≥100 °C (≥212 °F)
- **Flash point:** None
- **Flammability (solid, gaseous):** Not applicable.

(Contd. on page 6)

US

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

- **Ignition temperature:** ≥280 °C (≥536 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** 0,0 Vol %
 - Upper:** 0,0 Vol %
- **Vapor pressure @ 20 °C (68 °F):** ≤23 hPa (≤17.3 mm Hg)
- **Density @ 20 °C (68 °F):** 1.01 g/cm³ (8.428 lbs/gal)
- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with:**
 - Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic @ 20 °C (68 °F):** 1 mPas
 - Kinematic:** Not determined.
- **Solvent content:**
 - VOC content:** 192 g/l
- **Other information:** 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 and strong reducing agents.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

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

Proprietary Solvent		
Oral	LD50	2,098 mg/kg (Rat)

(Contd. on page 7)

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

Dermal	LD50	1,640 mg/kg (Rabbit)
--------	------	----------------------

• **Primary irritant effect:**

• **On the skin:** Strong caustic effect on skin and mucous membranes.

• **On the eye:**

Strong irritant with the danger of severe eye injury.

Corrosive effect.

Causes serious eye irritation.

• **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 corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

• **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

None of the ingredients are listed.

• **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 Solvent

EC50	108.8 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:**

Do not allow undiluted product or product that has not been neutralized 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.

(Contd. on page 8)

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

- **Waste treatment methods:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings**
- **Recommendation:** Dispose of as unused product.

14 Transport Information

- **UN-Number:** UN2735
- **DOT, ADR/ADN, IMDG, IATA** UN2735
- **UN proper shipping name:** Amines, liquid, corrosive, n.o.s.
- **DOT** UN2735 Amines, liquid, corrosive, n.o.s.
- **ADR/ADN** AMINES, LIQUID, CORROSIVE, N.O.S.
- **IMDG, IATA**
- **Transport hazard class(es):**

- **DOT**



- **Class:** 9 Miscellaneous dangerous substances and articles
- **Label:** 8

- **ADR/ADN**



- **Class:** 8 (C7) Corrosive substances
- **Label:** 8

- **IMDG, IATA**



- **Class:** 8 Corrosive substances
- **Label:** 8

(Contd. on page 9)

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

- **Packing group:** III
 - **DOT, ADR/ADN, IMDG, IATA** III
 - **Environmental hazards:** Not applicable.
 - **Special precautions for user:** Warning: Corrosive substances
 - **Danger code (Kemler):** 80
 - **EMS Number:** F-A, S-B
 - **Segregation groups:** Alkalis
 - **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
 - **Transport/Additional information:**
-
- **ADR/ADN**
 - **Excepted quantities (EQ):** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
 - **UN "Model Regulation":** UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S., 8, III

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):**

Proprietary Solvent

Proprietary Solvent

Proprietary Corrosion Inhibitor

Proprietary Corrosion Inhibitor

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

- **TSCA new (21st Century Act) (Substances not listed)**

Proprietary Solvent

- **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.

(Contd. on page 10)

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

· **New Jersey Right-to-Know List:**

Proprietary Solvent

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

None of the ingredients are listed.

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

Proprietary Solvent

Proprietary Corrosion Inhibitor

· **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:**



GHS05 GHS07

· **Signal word: Danger**

· **Hazard-determining components of labeling:**

Proprietary Solvent

· **Hazard statements:**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

· **Precautionary statements:**

P260 Do not breathe dusts or mists.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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.

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

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

P362 Take off contaminated clothing.

P405 Store locked up.

(Contd. on page 11)

Safety Data Sheet (SDS)

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

Issue date 11/15/2017

Reviewed on 11/15/2017

Trade name: NuKlean NCFR

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• 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: 11/15/2017 / -**• 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

Flam. Liq. 4: Flammable liquids – Category 4

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

• * Data compared to the previous version altered.SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106