

Safety Data Sheet (SDS)

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

Issue date 08/10/2016

Reviewed on 08/10/2016

1 Identification

- **Product Identifier**
- **Trade name: NuKut MD1**
- **Product Number: ng-NKMD1**
- **Relevant identified uses of the substance or mixture and uses advised against:**
Use as directed by manufacturer.
- **Product Description** Synthetic metalworking fluid.
- **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:**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.
Repr. 1 H360 May damage fertility or the unborn child.
STOT SE 1 H370 Causes damage to organs.
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
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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· **Hazard pictograms:**



GHS05 GHS08

· **Signal word: Danger**

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

Proprietary Surfactant
 2,2',2''-(hexahydro-1,3,5--tris (2-hydroxyethyl)-s-triazine)
 Proprietary Chelating Agent
 Proprietary Corrosion Inhibitor

· **Hazard statements:**

H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H340 May cause genetic defects.
 H350 May cause cancer.
 H360 May damage fertility or the unborn child.
 H370 Causes damage to organs.
 H372 Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements:**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P284 [In case of inadequate ventilation] wear respiratory protection.
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
 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.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 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).
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P363 Wash contaminated clothing before reuse.
 P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P314 Get medical advice/attention if you feel unwell.
 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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P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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



- **HMS-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:**

102-71-6	Triethanolamine, TEA ⚠ Skin Irrit. 2, H315; Eye Irrit. 2B, H320	2-12%
	Proprietary Corrosion Inhibitor ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	5%
	Proprietary Surfactant ⚠ Eye Dam. 1, H318	3%
4719-04-4	2,2',2''-(hexahydro-1,3,5--tris (2-hydroxyethyl)-s-triazine) ⚠ Acute Tox. 3, H301; Acute Tox. 3, H331; ⚠ Resp. Sens. 1B, H334; Muta. 1B, H340; Carc. 1B, H350; Repr. 1B, H360; STOT SE 1, H370; STOT RE 1, H372; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	≤ 2.5%
	Proprietary Chelating Agent ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	1.2%

- **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.

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- **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 or a rash occurs, consult a doctor.
- **After eye contact:**
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get 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
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.
- **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:**
Mouth respiratory protective device.
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:**
Ensure adequate ventilation.
Avoid contact with skin, eyes and clothing.
Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.
- **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.

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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.
 - 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:**
- **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:** 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.

102-71-6 Triethanolamine, TEATLV Long-term value: 5 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.
 - Store protective clothing separately.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.

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· **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

9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

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

· **pH-value @ 20 °C (68 °F):** 9.5

· **Change in condition**

Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	100 °C (212 °F)

· **Flash point:** None

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 305 °C (581 °F)

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· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure @ 20 °C (68 °F):	23 hPa (17 mm Hg)
· Density @ 20 °C (68 °F):	1.043 g/cm ³ (8.704 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility in / Miscibility with:	
Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	5.1 %
Water:	79.7 %
VOC content:	5.1 %
Solids content:	1.2 %
· 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:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological Information

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

102-71-6 Triethanolamine, TEA		
Oral	LD50	5530 mg/kg (rat) 2200 mg/kg (rabbit)
	LD50 Oral	2200 ml/kg (Guinea Pig) 5846 ml/kg (mouse)
Dermal	LD50	>22500 mg/kg (rabbit)
Proprietary Corrosion Inhibitor		
Oral	LD50	96444 mg/kg (rat)
Dermal	LD50	4563 mg/kg (rabbit)
Proprietary Surfactant		
Oral	LD50	>2000 mg/kg (rat)
4719-04-4 2,2',2''-(hexahydro-1,3,5--tris (2-hydroxyethyl)-s-triazine)		
Oral	LD50	535-580 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Proprietary Chelating Agent		
Oral	LD50	630-1260 mg/kg (rat)

- **Primary irritant effect:**
- **On the skin:**
Irritant to skin and mucous membranes.
May cause an allergic skin reaction.
- **On the eye:**
Strong irritant with the danger of severe eye injury.
Causes serious eye irritation.
- **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
Carcinogenic
The product can cause inheritable damage.
- **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

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102-71-6 Triethanolamine, TEA	3
<ul style="list-style-type: none"> • NTP (National Toxicology Program): None of the ingredients are listed. 	
<ul style="list-style-type: none"> • OSHA-Ca (Occupational Safety & Health Administration): None of the ingredients are listed. 	

12 Ecological Information

- **Toxicity:**

- **Aquatic toxicity:**

102-71-6 Triethanolamine, TEA	
EC50	609.98 mg/l (daphnia)
Proprietary Corrosion Inhibitor	
EC50	6797 mg/l (daphnia)
4719-04-4 2,2',2''-(hexahydro-1,3,5--tris (2-hydroxyethyl)-s-triazine)	
EC50 (static)	119 mg/l (daphnia) (OECD Test Guideline 203, 96 hour, Static Test)
	26.1 mg/l (Water flea)

- **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.

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

14 Transport Information

- | | |
|---|------------------------|
| · UN-Number: | |
| · DOT, ADR, IMDG, IATA | Non-Regulated Material |
| · UN proper shipping name: | |
| · DOT, IMDG, IATA | Non-Regulated Material |
| · Transport hazard class(es): | |
| · DOT, ADR, 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: | 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):**

102-71-6	Triethanolamine, TEA
	Proprietary Surfactant
	Proprietary Surfactant
4719-04-4	2,2',2''-(hexahydro-1,3,5--tris (2-hydroxyethyl)-s-triazine)
	Proprietary Chelating Agent
7732-18-5	Water, distilled water, deionized water

- **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.

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· **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:**

102-71-6 Triethanolamine, TEA

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

None of the ingredients are listed.

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

102-71-6 Triethanolamine, TEA

· **Pennsylvania Special Hazardous Substance List:**

None of the ingredients are listed.

· **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 GHS08

· **Signal word: Danger**

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

Proprietary Surfactant
 2,2',2''-(hexahydro-1,3,5--tris (2-hydroxyethyl)-s-triazine)
 Proprietary Chelating Agent
 Proprietary Corrosion Inhibitor

· **Hazard statements:**

H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H340 May cause genetic defects.
 H350 May cause cancer.
 H360 May damage fertility or the unborn child.
 H370 Causes damage to organs.
 H372 Causes damage to organs through prolonged or repeated exposure.

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Trade name: NuKut MD1**Precautionary statements:**

- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P284 [In case of inadequate ventilation] wear respiratory protection.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
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.
P272 Contaminated work clothing must not be allowed out of the workplace.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
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).
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.
P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
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: 08/10/2016 / -

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

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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
OSHA: Occupational Safety & Health
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 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
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
Resp. Sens. 1: Respiratory sensitisation – Category 1
Resp. Sens. 1B: Respiratory sensitisation – Category 1B
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1B: Carcinogenicity – Category 1B
Repr. 1: Reproductive toxicity – Category 1
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
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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