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Safety Data Sheet (SDS)

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

Issue date 12/04/2018 Reviewed on 12/04/2018

1 Identification

· Product Identifier

· Trade Name: NuWet DM6701

· Product Number: ng-NWDM6701

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

Disk drive media cleaning. Use as directed by manufacturer.

· Product Description:

Disk drive cleaning agent for removal of Silicon Dioxide from Nickel-Phosphate coating. NuWet DM6701 is a specially formulated cleaning agent that approaches the Silicon Dioxide removal mechanism from two critical angles: enhanced dissolution, and proper surfactant selection according to the zeta potential behavior of SiO2. NuWet DM6701 has excellent wettability and rinseability. Ideal for use at immersion cleaning applications with ultrasonic or megasonic frequencies. Operates at room temperature.

- · Application of the substance / the mixture: Disk drive cleaning.
- · 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: 1-801-629-0667

2 Hazard(s) Identification

· Classification of the substance or mixture:



Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



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:

Potassium Hydroxide

(Contd. on page 2)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

Proprietary Salt

Proprietary Surfactant

· 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/protective clothing/eye protection/face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell. P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with

water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

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

Sheet).

P363 Wash contaminated clothing before reuse.

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. 5 % 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)



Health = 3 Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *3 Fire = 0

Physical Hazard = 0

· Hazard(s) not otherwise classified (HNOC): Contact with acids liberates toxic gases.

3 Composition/Information on Ingredients Non-hazardous components: Proprietary Salt Proprietary Surfactant Proprietary Surfactant Proprietary% Water, distilled water, deionized water (Contd. on page 3)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

· Chemical characterization: Mixtures

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

· Dangerous Components:				
CAS: 1310-58-3 RTECS: TT 2102000	Potassium Hydroxide ♦ Skin Corr. 1A, H314; ♦ Acute Tox. 4, H302	15-35%		
	Proprietary Salt ♦ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	Proprietary%		
	Proprietary Surfactant Proprietary Surfactant Superscript Surfactant Proprietary Surfactant Propri	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
- · General information: Immediately remove any clothing soiled by the product.
- · 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 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.

Wash with soap and water.

· After eye contact:

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

If easy to do so, remove contact lenses if worn.

Seek immediate medical advice.

· 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

(Contd. on page 4)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

- · Special hazards arising from the substance or mixture: No further relevant information available.
- · Advice for firefighters
- · Special protective equipment for firefighters:

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.

Ensure adequate ventilation.

Product is slippery when spilled.

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.

· Protective Action Criteria for Chemicals

1310-58-3	Potassium Hydroxide	0.18 mg/m³
	Proprietary Corrosion Inhibitor	1.2 mg/m³
	Proprietary Corrosion Inhibitor	30 mg/m³
PAC-2:		
1310-58-3	Potassium Hydroxide	2 mg/m³
	Proprietary Corrosion Inhibitor	13 mg/m³
	Proprietary Corrosion Inhibitor	340 mg/m³
PAC-3:		
1310-58-3	Potassium Hydroxide	54 mg/m³
	Proprietary Corrosion Inhibitor	77 mg/m³
	Proprietary Corrosion Inhibitor	630 mg/m³

7 Handling and Storage

- · Handling
- · Precautions for safe handling:

Avoid contact with skin, eyes and clothing

Wear protective equipment.

Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 5)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

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, strong reducing agents, flint glass, amphoteric metals such as Aluminium, Zinc, Lead and Tin, and their alloys, (Brass, Bronze, etc.).

Do not neutralize with acids to a pH < 4.0 as product can liberate toxic gases when exosed to high concentrations of acid.

- · 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 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.

1310-58-3 Potassium Hydroxide

REL Ceiling limit value: 2 mg/m³
TLV Ceiling limit value: 2 mg/m³

- · 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:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.

Protection of hands:



(Contd. on page 6)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

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

9 Physical and Chemical Properties

- · Information on basic physical and chemical properties
- · General Information

· Appearance:

Form: Liquid
Color: Amber
Odour: Mild

· Odor threshold: Not determined.

· pH-value @ 20 °C (68 °F): 13.0-14.0

· Change in condition

Melting point/Melting range: 0 °C (32 °F)

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

· Flash point: None

Flammability (solid, gaseous): Not applicable.
 Ignition temperature: 225 °C (437 °F)
 Decomposition temperature: Not determined.

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

• Danger of explosion: Product does not present an explosion hazard.

(Contd. on page 7)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

· 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): 1.178 g/cm³ (9.8304 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: Not determined.

Kinematic @ 20 °C (68 °F): 1 s (DIN 53211/4)

· Solvent content:

Water: Proprietary % VOC content: 0.00 %

Solids content: 25.6 %

· Other information: No further relevant information available.

10 Stability and Reactivity

· Reactivity:

No further relevant information available.

The product is stable under normal conditions

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:

Store away from strong acids, strong bases, strong oxidizing agents, strong reducing agents, flint glass, amphoteric metals such as Aluminium, Zinc, Lead and Tin, and their alloys, (Brass, Bronze, etc.).

Do not neutralize with acids to a pH < 4.0 as product can liberate toxic gases when exosed to high concentrations of acid.

· Hazardous decomposition products: No dangerous decomposition products known.

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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

11 Toxicological Information

- · Information on toxicological effects:
- · Acute toxicity:

· LD/LC50	· LD/LC50 values that are relevant for classification:					
1310-58-3	Potassium Hy	droxide				
Oral	LD50	273 mg/kg (Rat)				
Inhalative	LC50/96 hours	80 mg/l (Daphnia)				
Proprieta	ry Salt					
Oral	LD50	245 mg/kg (Rat)				

- · Primary irritant effect:
- On the skin: Strong caustic effect on skin and mucous membranes.
- · On the eye: Corrosive effect.
- · 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):		
Proprietary Salt	3	
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: No further relevant information available.
- · 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.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably

(Contd. on page 9)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- · 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 packaging
- · Recommendation: Disposal must be made according to official regulations.

14 Transport Information

· UN-Number:

· DOT, ADR/ADN, IMDG, IATA

· UN proper shipping name:

· DOT

Corrosive liquid, basic, inorganic, n.o.s. (Potassium

hydroxide)

UN3266

· ADR/ADN

· IMDG, IATA

UN3266 CORROSIVE LIQUID, BASIC, INORGANIC,

CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.

N.O.S. (POTASSIUM HYDROXIDE)

(POTASSIUM HYDROXIDE)

· Transport hazard class(es):

· DOT



· Class: · Label: 8 Corrosive substances

8

· ADR/ADN



· Class:

8 (C5) Corrosive substances

(Contd. on page 10)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

· Label: 8

· IMDG, IATA



· Class: 8 Corrosive substances

· Label:

· Packing group:

· DOT, ADR/ADN, IMDG, IATA |||

· Environmental hazards: Not applicable.

· Special precautions for user: Warning: Corrosive substances

Danger code (Kemler):
EMS Number:
Segregation groups:
Stowage Category

8
Alkalis
A

Stowage Code
 Segregation Code
 SW2 Clear of living quarters.
 SG35 Stow "separated from" acids.

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code: Not applicable.

· Transport/Additional information:

· DOT

• **Quantity limitations:**On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L

· ADR/ADN

· Excepted quantities (EQ): Code: E

· IMDG

Limited quantities (LQ):Excepted quantities (EQ):Code: E

UN "Model Regulation": UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC,

N.O.S. (POTASSIUM HYDROXIDE), 8, III

15 Regulatory Information

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

1310-58-3 Potassium Hydroxide

Proprietary Salt

(Contd. on page 11)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701 Proprietary Surfactant Proprietary Corrosion Inhibitor Proprietary Corrosion Inhibitor 7732-18-5 Water, distilled water, deionized water · TSCA new (21st Century Act) (Substances not listed) Proprietary Salt · 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: 1310-58-3 Potassium Hydroxide Proprietary Salt · New Jersey Special Hazardous Substance List: 1310-58-3 Potassium Hydroxide CO, R1 · Pennsylvania Right-to-Know List: 1310-58-3 Potassium Hydroxide Proprietary Corrosion Inhibitor · Pennsylvania Special Hazardous Substance List: 1310-58-3 Potassium Hydroxide Ε Ε Proprietary Corrosion Inhibitor · Carcinogenic categories: · EPA (Environmental Protection Agency): None of the ingredients are listed. · TLV (Threshold Limit Value established by ACGIH): A4 Proprietary Salt · 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).

(Contd. on page 12)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

· Hazard pictograms:





GHS05 GHS07

· Signal word: Danger

· Hazard-determining components of labeling:

Potassium Hydroxide Proprietary Salt Proprietary Surfactant

· 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/protective clothing/eye protection/face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell. P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with

water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

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

Sheet).

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

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: 12/04/2018 / -

(Contd. on page 13)



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

Issue date 12/04/2018 Reviewed on 12/04/2018

Trade Name: NuWet DM6701

· 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

Acute Tox. 3: Acute toxicity - Category 3

Acute Tox. 4: Acute toxicity - Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2

· * Data compared to the previous version altered.

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