MATERIAL SAFETY DATA SHEET - LODOŁAMACZ	
Previous version: 02.01.2010 r.	Date of actualisation: 21.09.2015 r.
Material Safety Data Sheet according to Commission Regulation (EU) 2015/830 from 28 May 2015	

SECTION 1. IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1. Product identifier:
Lodołamacz®
(Icebreaker)
Product code:
CAS number:
EC number:
Registration number: not applied (mixture)
1.2. Relevant identified uses of the substance or mixture and use not recommended:
Identified uses:
Product based on calcium chloride - to remove snow and black ice.
Applications not recommended:
All other uses than above mentioned. Not for use in construction, agriculture, horticulture or household.
1.3. Details of the supplier of the safety data sheet
Manufacturer/Supplier:
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1.4 Emergency telephone number: +48 661 430 395

Data of actualisation: 21.09.2015

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the mixture according to the Regulation (EC) No 1272/2008.
Classification of the mixture according to the Regulation (EC) No 1272/2008.
Hazards due to the physical-chemical properties:
Not classified.
Health hazards:
Eye Irrit. 2; H319
Warning
Environmental hazards:
Not classified.
2.2. Label elements according to the Regulation (EC) No 1272/2008.

Eye Irrit. 2

Signal Word: Warning
Hazards-statements:
H319 - Causes serious eye irritation.
Precautionary statements:
P260 - Do not breathe dust.
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
2.3. Results of PBT and VPvB assessments:
Not applicable

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances
Not applied.
3.2. Mixtures
A mixture of inorganic salts based on calcium chloride.
Calcium chloride, dihydrate $CaCl_2 \times H_2O$)
Content (w/w): 94-99%
Index number: -
CAS number: 10035-04-8
EC number: 233-140-8
Registration number: -
Classification according to regulation (EC) No 1272/2008 (CLP): Producer′classification

Eye Irrit. 2; H319
Warning

Ammonium hydrogen phosphate, dibasic [$(NH_4)_2$ HPO_4)]
Content (w/w): 1-5%
Index number: -
CAS: 7783-28-0
EC number: 231-987-8
Registration number: -
Classification according to regulation (EC) No 1272/2008 (CLP): Producer′classification

Eye Irrit. 2: H319
STOT SE 3; H335
Skin Irrit. 2; H315
Warning

Sodium hypophosphite monohydrate
Content (w/w): 0,1-1%
Index number: -
CAS number: 10039-56-2
EC number: 231-669-9
Registration number: -
Classification according to regulation (EC) No 1272/2008 (CLP): Producer′classification

Eye Irrit. 2: H319
STOT SE 3; H335
Skin Irrit. 2; H315
Warning

The wording of the hazards statements, hazard class and category codes is specified in chapter 16 if dangerous ingredients are mentioned.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures
If Inhaled:

SECTION 4. FIRST AID MEASURES

Move the patient to the open air, keep warm and at rest. In case of difficulty in breathing, apply artificial respiration. In the event of respiratory distress trained person may give oxygen. Consult a physician

On skin contact:

Remove contaminated clothing and shoes. Wash skin with plenty of water and soap. Wash contaminated clothing before reuse.

On contact with eyes:

Rinse immediately with plenty of water with the eyelid wide open for at least 15 minutes. Remove contact lenses if present. Consult a doctor if any symptoms persist, e.g. symptoms of eye irritation.

On ingestion:

Rinse mouth with water. If unconscious do not give any kind of orally. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Routes of absorption into the body:

Inhalation, skin contact, eye contact, ingestion.

Effects of acute exposure:

Causes serious eye irritation. See also section 11.

Effects of chronic exposure:

There are no results of experimental studies of the product. See section 11.

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

Advice to the doctor:

Symptomatic treatment.

SECTION 5. FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: The product is not flammable. Water spray, carbon dioxide (CO_2), and dry powder, foam.

Unsuitable extinguishing media: Water jets.

5.2. Specific hazards associated with the substance or mixture

In case of fire can produce carbon toxic fumes. Do not breathe vapours and gases produce in the fire. See also section 10.

5.3. Information for fire brigade

Depending on the size of the fire, wear protective clothing and gas-tight breathing apparatus with independent air supply, protective boots, helmets, coveralls, etc. Contaminated extinguishing agents used to collect and dispose of according to local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

For those not belonging to the staff assisting: Forbid unauthorized access to the site contamination. Avoid contact with eyes, skin and clothing.

For those providing assistance: Avoid contact with skin and eyes.

Inform about failure. Remove from the danger area all persons not taking part in liquidation of consequences of the incident. Wear appropriate personal protective equipment - masks, eye protection (goggles), rubber boots, and thick rubber gloves - see also Section 8.

6.2. Environmental precautions:

Do not allow penetrating the product into surface water, groundwater and soil. Do not allow the product into drains. Secure the grille and gullies. Inform the relevant authorities if the release of large amounts of product into the environment.

6.3. Methods and materials for containment and cleaning up:

Collect mechanically to an appropriately labelled, sealed container and keep until disposal. Avoid raising dust. After gathering the material, ventilate and wash with water contaminated sites. Contaminated product residues disposed of in accordance with the recommendations set out in section 13.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.4. References to other sections:
Protective equipment and clothing - see section 8
Disposal of waste - see section 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling:
Do not breathe dust. Avoid contact with eyes, skin and clothing. Wear protective clothing, gloves and cover the respiratory tract. Avoid prolonged or repeated exposure
Please observe the regulations in force when working with chemicals. Observe the guidelines for when working with chemical agents. Do not eat, drink, smoke or store food in the working areas. Immediately remove contaminated clothing and wash before reuse.
Recommendations against fire and explosion:
There are no special recommendations. The product is not flammable.
7.2. Conditions for safe storage, including any incompatibilities:
Store in clean and dry indoor spaces in sealed packaging. Protect from moisture to prevent caking of the product - hygroscopic mixture. Do not store with food, drinks and feed.
7.3. Specific use (s) final:
No data available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
The product does not contain substances with specific occupational exposure limit values (TLV) in the air of the working environment in Poland.
Biological exposure index:
Not determined
DNELs substances - components of the product under conditions of acute and chronic exposure:
DNEL – Derived No-Effect Level
Calcium chloride (CAS: 10035-04-8).
Data for workers

Route of exposure	Duration of exposure	Effects of exposure	Value of DNEL
Inhalative	Short-term (acute)	Systemic	10 mg/m^3
Inhalative	Long-term	Systemic	5 mg/m^3

Data for consuments

Route of exposure	Duration of exposure	Effects of exposure	Value of DNEL
Inhalative	Short-term (acute)	Systemic	5 mg/m^3
Inhalative	Long-term	Systemic	2,5 mg/m^3

Ammonium hydrogen phosphate, dibasic (CAS: 7783-28-0).

Route of exposure	Duration of exposure	Effects of exposure	Value of DNEL
Inhalative	Long-term	Systemic	6,1 mg/m^3
Dermal	Long-term	Systemic	34,7 mg/kg body weight per day

Data for consuments

Route of exposure	Duration of exposure	Effects of exposure	Value of DNEL
Oral	Long-term	Systemic	2,1 mg/kg body weight per day
Inhalative	Long-term	Systemic	1,8 mg/m^3
Dermal	Long-term	Systemic	20,8 mg/kg body weight per day

PNEC substances - components of the aquatic environment and biological sewage treatment plants.
PNEC – Predicted No-Effect Concentration
Sodium hypophosphite monohydrate

Environmental compartment	PNEC value

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Fresh water	1,7mg/L
Marine water	0,17 mg/L
Intermittent (fresh water)	17 mg/L
Sewage treatment plant	10 mg/L

8.2. Exposure control

Applied Engineering controls:
Provide adequate ventilation.

Respiratory protection:

With proper ventilation is not required. Excessive dust wear a dust mask or face shield with dust filter. Specialist advice when choosing the appropriate respiratory protection.

Eye protection:

Tightly fitting safety goggles.

Hand protection:

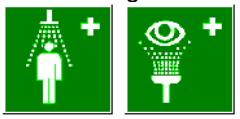
Gloves, such as natural rubber, meeting the requirements of EN 374.
The protective properties of the glove depend not only on the type of material from which they are made.
Protective action time could be different for different glove manufacturers.
In the case of many substances cannot be precisely estimated time of the protective gloves.
Taking into account the parameters specified by the manufacturer of the protective gloves should pay attention to while taking the gloves still retain their protective properties.

Skin protection:

It is a good industrial hygiene practice to minimize skin contact.
Wear suitable protective clothing, protective boots.
Thermal hazards:
Not applicable.

General recommendations:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Avoid skin and eyes contamination. Remove and wash contaminated clothing. When using does not eat, drink or smoke. Keep away from food, feed and drinks.



We recommend the installation of emergency showers and eyewash in the vicinity of the work.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

When ventilation is not sufficient to maintain the concentration of the substance below the limit values, apply appropriate respiratory protection. Selection of personal protective equipment should be made taking into account the concentration of the substance occurring at the workplace, time of exposure, the activities performed by the employee and the recommendations given by the manufacturer of personal protective equipment.
In the hazardous area must be worn, gloves and shoes antistatic.
Observe the general safety rules and regulations in the handling of chemicals.
Avoid contact with eyes and skin.
It is forbidden to smoking, drinking, eating while working. Observe the typical standards of hygiene at work.

8. 3. Environmental control:

Avoid pollution. Do not allow product from entering soil, sewers, waterways

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Parameter	**Calcium chloride**	**Ammonium hydrogen phosphate, dibasic**	**Sodium hypophosphite monohydrate**
Chemical formula	$CaCl_2 \times 2\ H_2O$	$(NH_4)_2\ HPO_4$	$NaH_2PO_2 \times H_2O$
Molecular weight	147,02	132,06	106,00
Physical state	Solid	Solid	Solid
Specific density	1,85 g/cm^3	1,62 g/cm^3	-
Appearance	Flakes or crystals	Small crystals	Small crystals
Colour	White	White	White
Water solubility	App. 1 000 g/l	690 g/l	1 000 g/l
pH	8-9 (5% solution)	7,5-8,5 (5% solution	5,5-7,0 (10% solution)
Melting temperature	App. 176°C	155°C (decomposition)	90°C (decomposition)
Boiling temperature	1670°C	-	-
Flesh point	Non-inflammable	Non-inflammable	Non-inflammable
Flammability	Not applicable	Not applicable	Not applicable
Auto-ignition temperature	Not applicable	Not applicable	Not applicable
Oxidising properties	Not applicable	Not applicable	Not applicable
Explosive properties	Not applicable	Not applicable	Not applicable
Explosive limits	Not applicable	Not applicable	Not applicable
Partitioning coefficient n-octanol/water	-	-	-
Viscosity	Not applicable	Not applicable	Not applicable
Bulk density	600-900 kg/m^3	800-1 000 kg/m^3	800-1 000 kg/m^3
Solvents content	Not applicable	Not applicable	Not applicable
Water content	App. 25%	-	App. 17%
Surface tension	Not applicable	Not applicable	Not applicable
Conductivity	Not applicable	Not applicable	Not applicable

9.2 Other information

Strongly hygroscopic

SECTION 10. STABILITY AND REACTIVITY

10.1 Conditions, to avoid:

Avoid humidity. Avoid high temperatures.

10.2 Incompatible materials:

Strong acids, strong bases, strong oxidisers, boron oxides, zinc, magnesium, bromine trifluoride, methyl vinyl ether.

10.3 Hazardous decomposition products:

Hydrogen chloride (HCl), calcium oxide, nitrogen oxides, phosphorus oxides, ammonia, phosphine.

SECTION 10. STABILITY AND REACTIVITY

10.4. Hazardous polymerisation:
Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Substance
Not applicable
Mixtures
Significant hazard class
There is no experimental data for the product. The mixture was classified by calculation method, taking into account qualitative and quantitative composition and toxicological properties of the components.
a) Acute toxicity
There are no results of experimental studies of the product. By calculation method, the product is not classified as hazardous under conditions of acute exposure.
Data for calcium chloride (CAS: 10035-04-8)
LD_{50} (rat/oral): 1 000 mg/kg b.w.
Data for Sodium hypophosphite monohydrate (CAS: 10039-56-2)
LD_{50} (rat/oral): 7 640 mg/kg b.w.
b) Skin corrosion / irritation
May cause skin irritation. The product is not classified as hazardous in this class.
c) Serious eye damage / eye irritation
Irritating to the eyes. The product is classified as hazardous in this class.
d) Sensitisation by inhalation or skin
There is no data available. The product is not classified as hazardous in this class
e) Germ cell mutagenicity
There is no data available. The product is not classified as hazardous in this class
f) Carcinogenic action
There is no data available. The product is not classified as hazardous in this class
g) Reproductive toxicity
There is no data available. The product is not classified as hazardous in this class
h) Specific target organ toxicity
Single exposure
May cause respiratory irritation. The product is not classified as hazardous in this class.
Repeated exposure
There is no data available. The product is not classified as hazardous in this class
i) Risk of aspiration:
There is no data available. The product is not classified as hazardous in this class.
Delayed and immediate and chronic effects of short-and long-term exposure
See above.
Routes of absorption into the body:
Respiratory tract, contact with eyes or skin, ingestion.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity
Acute toxicity to the aquatic environment:
There is no experimental data for the product.
The product is not classified as hazardous to the aquatic environment. Do not allow the discharge of larger quantity to the surface water, ground water or sewage system.
Data for calcium chloride (CAS: 10035-04-8)
The LC_{50} value for fish, under 96-hour exposure: 100 mg/L. mg/L.
Chronic toxicity to the aquatic environment
There is no data available.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to microorganisms
There is no data available.
Toxicity to terrestrial organisms
There is no data available.
Toxicity to the atmospheric environment
There is no data available.
12.2. Persistence and degradability
There is no data available for the product.
Data for calcium chloride:
Inorganic product. Not biodegraded.
12.3. Bioaccumulation:
There is no data available for the product.
Data for calcium chloride:
Inorganic product. Not bioaccumated.
12.4 Mobility in soil
The product is dissolved in water.
12.5 Results of PBT and vPvB assessment
Not applied.
12.6. Other adverse effects
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SECTION 13. DISPOSAL CONSIDERATIONS

Do not allow product to reach surface water, ground water or sewage system. Handling of wastes – Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste
Classification of wastes according to European Directive 2000/532/EC, Council Decision 2001/118/EEC:
Not determined
The final waste code is determined by way of use of the product.
Waste treatment methods
Collect the spilled product into containers and allocate for recycling. Avoid dusty soil. In the case of disposal of this material, contact a licensed professional. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Comply with state and local environmental regulations. Scattered small quantities dissolved carefully in excess of water, neutralize and separate the insoluble precipitates, then flushed to drains with large amounts of water.
Dispose agree with the proper field and the Environmental Protection Department.

SECTION 14. TRANSPORT INFORMATION

General:
Land transport - ADR/RID; Sea transport – IMDG; Air transport – IATA/ICAO
For the purposes of these regulations, the product is not classified as dangerous
14.1 UN Number: Not applied.
14.2 UN proper shipping name: Not applied.
14.3 Transport hazard class(es): Not applied.
14.4 Packing group: Not determined.
14.5 Environmental hazards:
Marine pollutant: No
14.6 Special precautions for user: Not applied.
14.7 Transport in bulk according to Annex II MARPOL73/78 and code IBC: Not applied.
UN „Model regulation”: Not applied.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
The Act of 25 February 2011. Chemical substances and mixtures thereof. (Official Journal, No. 63, item. 322, as amended Official Journal, No 0, item 908).
Statement of the Minister of Health of 12 January 2015 on announcing uniform text of the Regulation of the Minister of Health on the criteria and classification of chemical substances and mixtures thereof. Acts. Laws 2015 No. 0, pos. 208.
Regulation of the Minister of Labour and Social Policy of 6 June 2014 on maximum permissible concentration and intensity of harmful factors in the work environment. Acts. U. item. 817, 2014.
The Act of wastes of 14 December 2012. Official Journal 2013, No. 0, item 21.
Regulation of the Minister of Environment of the waste. 27 September 2001. Official Journal 2021, No 112, item 1206.
The Act of 11 May 2001. Packaging and packaging waste (Official Journal 2001, No 63, item 638 with changes in Official Journal 2003, No 7, item 78; Official Journal 2004, No 11, item 97; Official Journal 2004, No 96, item 959; Official Journal 2005, No 175, item 1458).
Regulation (EC) No 1272/2008 as amended by Regulation (EC) No 487/2013
Regulation (EC) No 1272/2008 as amended by Regulation (EC) No 758/2013
Regulation (EC) No 1272/2008 as amended by Regulation (EC) No 944/2013
Regulation (EC) No 1272/2008 as amended by Regulation (EC) No 605/2014
Regulation (EC) No 1272/2008 as amended by Regulation (EC) No1297/2014
Directive 2000/39/EC and relative amendments and additions.
Directive 1999/13/EC and relative amendments and additions.
Directive 1996/82/EC and relative amendments and additions.
Directive 2000/60/EC and relative amendments and additions.
Directives 91/156/EEC, 91/689/EEC and 94/62/EC and relative amendments and additions
Directive 89/391/EEC and relative amendments and additions.
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006.
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.

15.2 Chemical safety assessment
Chemical Safety Assessment
Safety assessment of substances - the components – No data.

SECTION 16. OTHER INFORMATION

Hazard class and category code(s) of sections 2 and 3
Eye Irrit. 2 – Serious eye irritation, category 2.
Skin Irrit. 2 - Skin irritation, category 2.
STOT SE 3 - Specific target organ toxicity — single exposure, category 3.
The following phrases represent the prescribed H-statements for the ingredients designated in section 2 and 3.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 - May cause respiratory irritation.
List of Acute Poisoning Centres in Poland is located on the following website:
http://www.resmedica.pl/pl/archiwum/ooz.html
Necessary training:
It is necessary to train employees on the characteristics of the product and its proper and safe use, knowledge of health and safety and first aid.
The employer is obliged to inform all employees who have contact with any hazards and safety measures specified in the data sheet.
The employer should have documents confirming the holding of training in health and safety and fire safety.
Reasons for changes:

SECTION 16. OTHER INFORMATION

Updating of the material safety data sheet in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015.
Section 8.1 is added DNEL for calcium chloride (CAS 10035-04-8). Ammonium hydrogen phosphate, dibasic (CAS 7783-28-0) and PNECs for hydrogen, ammonium dibasic (CAS 7783-28-0).
Sources of data:
MSDS of components of the mixture developed by our suppliers.
ESIS - European Chemical Substances Information System.
Reasons for changes:
Updated according to applicable regulations.
Classification and labelling of the product are not changed
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Data of issue: 21.09.2015

End of MSDS