

Material Safety Data Sheet

According to 1907/2006/WE(REACH),2015/830/EU

Date of compilation: 03.06.2007

Updated on: 20.07.2020

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VERSION: 6.0

NANOMAX FOR DESCALING

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 **Product identifier:** NANOMAX for descaling
- 1.2 **Appropriate identified uses of the substance or mixture and uses advised against:**
- 1.2.1 Appropriate uses: professional and concentrated descaling agent
- 1.2.2 Inappropriate uses: Undefined
- 1.3 **Details of the supplier of the safety data sheet:**
- 1.3.1 Producer: **DYNAMIC TECHNOLOGY SP. Z O.O. (LLC.)**
- 1.3.2 Address: ul. Fabryczna 12; 32-500 Chrzanów
- 1.3.3 Telephone no. : +48 32 611 09 38
- 1.3.4 e-mail address: think@dynamic.pl
- 1.4 **Emergency telephone no.:** +48 32 611 09 38 (weekdays: 8⁰⁰- 15⁰⁰), 112

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 **Classification of the substance or mixture:**
- 2.1.1. Hazardous to humans: Product is classified as potentially hazardous to humans.
H314- Causes severe skin burns and eye damage
Skin Corr.1B- Skin corrosion, category 1B
- 2.1.2 Environmental hazards: Product is not classified as dangerous to the environment.
- 2.1.3 Hazards imposed by physical or chemical properties: Product is not classified as dangerous
- 2.2. **Label elements:**
- 2.2.1 Pictograms identifying hazard:



- 2.2.2 Warning: DANGER
- 2.2.3 Names of hazardous ingredients on label: phosphoric (V) acid
- 2.2.4 Hazard statements: H314- Causes severe skin burns and eye damage
- 2.2.5 Precautionary statements: P260- Do not breathe dust/fumes/gas/mist/vapours/spray P280- Wear protective gloves/protective clothing/eye protection/face protection 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 P310- Immediately call a POISON CENTER/doctor/... P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P405- Store locked up.
- 2.2.6 Additional information: none
- 2.3 **Other hazards:** No information on meeting PBT/vPvB criteria in accordance to annex XIII EU Regulation no 253/2011 from 15.03.2011. Research has not been conducted.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 **Substances:** Non-applicable

3.2 **Mixtures:**

Substance identification	Concentration range	Number CAS	Number WE	Classification according to 1272/2008/WE
Phosphoric (V) acid Registration no.: 01-2119485924-24-xxxx	20%-25%	7664-38-2	231-633-2	Skin Corr. 1B, H314

SECTION 4: FIRST AID MEASURES

4.1 **Description of first aid measures:**

- 4.1.1 Ingestion: If swallowed rinse mouth with water, remove dentures if present. Reach the nearest medical facility to seek treatment. Have product label at hand. If spontaneous vomiting occurs, hold head beneath hips.
- 4.1.2. Inhalation: Remove from place of exposure to fresh air. Let subject rest and relax. In case of coughing, vomiting, nausea, wheezing seek medical attention. If unconscious put in lateral position.

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4.1.3. Skin contact: Remove contaminated clothing. Wash skin with warm water and soap. In case of skin irritation seek medical advice.

4.1.4. Eye contact: Remove contact lenses immediately. Thoroughly rinse eyes with large amount of water, turning eyelids inside out. Avoid high water pressure to avoid injuring corneas. Provide immediate medical attention. Warning: persons in danger of contaminating eyes are to be instructed on the importance and methods of immediate eye washing.

4.2 Acute and delayed symptoms:

4.2.1 Eye contact: Irritation, reddening and tearing can occur.

4.2.2 Ingestion: Nausea, vomiting and stomach pains may occur.

4.2.3 Skin contact: May cause skin irritation.

4.3 Indication of any immediate medical attention and special treatment needed: Symptomatic treatment.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media: Use conventional media, depending on surroundings.

5.1.2 Unsuitable extinguishing media: Dense stream of water.

5.2 Specific hazards related to ingredients: Unknown. Due to phosphoric (V) acid content, harmful phosphorus oxides can form as a result of its thermal decomposition.

5.3 Advice for firefighters: Use regular fire-protection equipment. Do not stay in environment in danger of fire without chemical resistant equipment and breathing apparatus with independent air supply. If not too dangerous remove containers which are exposed to fire or cool with water spray from safe distance. Isolate area by evacuating all people from immediate surroundings of the fire. Do not take any action which could pose risk to anyone unless one is specially trained.

SECTION 6: ACCIDENTAL RELEASE GUIDELINES

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-personnel eliminating effects of accident: Restrict access of bystanders to area of accident until it is clear of danger. Do not touch, do not walk over spilled material. Do not breathe fumes or vapors. Wear appropriate protective equipment.

6.1.2 For personnel eliminating effects of accident: Eliminating the breakdown and its effects can only be carried out by specially trained personnel. Use chemical resistant protective equipment.

6.2 Environmental safety precautions: Prevent drinking water, soil, sewage contamination. If possible eliminate spill (ie. seal leaking container, close off water source, encapsulate leaking container in a sealed one). Contact appropriate public services if needed.

6.3 Methods and materials for containment and cleaning up: Wipe small spills with paper towel. Or absorb with pH neutral absorbent and put into appropriate waste container. In case of large spills: stop leakage if safe. Rampart area of spill and fill with absorbent material like sand, dirt and collect in a sealed, marked container. Wash exposed area with large amount of water. Hire a licensed waste disposal company. Contaminated absorbent material could pose the same risks as spilled product.

6.4 References to other sections: waste disposal guidelines – section 13, personal protection equipment – section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling: Respect health and safety regulations. Avoid eye contact. Do not inhale fumes or vapors. Wash hands before break and after work. Keep unused containers sealed. Maintain appropriate ventilation of area where product is used. Use product according to guidelines on the label.

7.2 Conditions of safe storage, and information on incompatibility with other substances: Keep well sealed away from sources of ignition. Keep away from children. Do not store with food products. Do not store with bases.

7.3 Special requirements: Non-applicable

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters: Based on mixture ingredients:

Phosphoric (V) acid NDS: 1mg/ m3, NDSCh: 2 mg/m3

DNEL for personnel (long-term): 2,92mg/m3

DNEL for general society (long-term): 0,73 mg/m3

PNEC – considering pH- safe pH value is between 6-9

8.2 Exposure control: Respect health and safety regulations. Do not eat, drink or smoke while working. Avoid eye contact. Ensure proper ventilation. Provide eye-cleaning facilities near work station. Remove contaminated clothing.

8.2.1 Respiratory tract protection: Use when there is no appropriate ventilation. Use respiratory tract protection.

8.2.2 Eye/face protection: Use protective eyewear.

8.2.3 Skin protection: Use acid-resistant protective gloves, acid-resistant clothing, rubber boots.

8.2.4 Technical protection measures: Room ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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9.1 Information on basic physical and chemical properties

Appearance:	liquid
Colour:	transparent to light ivory
Smell:	characteristic
Smell threshold:	Undefined
pH:	around 1
Melting/freezing point:	no data
Boiling point:	no data
Flash point temperature:	no data
Evaporation rate :	no data
Flammability:	inflammable
Upper/lower flammability/ explosiveness threshold:	no data
Vapour pressure:	no data
Vapour density:	no data
Relative density:	1,146 g/ml
Solubility:	very good in water
Coefficient of n-octanol/water:	no data
Self-ignition temperature :	non-applicable
Decomposition temperature:	no data
Viscosity:	no data
Explosive properties:	non-applicable
Oxidizing properties:	no data
9.2 Other information:	no data

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Stable in regular storing conditions.

10.2 Chemical stability: Stable in regular use conditions.

10.3 Risk of dangerous reactions: No data.

10.4 Conditions which are to be avoided: Extreme temperatures, sources of ignition.

10.5 Incompatible substances: Due to low pH do not mix with bases.

10.6 Hazardous decomposition products: No data.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

a)acute toxicity: Based on available data the product is not qualified for classification.

b)causticity: Causes severe skin burns.

c)severe eye damage: Causes eye damage.

d)skin or respiratory tract allergenic effects: Based on available data the product is not qualified for classification.

e)CMR effects (carcinogenicity, mutagenicity, reproductive toxicity): Based on available data the product is not qualified for classification.

h)specific target organ toxicity (STOT) – single exposure: Based on available data the product is not qualified for classification.

i)specific target organ toxicity (STOT) – repeated exposure: Based on available data the product is not qualified for classification.

j)hazards caused by aspiration: Based on available data the product is not qualified for classification.

Toxicological information based on ingredients:

Toxicological information based on phosphoric (V) acid content:

Acute toxicity – digestive tract: LD50 – 1530 mg/kg (rat)

Acute toxicity- respiratory tract: no data

Acute toxicity- skin application: LD50 – 2740 mg/kg (rabbit)

Causticity/irritation to skin:

Skin irritation: deep burns, slow healing wounds, scarring, inflammation

Severe eye damage/eye irritation:

Eye irritation: cornea damage, tearing, photophobia, conjunctiva swelling and inflammation

Allergenic effects on respiratory tract or skin: no data

Mutagenic effects on reproductive cells: no data

Carcinogenicity: no data

Reproductive toxicity: no data

Toxicity to organs and organ systems- single exposure: no data

Toxicity to organs and organ systems-repeated exposure: no data

Toxicity when inhaled: no data

Phototoxicity: no data

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SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity: Product is not classified as hazardous to the environment.

12.2 Stability and degradability: No data

12.3 Bioaccumulative potential: No data

12.4 Mobility in soil: No data

12.5 PBT and vPvB properties: No data

12.6 Other harmful effects: No data.

Information based on ingredients:

Phosphoric (V) acid:

Toxicity for fish: LC50 100-1000 mg/l/96h

SECTION 13: WASTE DISPOSAL MANAGEMENT

13.1 Methods for waste disposal:

13.1.1 Recommendations for mixture disposal: Act accordingly to local laws. Assign waste code at place of use.

13.1.2 Recommendations for empty containers: Recycle/dispose of according to local laws. Only completely empty containers can be recycled.

SECTION 14: TRANSPORT INFORMATION

14.1 UN Number: UN 1805

14.2 Correct shipping name/class: PHOSPHORIC ACID, SOLUTION

14.3 Transport hazard class: 8

14.4 Hazard number: 80

14.5 Packaging group: III

14.6 Classification code: C1

14.7 Warning sticker: 8

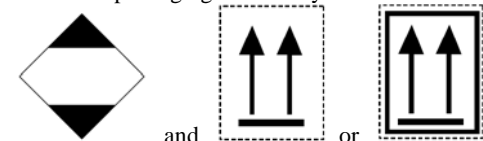


14.8 Environmental hazard: Mixture does not impose threat to environment.

14.9 Special safety precautions for handlers: Non-applicable

14.10 Loose transport according to annex II to MARPOL convention and the IBC codex: Non-applicable

14.11 Transport according to 1.1.3.4 exception: combined packaging of gross weight not over 30kg, internal containers not over 5L or tray wrapped in stretchable or heat shrinking foil of gross weight not over 20kg, internal containers not over 5L. Combined packaging and/or trays should be visibly marked with a limited quantity label and one of these positional arrows:



and (if trays are wrapped in see-through foil then positional arrows are not necessary). If tray or combined packaging gross weight exceeds 8000kg in one transport unit, then such unit must be marked with 2 limited quantity labels - one on the front and one on the back (25cm side square).

14.12 Transport according to 1.1.3.6 exception: Transport category 3, maximum amount for transport unit: 1000L

14.13 Tunnel transport category: E

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental protection legal provisions, specific for the substance and mixture:

1272/2008 / EC Regulation of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548 / EEC and 1999/45 / EC and amending Regulation (EC) No. 1907/2006 (Journal of Laws UE L 353 of 31 December 2008) Act of November 24, 2017 on the publication of the uniform text of the Act on chemical substances and mixtures (Journal of Laws 2018 item 143)

Announcement of the Minister of Health of 2 March 2015. on the publication of a uniform text of the regulation of the Minister of Health on labeling packaging of hazardous substances and mixtures and certain mixtures (Journal of Laws of 2015, item 450)

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Regulation of the Ministry of Labor and Social Policy of June 6, 2014. on the highest allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws 2014, item 817) Government Statement of February 18, 2019 on the entry into force of amendments to Annexes A and B to the European Agreement on the International Carriage of Dangerous Goods by Road (ADR), drawn up in Geneva on September 30, 1957 (Journal of Laws No. 2019, Item 769)

Regulation of the Minister of Economy of December 21, 2005 on the essential requirements for personal protective equipment (Journal of Laws No. 259, item 2173)

15.2 Chemical safety assessment:

The manufacturer did not assess chemical safety of the mixture.

SECTION 16: OTHER INFORMATION

The information contained in this Safety Data Sheet has been based on sources and technical knowledge as well as applicable law at European and national level, and its accuracy cannot be fully guaranteed. This information cannot be treated as a guarantee of product properties, as it is only a description of safety requirements. The methods and working conditions of the users of this product are beyond the reach of our knowledge and control, so the user is solely responsible for taking appropriate measures to comply with legal requirements regarding the handling, storage, use and disposal of chemical products. The information contained in this Safety Data Sheet applies only to the product that must not be used for purposes other than those specified therein. Every employee handling this product should be trained in appropriate workplace health and safety procedures.

Abbreviations used in the text:

H314-Causes severe skin and eye damage

Skin Corr.1B- Skin corrosion, category 1B

Classification method (WE) 1272/2008 (CLP)

Skin Corr. 1B, H314– classification based on calculation