

Safety Data Sheet (SDS)

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

Issue date 08/23/2016

Reviewed on 08/23/2016

1 Identification

- **Product Identifier**
- **Trade name:** AquaKlean EF105MF
- **Product Number:** ng-AKEF105MF
- **Relevant identified uses of the substance or mixture and uses advised against:**
For professional use only.
- **Product Description** Non-Silicated, non-nitrated multi-metal tank cleaner with moderate foam
- **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:**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

- **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 Surfactant

Proprietary Surfactant

Proprietary Surfactant

Proprietary Chelating Agent

- **Hazard statements:**

H302 Harmful if swallowed.

H315 Causes skin irritation.

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H318 Causes serious eye damage.

Precautionary statements:

- P280 Wear protective gloves.
- P280 Wear eye protection / face protection.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER/doctor.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P330 Rinse mouth.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **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 Hydrotrope	3.2%
⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
Proprietary Surfactant	3%
⚠ Skin Corr. 1C, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312	
Proprietary Surfactant	2%
⚠ Eye Dam. 1, H318	
Proprietary Surfactant	2%
⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Aquatic Acute 2, H401; Aquatic Chronic 3, H412	

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	Proprietary Chelating Agent	1.56%
	☠ Eye Dam. 1, H318; ☠ Acute Tox. 4, H302	
1310-73-2	Sodium Hydroxide	≤ 2.5%
	☠ Skin Corr. 1A, H314	

• **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:**

Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.

• **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.

• **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 several minutes under running water. Then consult a doctor.

• **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:**

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:** 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.

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6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
- **Environmental precautions:**
Dilute with plenty of water.
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).
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.

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

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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 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.

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:**

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

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**



Protective work clothing

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9 Physical and Chemical Properties

38 gram/liter

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

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Colorless
Odor:	Mild
Odor threshold:	Not determined.

· pH-value @ 20 °C (68 °F):	10.4 10.2 @ 5%
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· **Change in condition**

Melting point/Melting range:	--
Boiling point/Boiling range:	100 °C (212 °F)

· Flash point:	None
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· Flammability (solid, gaseous):	Not applicable.
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· Ignition temperature:	277 °C (531 °F)
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· Decomposition temperature:	Not determined.
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· Auto igniting:	Product is not self-igniting.
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· Danger of explosion:	Product does not present an explosion hazard.
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· **Explosion limits:**

Lower:	0.0 Vol %
Upper:	0.0 Vol %

· Vapor pressure @ 20 °C (68 °F):	23 hPa (17 mm Hg)
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· Density @ 20 °C (68 °F):	1.032 g/cm ³ (8.612 lbs/gal)
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· Bulk density:	8.8 #/gal
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.

· **Solubility in / Miscibility with:**

Water:	Fully miscible.
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· Partition coefficient (n-octanol/water):	Not determined.
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· **Viscosity:**

Dynamic @ 20 °C (68 °F):	1 mPas
Kinematic:	Not determined.

· **Solvent content:**

Organic solvents:	0.0 %
Water:	78.5 %

· Solids content:	7.6 %
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· **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 Hydrotrope

Oral	LD50	>7.200 mg/kg (rat)
Dermal	LD50	>2.000 mg/kg (rabbit)

Proprietary Surfactant

Oral	LD50	>2000 mg/kg (rat)
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Proprietary Surfactant

Oral	LD50	2000-5000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)

Proprietary Chelating Agent

Oral	LD50	630-1260 mg/kg (rat)
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1310-73-2 Sodium Hydroxide

Oral	LD50	2000 mg/kg (rat)
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- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:**
Strong irritant with the danger of severe eye injury.
Causes serious eye irritation.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**
Group 1 - Carcinogenic to humans
Group 2A - Probably carcinogenic to humans

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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:**

1310-73-2 Sodium Hydroxide

EC50 40 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.

· **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:**

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:**

Disposal must be made according to official regulations.

Dispose of as unused product.

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

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14 Transport Information

- **UN-Number:**
· DOT, ADR, ADN, IMDG, IATA Non-Regulated Material
- **UN proper shipping name:**
· DOT, ADR, ADN, IMDG, IATA Non-Regulated Material
- **Transport hazard class(es):**
· DOT, ADR, ADN, IMDG, IATA
· Class: Non-Regulated Material
- **Packing group:**
· DOT, ADR, IMDG, IATA Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

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:**

1310-73-2 Sodium Hydroxide

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

1310-73-2 Sodium Hydroxide

CO, R1

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

1310-73-2 Sodium Hydroxide

· **Pennsylvania Special Hazardous Substance List:**

1310-73-2 Sodium Hydroxide

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· **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 Surfactant

Proprietary Surfactant

Proprietary Surfactant

Proprietary Chelating Agent

· **Hazard statements:**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

· **Precautionary statements:**

P280 Wear protective gloves.

P280 Wear eye protection / face protection.

P264 Wash thoroughly after handling.

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

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

P310 Immediately call a POISON CENTER/doctor.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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

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

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water.

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

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

• **National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

• **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:** 08/23/2016 / -

• **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)

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

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. 1A: Skin corrosion/irritation – Category 1A

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

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

• *** Data compared to the previous version altered.**

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