

Safety data sheet
according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name: K2 GRAVON**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Ceramic protective coating
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Melle Sp. z o. o.
Stary Staw 9
63-400 OSTRÓW WLKP.
POLAND
- **Further information obtainable from:**
Product safety department.
zakupy@inter-global.com.pl
- **1.4 Emergency telephone number:** During normal opening times: 0048/62 737 88 00

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Repr. 2 H361f Suspected of damaging fertility.



GHS05 corrosion

Skin Corr. 1A 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

Acute Tox. 4 H302 Harmful if swallowed.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 1)

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS02 GHS05 GHS07 GHS08 GHS09

· Signal word Danger

· Hazard-determining components of labelling:

cyclosilazanes

octamethylcyclotetrasiloxane

· Hazard statements

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H361f Suspected of damaging fertility.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P102 Keep out of reach of children.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves / face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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.

P501 Dispose of contents/container to a waste container.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT:

556-67-2	octamethylcyclotetrasiloxane
541-02-6	2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane

· vPvB:

556-67-2	octamethylcyclotetrasiloxane
541-02-6	2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane

· Determination of endocrine-disrupting properties

556-67-2	octamethylcyclotetrasiloxane	List II; III
541-02-6	2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane	List II

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:** Mixture: consisting of the following components.

(Contd. on page 3)

IE

Safety data sheet

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Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 2)

· Dangerous components:

CAS: 556-67-2 EINECS: 209-136-7	octamethylcyclotetrasiloxane ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361f; Aquatic Chronic 4, H413 PBT; vPvB	<50%
CAS: 541-02-6	2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane ⚠ Flam. Liq. 3, H226 PBT; vPvB	<25%
CAS: 475645-84-2 EC number: 640-361-7	cyclosilazanes ⚠ Flam. Liq. 1, H224; ⚠ Skin Corr. 1A, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	<25%

· SVHC

556-67-2	octamethylcyclotetrasiloxane
541-02-6	2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane

· Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****· 4.1 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.

Take affected persons out into the fresh air.

Personal protection for the First Aider.

· After inhalation: In case of unconsciousness place patient stably in side position for transportation.**· After skin contact:** Immediately wash with water and soap and rinse thoroughly.**· After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.**· After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.**· 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures**· 5.1 Extinguishing media****· Suitable extinguishing agents:** CO₂, powder or water spray. Fight larger fires with water spray.**· For safety reasons unsuitable extinguishing agents:** Water with full jet**· 5.2 Special hazards arising from the substance or mixture** No further relevant information available.**· 5.3 Advice for firefighters****· Protective equipment:** No special measures required.**· Additional information** Cool endangered receptacles with water spray.**SECTION 6: Accidental release measures****· 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 3)

- **6.2 Environmental precautions:**

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

Do not allow to enter sewers/ surface or ground water.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect from heat.

Protect against electrostatic charges.

- **7.2 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 container tightly sealed.

Protect from heat and direct sunlight.

- **7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** *The lists valid during the making were used as basis.*

- **8.2 Exposure controls**

- **Appropriate engineering controls** *No further data; see section 7.*

- **Individual protection measures, such as personal protective equipment**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 4)

· Hand protection

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.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the 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 can not 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 found out by the manufacturer of the protective gloves and has to be observed.

· Eye/face protection

Tightly sealed goggles

SECTION 9: Physical and chemical properties

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

· Physical state	Fluid
· Colour:	Different according to colouring
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	Undetermined.
· Flammability	Flammable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Soluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density:	Not determined.

(Contd. on page 6)

IE

Safety data sheet
according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 5)

· <i>Relative density</i>	<i>Not determined.</i>
· <i>Vapour density</i>	<i>Not determined.</i>
· 9.2 Other information	
· Appearance:	
· Form:	<i>Liquid</i>
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	<i>Product is not selfigniting.</i>
· Explosive properties:	<i>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</i>
· Change in condition	
· Evaporation rate	<i>Not determined.</i>
· Information with regard to physical hazard classes	
· Explosives	<i>Void</i>
· Flammable gases	<i>Void</i>
· Aerosols	<i>Void</i>
· Oxidising gases	<i>Void</i>
· Gases under pressure	<i>Void</i>
· Flammable liquids	<i>Flammable liquid and vapour.</i>
· Flammable solids	<i>Void</i>
· Self-reactive substances and mixtures	<i>Void</i>
· Pyrophoric liquids	<i>Void</i>
· Pyrophoric solids	<i>Void</i>
· Self-heating substances and mixtures	<i>Void</i>
· Substances and mixtures, which emit flammable gases in contact with water	<i>Void</i>
· Oxidising liquids	<i>Void</i>
· Oxidising solids	<i>Void</i>
· Organic peroxides	<i>Void</i>
· Corrosive to metals	<i>Void</i>
· Desensitised explosives	<i>Void</i>

SECTION 10: Stability and reactivity

- **10.1 Reactivity** *No further relevant information available.*
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **10.3 Possibility of hazardous reactions** *No dangerous reactions known.*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:** *No further relevant information available.*
- **10.6 Hazardous decomposition products:** *No dangerous decomposition products known.*

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** *Harmful if swallowed.*

· LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Oral	LD50	962 mg/kg

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 6)

475645-84-2 cyclosilazanes

Oral LD50 500 mg/kg (ATE)

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Suspected of damaging fertility.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

556-67-2 octamethylcyclotetrasiloxane

List II; III

541-02-6 2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane

List II

* **SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** The product is biodegradable. Degree of biodegradation > 70%
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**

· **PBT:**

556-67-2 octamethylcyclotetrasiloxane

541-02-6 2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane

· **vPvB:**

556-67-2 octamethylcyclotetrasiloxane

541-02-6 2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane

- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**

· **Remark:** Harmful to fish· **Additional ecological information:**· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Harmful to aquatic organisms

SECTION 13: Disposal considerations· **13.1 Waste treatment methods**· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 7)

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

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA**

UN1993

- **14.2 UN proper shipping name**
- **ADR**

1993 FLAMMABLE LIQUID, N.O.S. (cyclosilazanes, octamethylcyclotetrasiloxane), ENVIRONMENTALLY HAZARDOUS

- **IMDG, IATA**

FLAMMABLE LIQUID, N.O.S. (cyclosilazanes, octamethylcyclotetrasiloxane)

- **14.3 Transport hazard class(es)**

- **ADR**



- **Class**
- **Label**

3 Flammable liquids.
3

- **IMDG, IATA**



- **Class**
- **Label**

3 Flammable liquids.
3

- **14.4 Packing group**
- **ADR, IMDG, IATA**

III

- **14.5 Environmental hazards:**
- **Special marking (ADR):**

Symbol (fish and tree)

- **14.6 Special precautions for user**
- **Hazard identification number (Kemler code):**
- **EMS Number:**
- **Stowage Category**

Warning: Flammable liquids.
30
F-E, S-E
B

- **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

- **Transport/Additional information:**

- **ADR**
- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

5L
Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

- **Transport category**

3

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 8)

· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (CYCLOSILOXANE), 3, III, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 70

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **National regulations:**

1. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

2. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 22.06.2023

Version number 3 (replaces version 2)

Revision: 21.02.2023

Trade name: K2 GRAVON

(Contd. of page 9)

Local regulations.

· **Other regulations, limitations and prohibitive regulations**· **Substances of very high concern (SVHC) according to REACH, Article 57**

556-67-2 | octamethylcyclotetrasiloxane

541-02-6 | 2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H224 Extremely flammable liquid and vapour.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H361f Suspected of damaging fertility.

H413 May cause long lasting harmful effects to aquatic life.

· **Classification according to Regulation (EC) No 1272/2008**

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· **Date of previous version:** 18.10.2017· **Version number of previous version:** 2· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 1: Flammable liquids – Category 1

Flam. Liq. 3: Flammable liquids – 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

Repr. 2: Reproductive toxicity – Category 2

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

Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4