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Safety Data Sheet (SDS)

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

Issue date 05/16/2015 Reviewed on 05/16/2015

1 Identification

- · Product identifier
- · Trade name: NuKoat RPWF
- · Product number: ngt-RPWF
- · Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Corrosion inhibitors
- · 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

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

· 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



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

STOT RE 1 H372 Causes damage to the respiratory system through prolonged or repeated

exposure. Route of exposure: Inhalative.



GHS05 Corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- · Label elements
- · GHS label elements

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

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Trade name: NuKoat RPWF

· Hazard pictograms









GHS05 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

Phosphate Ester

1.2.4-triazole

· Hazard statements

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing cancer.

Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalative.

Toxic to aquatic life with long lasting effects.

Precautionary statements

Do not breathe dusts or mists.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

Wear eye protection / face protection.

Avoid release to the environment.

Wash thoroughly after handling.

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

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Immediately call a poison center/doctor.

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Get medical advice/attention if you feel unwell.

If on skin: Wash with plenty of water.

Collect spillage.

Store locked up.

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

· Unknown acute toxicity:

72.5 percent of the mixture consists of ingredient(s) of unknown toxicity.

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- · Classification system:
- NFPA ratings (scale 0 4)



Health = 1 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1 Fire = 0 Reactivity = 0

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

3 Composition/information on ingredients

9002-92-0 Ethoxylated lauryl alkohol

15-35%

- · Chemical characterization: Mixtures
- · Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous Compone	ents:	
CAS: 57-55-6 RTECS: TY 2000000	Propylene Glycol	60-90%
CAS: 68131-71-5	Phosphate Ester ♦ Met. Corr.1, H290; Skin Corr. 1C, H314; Eye Dam. 1, H318; ↑ Acute Tox. 4, H302	5-10%
CAS: 95-14-7 RTECS: DM 1225000	benzotriazole • Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Aquatic Acute 3, H402; Aquatic Chronic 3, H412	2-12%
CAS: 29385-43-1	methyl-1H-benzotriazole • Acute Tox. 4, H302; Eye Irrit. 2A, H319; STOT SE 3, H335; Aquatic Acute 3, H402; Aquatic Chronic 3, H412	≤2.5%
CAS: 288-88-0	1,2,4-triazole ♦ Carc. 2, H351; STOT RE 1, H372; ♦ Eye Dam. 1, H318; ♦ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ♦ Acute Tox. 4, H302; Skin Sens. 1B, H317	≤2.5%

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness, place patient securely on side position for transportation.

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· 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: 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:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · 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 Not required.
- Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

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 (ie. 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.

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- · Conditions for safe storage, including any incompatibilities
- · Storage.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · 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
- · Components with occupational exposure limits:

57-55-6 Propylene Glycol

WEEL Long-term value: 10 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.

· 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:



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.

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· Eye protection:



Goggles recommended during refilling.

9 Ph	vsical	and	ch	emi	cal	pro	perties
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· Information o	n basic pi	hvsical and	l chemical	properties
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· General Information

· Appearance:

Form: Liquid
Color: Amber

Odor: Sweetish
Odor threshold: Not determined.

· pH-value @ 20 °C (68 °F): 9.1

· Change in condition

Melting point/Melting range: --

Boiling point/Boiling range: 185 °C (365 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 371 °C (700 °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:
 2.6 Vol %

 Upper:
 12.6 Vol %

· Vapor pressure @ 20 °C (68 °F): 0.1 hPa

• **Density @ 20 °C (68 °F):** 1.04 g/cm³ (8.679 lbs/gal)

Relative density
 Vapor density
 Evaporation rate
 Not determined.
 Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic @ **20** °**C** (**68** °**F**): 1 mPas

Kinematic: Not determined.

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Solids content: Other information	10.0 % No further relevant information available.	
VOC content:	65.0 %	
Solvent content: Organic solvents:	65.0 %	

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: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- · Acute toxicity:

57-55-6 P	ropylene Glyco	I
Oral	LD50	20000 mg/kg (rat)
Dermal	LD50	20800 mg/kg (rabbit)
Inhalative	LC50/96 hours	52930 mg/l (Pimephales)
	Intravenous	6630 mg/kg (mouse)
		6423 mg/kg (rat)
		6500 mg/kg (rabbit)
95-14-7 b	enzotriazole	
Oral	LD50	560 mg/kg (rat)
Dermal	LD50	1000 mg/kg (rat)
Inhalative	LC50/4 h	25 mg/l (Trout)
		1.4 mg/l (rat)
288-88-0	1,2,4-triazole	
Oral	LD50	1750 mg/kg (rat)

- · Primary irritant effect:
- · on the skin: May cause an allergic skin reaction.
- · on the eye: Causes serious eye irritation.
- · Sensitization: Sensitization possible through skin contact.
- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

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Trade name: NuKoat RPWF

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

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:

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

57-55-6 Propylene Glycol

EC50 >10000 mg/l (daphnia)

95-14-7 benzotriazole

EC50 91 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.
- · Ecotoxical effects:
- · Remark: Toxic for fish
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

- 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.

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

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

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 MARPOL73/78 and the IBC Code	of Not applicable.
· UN "Model Regulation":	-

15 Regulatory information

- \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara 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):

All ingredients are listed.

- · 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.

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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 GHS08 GHS09

· Signal word Danger

· Hazard-determining components of labeling:

Phosphate Ester

1.2.4-triazole

· Hazard statements

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing cancer.

Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalative.

Toxic to aquatic life with long lasting effects.

· Precautionary statements

Do not breathe dusts or mists.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

Wear eye protection / face protection.

Avoid release to the environment.

Wash thoroughly after handling.

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

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Immediately call a poison center/doctor.

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

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Trade name: NuKoat RPWF

If swallowed: Rinse mouth. Do NOT induce vomiting.

Get medical advice/attention if you feel unwell.

If on skin: Wash with plenty of water.

Collect spillage. Store locked up.

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.

State Right to Know			
CAS: 57-55-6 RTECS: TY 2000000	Propylene Glycol	60-90%	
CAS: 9002-92-0	Ethoxylated lauryl alkohol	15-35%	
CAS: 68131-71-5	Phosphate Ester		
	Met. Corr.1, H290; Skin Corr. 1C, H314; Eye Dam. 1, H318; Acute Tox. 4, H302		
CAS: 95-14-7	benzotriazole	2-12%	
RTECS: DM 1225000	① Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Aquatic Acute 3, H402; Aquatic Chronic 3, H412		
CAS: 29385-43-1	methyl-1H-benzotriazole		
	Acute Tox. 4, H302; Eye Irrit. 2A, H319; STOT SE 3, H335; Aquatic Acute 3, H402; Aquatic Chronic 3, H412		
CAS: 288-88-0	1,2,4-triazole		
	 Carc. 2, H351; STOT RE 1, H372; People Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1B, H317 		

[·] 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 05/16/2015 / 22

Abbreviations and acronvms:

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, ÉU)

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LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Met. Corr.1: Corrosive to metals, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1 Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1 Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3 STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1 Aquatic Acute 1: Hazardous to the aquatic environment - Acute Aquatic Acute 3: Hazardous to the aquatic environment - AcuteHazard, Category 3 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

* Data compared to the previous version altered.

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US