Safety Data Sheet (MSDS; SDS)
MELONKOTE850

(Ord. Of UE no 453/2010 from 20-05-2010 changing the ord. (WE) no 1907/2006 for REACH)

Date of preparation: 2014-11-20 Updated : 2014-11-20

Section 1. Identification of the substance / mixture and of the company.

1.1. . Product ID
Trade name: MELONKOTE850
ID name: MELONTOTE850
1.2. Relevant identified uses of the substance or mixture and uses not advised.
Identified uses: protection against decarburization and oxidation in the heat treatment of steel.
Uses advised against: other than those listed above
1.3. Details of the supplier of the safety data sheet.
Melontools
Mickiewicza Street 25/31 m 80
42-217 Częstochowa
POLAND
Phone numer: 73 000 80 15
The person responsible for the MSDS: Melontools - kontakt@melontools.com
1.4. Emergency telephone number.
Melontools in business hours phone: 73 000 80 15; 998 or 112; nearest local branch of the Fire Brigade. toxicological information in Poland: 042/ 631 47 24 (7.00-15.00)

Section 2. Hazards Identification.

2.1 Classification of the substance or mixture
According to Regulation 1272/2008:
Eye Irrit. 1; H318
Skin Irrit. 2; H315
According to Directive 67/548 / EWG:
Xi, R36 / 38
Irritant, risk of serious damage to eyes, irritating to the skin.
2.2. Label elements
Hazard pictograms:

Warning Password: DANGER
Hazard statements:
H318 - Causes serious eye damage
H315 - Causes skin irritation
Phrases determining the conditions of safe use:
P303 + P361 + P353 - In case of contact with skin (or hair): Immediately remove / Take off all contaminated clothing. Rinse skin
current water / shower.
P262 - Do not get/ put in eyes, on skin or on clothing.
P280 - Wear protective gloves / protective clothing / eye protection / face protection.
P305 + P351 + P338 - In case of eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and if it's easy to do. Rinse continuously.
2.3. Other hazards.
The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH.
The product is classified as hazardous/ dangerous under applicable regulations.

Section 3. Composition / information on ingredients.

The composition according to the Ordinance 1272/2008.

The name and concentration	Concentration	CAS no	WE no	Classification 67/548/EEC	Classification CLP
Sodium silicate Na2SiO3 Krzemian sodu	30-43%	1344-09-8	215-687-4	Xi; R41,38	Skin Irrit. 2, H315 Eye Dam. 1, H318

The product based on the water solution of sodium silicate and mineral additives not classified as hazardous/ dangerous. The full meaning of the R and H phrases is given in S. 16 of the SDS.

Section 4. First aid measures.

4.1. Description of first aid.
Inhalation: In case of inhalation of aerosol in the case of discomfort, move out to fresh air.
Skin contact: In case of contact with skin, take off immediately all contaminated clothing. Rinse skin with water / shower.
Eye contact: In case of contact with eyes, carefully rinse with water for at least 10 minutes. Remove contact lenses, if present, and if can be easily removed. Provide the assistance of ophthalmologist (eye doctor).
Ingestion: If swallowed, rinse mouth, do not induce vomiting.
4.2. Both acute/ sharp and delayed symptoms and effects of exposure.
Liquid substance, an alkaline nature. Skin contact causes serious irritation. Accidental introduction
substances into the eye may cause serious, often permanent damage to the eye. Ingestion of the substance causes damage to the mucosa.
4.3. Indication of any immediate medical attention and special treatment needed.
In the case of the substance penetration into the eye and the irritation or redness of the eyes after washing with water does not dissapear - immediately provide the assistance of an ophthalmologist/ eye doctor. In the case of prolonged and repeated skin irritation, contact your doctor. In the case of penetration of substances into the respiratory system, the victim immediately should be exposed into fresh air, and if irritation does not cease, contact the doctor. In case of accidental ingestion, give to the victim a large amount of water to drink. Call a doctor \emergency. Each time, when you use a medical aid, this SDS should be submitted.

Section 5. Fire-fighting measures.

5.1. Extinguishing media.
In case of fire use the media suitable for materials hard by. No data about methods/ mesures not recommended for firefighters.
5.2. Special hazards arising from the substance or mixture.
Non-combustible and do not support fire / do not fan the flame.
5.3. Advice for firefighters. Water soluble, alkali. Do not allow to enter waters: surface water or groundwater. Avoid direct contact with bare skin and eyes. Use general means of individual personal protection.

Section 6. Accidental release to environement measures.

6.1. Personal precautions, protective equipment and emergency procedures. Prevent spraying and
inhalation aerosol substances from the air. Avoid contact with skin and eyes, and avoid the polllution with the substance; provide ventilation indoors. Wear protective clothing and rubber gloves to protect against
pollution; Wear a dust mask or respirator dust filter A / P2; use face protection - safety goggles.
Remove contaminated clothing and wash before reuse. Eliminate the source of the release of the product. In case of accidental bottling - fence off the contaminated place. The spilled product overwhelm with an inert and liquid-absorbent material (Eg. Sand, diatomaceous earth, universal binders, vermiculite, sawdust, etc.) and pick up mechanically. Protect from getting into the water and sewage system, waterways and soil.
6.2. Precautions for environmental protection.
Do not allow the entry of product into sewers, surface water and groundwater, reservoirs and waterways. In case of contamination of the environment with a big amount of substance, the relevant authorities and chemical rescue should be informed.
6.3. Methods and materials to prevent containment and cleaning up contaminated place.
The contaminated place should be fenced off, spills cover with sand or absorbent material, collect the remains mechanically, for recycling. Do not rinse with water. Do not neutralize.
6.4. References to other sections.
Dispose in accordance with the recommendations set out in Section 13.

Section 7. Handling and storage the substances and mixtures.

7.1. Precautions for safe handling.
Prevent pulverizing/ spraying substance. Empty containers to the end. Avoid contact with skin and eyes, use personal protective measures: gloves, eye protection, protective clothing. Do not eat, drink, or smoke tobacco while working with substance, with the exception of breaks and sites designed for this; should wash hands before breaks and at the end of work. Do not pour wastes / residues into waste water or sewage system. Follow the general rules of health and safety handling of chemical substances, the principles of good industrial practice and the recommendations of the manufacturer.
If it is necessary to manipulate the substance, use personal protective equipment according to the principles described in section 8 of this card.
7.2. Conditions for safe storage, including information about any incompatibilities.
Store in airtight original containers in a dry place. Do not store near acids. Do not store in containers made or covered with zinc, aluminum. Containers tightly closed, if the substance is in it.
7.3. Specific end uses. The substance is used in the mixtures / formulations intended for consumers. Description of the safe use of substances are included in the risk scenario „Application in products for consumers”.

Section 8. Exposure (risk) controls / personal protection.

8.1. Control parameters.

DNEL values:

Workers (employed in the processes of manufacturing and processing, in which the concentration of the substance in the product and the mixture exceeds 25%)

- Long-term exposure - systemic effects - skin: 1.59 mg / kg mc / d
- Long-term exposure - systemic effects - inhalation of 5.61 mg / m3
- Long-term exposure - local effects - skin: not applicable
- Long-term exposure - local effects - inhalation: not applicable

Determined levels OEL (critical concentration in the workplace): 3 mg / m3 for the oral absorption and 10 mg / m3 for absorption through inhalation. Exceeding the designated dose of 5% resulted in chronic bronchitis. Although designated levels of DNEL for workers when operating a systematic and long-term are higher than the results from the examined / concentrations determined in the working environment, due to the alkalinity of the substance the harmful to the local effect on the skin, eyes and respiratory system must be taken into account.

Consumers:

- Long-term exposure - systemic effects - skin: 0.8 mg / kg mc/ d
- Long-term exposure - systemic effects - inhalation: 1.38 mg / m3
- Long-term exposure - systemic effects - oral: 0.8 mg / kg mc / d
- Long-term exposure - local effects - skin: not applicable
- Long-term exposure - local effects - inhalation: not applicable

For consumers, direct and indirect contact with the skin, the action of inhalation and ingestion, as well as incidental cases of eye exposure or ingestion have been identified and assessed. The biggest threat creates repeated action for the skin, short-term exposure may be caused by absorption by inhalation.

The threat caused by swallowing plays a marginal role.

PNEC:

For the aquatic environment - fresh water: 7,5 mg / l

For the aquatic environment - sea water: 1.0 mg / l

For the intermittent release of water: 7.5 mg / l

For sewage sludge - 348 mg / l

For the remaining components of the environment PNEC values have not been determined because of the very small, impossible to estimate, environmental risks.

NDS, NDSCh - not determined

(According to the Regulation of MPiPS dated. November 29, 2002, Journal of Laws No. 217, item. 1833, as amended)

Recommendations to the procedure of monitoring hazardous substances in air - method of measurements:

-Ordinance of the Minister of Health of 20 April 2005. On tests and measurements of agents harmful to health in the work environment (Journal of Laws No. 73, pos. 645)

-PN-89 / Z-01001/06. Air purity protection. The names, definitions and units. Terminology concerning air quality tests at workplaces.

-PN Z-04008-7: 2002. Air purity protection. Sampling. Principles of air sampling in the workplace and interpretation of results.

-PN-EN-689: 2002 Workplace atmospheres - guidelines for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.

Note: When the concentration of the substance is determined and known, personal protection should be made taking into account the concentration of the substance occurring at the workplace, exposure time and operations performed by worker's. In an emergency, if the concentration of substances in the workplace is not known, use individual protection with the highest recommended protection class.

The employer shall ensure that applied personal protective equipment and clothing and footwear have protective properties, and shall assure their proper cleaning, maintenance, repair and decontamination.

Recommended preliminary and periodic workers' medical examination should be carried out in accordance with the Regulation of the Minister of Health and Social Welfare of 30 May 1996. On medical examinations of employees, the scope of preventive health care for employees and medical certificates issued for purposes provided for cases in the Labour Code (Journal of Laws No. 69/1996. Pos. 332, as amended Dz.U. No. 37/2001. Pos. 451).

8.2. Exposure/ risk controls.

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

Respiratory protection:

If the substance is manufactured or processed outside rooms or tightly closed systems, there should be used: mask or respirator with dust filter

Eye protection: Safety goggles or safety glasses

Hand protection: Rubber gloves (natural rubber or with the addition of polychloroprene

Technical protective measures: ventilation of rooms / local exhaust ventilation

Other protective equipment: protective clothing

The general recommendations:

Do not eat, drink, or smoke tobacco while working with the substance, with the exception of breaks in work and places designed for this; one should wash hands before breaks and after work.

Control of environmental exposure: Due to the high alkalinity of it is advisable to neutralize the substance before discharge to water or sewage.

Section 9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties.
Appearance: black liquid / of a viscous consistence
Smell: characteristic odor
pH: 11-13
Melting / freezing point [° C]: No data available
Initial boiling point and boiling range [° C]: No data available
Flash point [° C]: not applicable
Evaporation rate: no data available
Flammability (solid, gas): not applicable
The upper explosive limit [% V / V]: not applicable
The lower explosive limit [% V / V]: not applicable
Vapour pressure [hPa], in temp. 1175 ° C0,103
Vapour density relative to air: no data available
Density [kg / m3] at. 20 ° C 1450-1480
Solubility in water: completely miscible
Solubility in other solvents: no data available
Partition coefficient n-octanol / water: not applicable
Auto-ignition (backfire) temperature [° C]: not applicable
Decomposition temperature [° C]: No data available
Viscosity [mPa s] at. 20 ° C> 100
Explosive properties: The test is not necessary, anorganic substance
Oxidizing properties: The substance has no oxidizing properties
Refractive index: no data available
Molecular Weight: not applicable
State of matter (physical state) : liquid
9.2. Other informations.
The minimum ignition Energy: [mJ]
Electrical Conductivity [pS / m]

Section 10. Stability and reactivity.

10.1. Reactivity. The alkaline substance. It reacts with acids with the emission of heat. Is mixed with water in all proportions.
10.2. Chemical stability. Stable under normal conditions of use and in the foreseeable storage and warehousing conditions.
10.3. Possibility of hazardous/ dangerous reactions
Avoid contact with water and strong acid and hydrofluoric acid ($HF_{aq)}$. Reaction with the acids and the water are accompanied by the secretion of a certain amount of heat. The reaction with hydrofluoric acid is accompanied by the release of hazardous gases.
10.4. Conditions to avoid. Avoid contact with acids.
10.5. Incompatible materials. The alkaline substance, and easily dissolving in water.
10.6. Hazardous products of decomposition. Under normal conditions, the substance does not decompose.

Section 11. Toxicological information.

Acute toxicity:
Ingestion: LD50 (rat) = 3400mg / kg
Inhalation LC50 (rat) = 2.06 g / m3
Dermal; LD50 (rat) = 5000 mg / kg
Skin corrosion / irritation: irritating to the skin;
Serious eye damage / irritation: Causes serious eye damage;
Sensitisation - respiratory or skin: it is not an allergenic substance;
Mutagenic effect on reproductive cells: no mutagenic effect on reproductive cells;
Carcinogenicity: there are no data which would allow to judge about the carcinogenic effect of soluble sodium silicates.
Reproductive toxicity: NOAEL rat> 159mg / mc / d (data point) assessment of the impact on sexual function and fertility and NOAEL (mouse)> 200 mg / kg mc / d (data point) assessment of adverse effects on the offspring. Cited data allow to assess the substance (sodium silicate) as a harmless for reproduction and for offspring. Organ toxicity - target - single exposure: Based on literature data describing animal studies, there was no statement about organ toxicity of substances in solution. No basis for classification of substances.
Toxic effects on target organs - repeated exposure; sodium silicate was considered a toxic dose repeated from 28 to 180 days of oral exposure in rats and dogs. There were no negative effects by giving the rats (male and females) the substance in water intended for drinking for a period of 180 days. Appointed NOAEL for rats is> 159 mg / kg mc / d. For dogs, negative effects were observed at doses of 2400 mg / kg mc / d.
Aspiration hazard: no data available

Section 12. Ecological information.

12.1. Toxicity.
Acute toxicity to fish:
LC50 (96 h): 1108 mg / L (Brachydanio rerio)
LC50 (96 h): 260 - 310 mg / L (Onchorhynchus mykiss)
NOEC (96 h, mortality): 348 mg / L (Brachydanio rerio)
Long-term toxicity to fish:
NOEC is not possible to determine
Acute toxicity to invertebrates:
EC50 (48 h): 1700 mg / L (Daphnia magna)
Long-term toxicity to invertebrates:
EC50 (72 h, biomass) 207 mg / L (Scenedesmus subspicatus)
EC50 (72 h, the growth rate):> 345.4 mg / L (Scenedesmus subspicatus)
a threat to the aquatic environment is not sufficient to classify the substance.
Because of the physico-chemical properties - very low vapor pressure - release to the atmosphere during use of the substance is not possible.
12.2. Persistence and degradability.
Biodegradability: not applicable to inorganic products.
Due to the good solubility in water can penetrate into the surface water on the site of the release and can be detected at points that are far from the place. However, soluble silica derived from the soluble silicates is indistinguishable from natural silicates with geochemical digestibility of minerals whose concentration in the water is in the range 10-20 mg. SiO2 / L. For this reason, silicates released into the water to an extent not exceeding designated PNEC level for water does not pose a threat to the environment.
12.3. Bioaccumulative. The substance exhibits a low potential for bioaccumulation, which has been confirmed by toxicokinetic tests on vertebrate animals.
12.4. Mobility in the soil. Soluble sodium silicates are hydrolyzed in water
12.5. The results of the assessment of PBT and vPvB. The substance does not exhibit the characteristics of a PBT or vPvB.
12.6. Other possible effects. The alkaline substance, well soluble in water. Unintended release of a significant quantities of substances into the aquatic environment may lead to the local pH changes harmful to organisms.

Section 13. Waste management.

13.1. Waste treatment methods.
Observe the provisions of the Act of 14 December 2012. on waste (Dz. U. 2013 pos. 21), as amended comply with Act of 13 June 2013. On packaging and packaging waste (Dz. U. 2013 item. 888) Ordinance of the Minister of Environment of 27 September 2001 on the catalog of waste (Dz. U. 2001 No 112, item. 1206)
Waste code: 16 03 03 * inorganic wastes containing dangerous substances
Do not pour wastes / residues into waste water or sewage system.
If the recovery and recycling to use is not possible, waste materials should be collected in suitable container, transfer to a specialized disposal companies.

Section 14. Transport information.

14.1. Transport by road / rail (ADR / RID).
UN number: - Proper shipping name: - Transport hazard class: not subject to; Packing group: without limits
Hazard identification number: -; label: not applicable; Mark: Not applicable
Code for tunnel transport restriction: not applicable
Other informations
14.2. Transport by sea (IMDG).
UN number: no data available; Proper Shipping Name: no data available
Transport hazard class: no data available; Packing group: no data available
Transport in bulk/ bulk transport according to Annex II of MARPOL 73/78 and the IBC Code: No data available
14.3. Transport by air (ICAO).
UN number: no data available; Proper Shipping Name: no data available
Transport hazard class: no data available; Packaging group: no data available
14.4. Transport by Inland Waterways (ADN).
UN number: no data available; Proper Shipping Name: no data available
Transport hazard class: no data available; Packing group: no data available
14.5. Threats to the environment.
It is not hazardous to the environment according to the criteria of the UNO Model Regulations
14.6. Special precautions for user
The alkaline substance. In the case of accidental release (spilling) collect mechanically using personal protective equipment as described in Section 8 of this card.

Section 15. Regulatory/ legal information.

15.1. Legislation on safety, health and environment protection specific for the substance or mixture.
The Act of 25 February 2011. On chemical substances and their mixtures (Journal of Laws No. 63 of 2011. Poz.322)
Regulation of the Minister of Environment of 27 September 2001. On the catalog of waste (Journal of Laws No. 112, item. 1206).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 on REACH.
Regulation of the European Parliament and Council Regulation (EC) No. 1272/2008 of 16 December 2008. on classification, labeling and packaging of substances and mixtures, amending and repealing Directive 67/548 / EEC and 1999/45 / EC, and amending Regulation (EC) No 1907/2006 (Official Journal of the European Union L335 / 1 dated. 31.12.2008)
15.2. Chemical Safety Assessment.
The manufacturer made a Chemical Safety Assessment.

Section 16. Other information.

The above information is based on our current state of art and product as it is used. Data for this product is shown to include security requirements, and not to guarantee its special properties. If the conditions of use of the product are not under the control of the manufacturer, the responsibility for a safe use of the product falls on the user. The employer is obliged to inform all employees who have contact with product of hazards and measures of personal protection listed in this MSDS.
This safety data sheet has been prepared on the basis of the safety data sheet supplied by the manufacturer and / or internet databases and valid regulations on hazardous substances and chemical preparations.

List of R-phrases:
R 36/38 - Irritating to eyes and skin.
R 41 - Risk of serious damage to eyes
List of H-phrases and EUH:
H315 - Causes skin irritation
H318 - Causes serious eye damage
Changes comparing to the previous version:
List of shortcuts
Expl. - Explosive
Flam. Gas - Gas flammable
Flam. Aerosol - An aerosol flammable
Ox. Gas - Gas oxidising
Press. Gas - pressurized gas
Flam. Liq. - Flammable liquid substance
Flam. Salt. - Solid flammable
Self-react. - Self-reactive substance or mixture
Pyr.liq. - Pyrophoric liquid
Pyr.sol. - Pyrophoric solid
Self-heat - substance or mixture self-heating
Water-react. - Substance or mixture which in contact with water releases flammable gas
Ox. Liq. - Oxidising liquid
Ox. Salt. - Oxidising solid
Org. Perox. - Organic peroxide
Met. Corr. - Substance or mixture corrosive to metals
Acute Tox. – Acute toxicity
Skin Corr. - Skin corrosion
Skin Irrit. - Skin irritation
Eye Dam. - Serious eye damage
Eye Irrit. - Eye irritation
Resp. Meaning. - Sensitisation Respiratory
Skin Sens. - Skin sensitization
Muta. – Mutagenicity on reproductive cells
Carc. - Carcinogenicity
Repr. - Reproductive toxicity
STOT SE - Toxic effect on target organs - single exposure
STOT RE - Toxic effect on target organs - repeated exposure
Asp. Tox. - Aspiration hazard
Aquatic Acute - Hazardous to the aquatic environment, acute hazard
Aquatic Chronic - Hazardous to the aquatic environment, cat. Chronic
Ozone - Hazardous to the ozone layer
Lact. - Reproductive toxicity, category an additional, effects on lactation or impact
NDS - Maximum concentration
NDSCh - Maximum momentary concentration
NDSP - acceptable ceiling/ highest concentration
vPvB - (substance) very persistent and very high capacity to bioaccumul
PBT - (substance) Persistent, bioaccumulative and toxic
PNEC - PNEC Predicted concentration not causing effects

DN (M) EL - Level-effect
LD50 - The dose at which it is observed the death of 50% of the test organisms
LC50 - The concentration at which it is observed the death of 50% of the test organisms
ECX - concentration at which the observed X% reduction in growth or growth rate
LOEC - The lowest concentration causing observable effect
NOEL - The highest concentration of the substance at which no observed effect
RID - Regulations concerning the International Carriage of Dangerous Goods
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG - International Maritime Dangerous Goods Code
ICAO / IATA - the International Civil Aviation Organization / International Air Transport Association
ADN - European Agreement concerning the international carriage of dangerous goods by inland water roads
UVCB - substances of unknown or variable composition, complex reaction products or biological materials
Issue date: 2014-11-20; Update: 2014-11-20;

Translator note:
An integral part of this card is its Polish language version. The translation into English was not submitted to an appropriate certification. At any inconsistency, the version of the appeal is the Polish version of this card.
Integralną częścią tej karty jest jej wersja w języku polskim. Tłumaczenie na język angielski nie było poddane odpowiedniej certyfikacji. Przy jakiejkolwiek niezgodności wersją odwoławczą pozostaje wersja polska niniejszej karty.