SAFETY DATA SHEET

INFRALIT EP/PE 8086-05 - All variants

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

1.1 Product identifier

Product name : INFRALIT EP/PE 8086-05 - All variants

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use : Paint.

1.3 Details of the supplier of the safety data sheet

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

e-mail address of person responsible for this SDS : Prod-safe@teknos.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : In an emergency, call 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aquatic Acute 1, H400
Aquatic Chronic 1, H410

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P273 - Avoid release to the environment.

Response : P391 - Collect spillage.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements :

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles :

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : May form explosible dust-air mixture if dispersed.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Zinc powder - zinc dust (stabilized)	REACH #: 01-2119467174-37 EC: 231-175-3 CAS: 7440-66-6	≥50 - ≤75	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
Lead (Pb)	EC: 231-100-4 CAS: 7439-92-1 Index: 082-013-00-1	<0.01	Repr. 1A, H360FD Lact., H362 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 **See Section 16 for the full text of the H statements declared above.**	Repr. 1A, H360D: C ≥ 0.03% M [Acute] = 10 M [Chronic] = 100	[1] [2] [3]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance with carcinogenic, mutagenic or reproductive toxicity properties

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

SECTION 4: First aid measures

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

Large spill : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1	100 tonnes	200 tonnes

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Lead (Pb)	**Regulation on Limit Values - MAC (Austria, 12/2024) [Blei und seine Verbindungen außer Bleiarsenat, Bleichromat, Bleichromatoxid und Alkylbleiverbindungen]** F, D, L. TWA 8 hours: 0.1 mg/m³ (measured as Pb). Form: Inhalable fraction. PEAK 15 minutes: 0.4 mg/m³ (measured as Pb), 4 times per shift. Form: Inhalable fraction.

Lead (Pb)	**Biological limit values (Belgium, 12/2023) [Lood en ionenverbindingen van lood]** OEL surveillance 8 hours: 0.075 mg/m³ (lead). **Limit values (Belgium, 12/2023) [Anorganisch lood en verbindingen daarvan]** TWA 8 hours: 0.15 mg/m³ (as Pb).
Lead (Pb)	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 10/2003 (BEI). (Bulgaria, 4/2024) [lead and its ionic compounds]** OEL surveillance 8 hours: 0.05 mg/m³ (lead). **Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 10/2003 (OEL). (Bulgaria, 4/2024) [inorganic lead and its compounds]** Limit value 8 hours: 0.05 mg/m³.
Lead (Pb)	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023) [olovo i njegovi ionski spojevi]** OEL surveillance 8 hours: 0.075 mg/m³ (lead). **Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023) [olovo i njegovi anorganski spojevi]** Repr 1A. ELV 8 hours: 0.15 mg/m³.
Lead (Pb)	**Department of labour inspection (Cyprus, 7/2021) [Ανόργανος μόλυβδος και οι ενώσεις του]** TWA 8 hours: 0.15 mg/m³.
Lead (Pb)	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** Repr. TWA 8 hours: 0.05 mg/m³. STEL 15 minutes: 0.2 mg/m³.
Organic dust	**Working Environment Authority (Denmark)** TWA 8 hours: 3 mg/m³.
Lead (Pb)	**Working Environment Authority (Denmark, 12/2024)** TWA 8 hours: 0.05 mg/m³ (calculated as Pb). Form: powder, dust, fume. STEL 15 minutes: 0.1 mg/m³ (calculated as Pb). Form: powder, dust, fume.
Organic dust	**Occupational exposure limits, Regulation No. 293 (Estonia)** TWA 8 hours: 5 mg/m³.
Lead (Pb)	**Biological exposure limits, Regulation number 193 (Estonia, 4/2024) [Plii ja selle ioonsete ühendite]** OEL surveillance 8 hours: 75 µg/m³ (lead). **Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024) [plii ja anorgaanilised ühendid]** Repr. TWA 8 hours: 0.1 mg/m³ (calculated as Pb). Form: Total dust. TWA 8 hours: 0.05 mg/m³ (calculated as Pb). Form: Respirable dust.
Lead (Pb)	**EU Biological limit values (Europe, 3/2024) [lead and its inorganic compounds]** OEL surveillance 8 hours: 0.015 mg/m³ (lead). **EU OEL (Europe, 3/2024) [lead and its inorganic compunds]** Non-threshold reprotoxic substance.. TWA 8 hours: 0.03 mg/m³.
Organic dust	**Institute of Occupational Health, Ministry of Social Affairs (Finland)** TWA 8 hours: 5 mg/m³. STEL 15 minutes: 10 mg/m³.
Lead (Pb)	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)** CARC. Ototoxicant. TWA 8 hours: 0.1 mg/m³ (calculated as Pb).

SECTION 8: Exposure controls/personal protection

Lead (Pb)	**Ministry of Labor (France, 6/2024) [Plomb métallique et composés]** TWA 8 hours: 0.1 mg/m³ (as Pb). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)
Organic dust	**DFG MAC-values list (Germany)** TWA 8 hours: 5 mg/m³.
Zinc powder - zinc dust (stabilized)	**DFG MAC-values list (Germany, 7/2024) [Zinc and its inorganic compounds]** Develop C. PEAK 15 minutes: 0.4 mg/m³ 4 times per shift [Interval: 1 hour]. Form: respirable fraction. TWA 8 hours: 2 mg/m³. Form: inhalable fraction. TWA 8 hours: 0.1 mg/m³. Form: respirable fraction. PEAK 15 minutes: 4 mg/m³ 4 times per shift [Interval: 1 hour]. Form: inhalable fraction.
Lead (Pb)	**DFG MAC-values list (Germany, 7/2024) [Lead and its inorganic compounds except lead arsenate and lead chromate]** Carc 4, Muta 3A, Develop A. PEAK 15 minutes: 0.032 mg/m³ (as Pb), 4 times per shift [Interval: 1 hour]. Form: inhalable dust. TWA 8 hours: 0.004 mg/m³ (as Pb). Form: inhalable dust.
Lead (Pb)	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024) [μόλυβδος και ανόργανες ενώσεις του]** TWA 8 hours: 0.15 mg/m³. **Presidential Decree 338/2001: Biological limit values (Greece, 8/2024) [lead and its inorganic compounds]** OEL surveillance 8 hours: 0.075 mg/m³ (lead).
Lead (Pb)	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025) [ólom és szervetlen vegyületei]** TWA 8 hours: 0.15 mg/m³ (as Pb).
Lead (Pb)	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024) [Blý, ólífræn sambönd]** TWA 8 hours: 0.05 mg/m³ (as Pb). Form: powder, dust and fume.
Lead (Pb)	**NAOSH (Ireland, 4/2024) [inorganic lead and its compounds]** Repr 1A. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 0.15 mg/m³. **NAOSH (Ireland, 4/2024) [lead and its ionic compounds]** OEL surveillance 8 hours: 0.075 mg/m³ (lead).
Lead (Pb)	**Legislative Decree No. 81/2008. Annex XXXIX. Mandatory biological limit values (Italy, 9/2024) [piombo e suoi composti ionici]** OEL surveillance 8 hours: 0.075 mg/m³ (lead). **Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024) [piombo inorganico e i suoi composti]** Limit value 8 hours: 0.15 mg/m³.
Lead (Pb)	**EU Biological limit values (Europe, 3/2024) [lead and its inorganic compounds]** OEL surveillance 8 hours: 0.015 mg/m³ (lead). **EU OEL (Europe, 3/2024) [lead and its inorganic compunds]** Non-threshold reprotoxic substance.. TWA 8 hours: 0.03 mg/m³.
Lead (Pb)	**Minister of Social Security and Labor and Minister of Health Protection, Order No. 97/406 (Lithuania, 1/2024) [Švinas ir jo joniniai junginiai]** OEL surveillance 8 hours: 0.075 mg/m³ (lead). **Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024) [švinas ir jo neorganinai junginiai]** Repr. TWA 8 hours: 0.07 mg/m³ (as Pb). Form: Respirable fraction. TWA 8 hours: 0.15 mg/m³ (as Pb). Form: Inhalable fraction.

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Lead (Pb)	**Grand-Duchy Regulation 2016. Biological limit values. Annex II (Luxembourg, 3/2021) [Plomb et ses composés ioniques]** OEL surveillance 8 hours: 0.075 mg/m³ (lead). **Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021) [plomb métallique et ses composés]** TWA 8 hours: 0.15 mg/m³.
Lead (Pb)	**EU Biological limit values (Europe, 3/2024) [lead and its inorganic compounds]** OEL surveillance 8 hours: 0.015 mg/m³ (lead). **EU OEL (Europe, 3/2024) [lead and its inorganic compunds]** Non-threshold reprotoxic substance.. TWA 8 hours: 0.03 mg/m³.
Lead (Pb)	**Ministry of Social Affairs and Employment, Biological limit values (Netherlands, 5/2024) [lood]** OEL for frequence of measurement 8 hours: 100 µg/m³ (lead). **Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024) [lood en anorganische loodverbindingen]** Repr B3. TWA 8 hours: 0.15 mg/m³.
Organic dust	**FOR-2011-12-06-1358 (Norway)** TWA 8 hours: 5 mg/m³.
Lead (Pb)	**FOR-2011-12-06-1358 (Norway, 5/2024) [bly og uorganiske blyforbindelser]** Repr. TWA 8 hours: 0.05 mg/m³ (calculated as Pb). Form: Dust and fumes.
Organic dust	**Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland)** TWA 8 hours: 10 mg/m³.
Lead (Pb)	**Regulation of the Ministry of Health of September 16, 2016, Safety and occupational health related to the presence of chemical agents in the workplace (Poland, 7/2024) [ołów i jego związki nieorganiczne]** OEL surveillance 8 hours: 0.075 mg/m³ (lead). Form: inhalable fraction. **Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 7/2024) [Lead – inorganic compounds]** TWA 8 hours: 0.05 mg/m³ (calculated as Pb). Form: Inhalable fraction.
Lead (Pb)	**Portuguese Institute of Quality (Portugal, 11/2014) [chumbo elementar e compostos inorgânicos]** A3. TWA 8 hours: 0.05 mg/m³ (expressed as Pb). **Decree-Law 301/2000 - Occupational exposure limits for carcinogenic and mutagenic agents (Portugal, 12/2024) [Chumbo metálico e respetivos compostos]** TWA 8 hours: 0.15 mg/m³. **Decree-Law 301/2000 - Biological limit values and health surveillance measures for carcinogenic or mutagenic agents (Portugal, 12/2024) [chumbo e respetivos compostos iónicos]** OEL surveillance 8 hours: 0.075 mg/m³. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021) [chumbo metálico e respectivos compostos iónicos]** TWA 8 hours: 0.15 mg/m³.

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Lead (Pb)	**HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2024) [plumbul și compușii săi ionici]** OEL surveillance 8 hours: 0.075 mg/m³ (lead). **HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024) [Plumb şi compuşi]** VLA 8 hours: 0.05 mg/m³. Short term 15 minutes: 0.1 mg/m³. **HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024) [plumb și compușii săi anorganici]** R1A. VLA 8 hours: 0.15 mg/m³ (expressed in Pb).
Zinc powder - zinc dust (stabilized)	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [zinok a jeho anorganické zlúčeniny]** Inhalation sensitiser. TWA 8 hours: 0.1 mg/m³ (Zinc and its inorganic compounds). Form: Respirable fraction. TWA 8 hours: 2 mg/m³ (Zinc and its inorganic compounds). Form: Inhalable fraction.
Lead (Pb)	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [olovo a jeho zlúčeniny]** Repr_1A. OEL surveillance 8 hours: 0.075 mg/m³ (as lead). **Government regulation SR c. 355/2006 (Slovakia, 6/2024) [olovo a jeho organické zlúčeniny]** Inhalation sensitiser. TWA 8 hours: 0.05 mg/m³ (Lead and its organic compounds).
Lead (Pb)	**Regulation on the protection of workers from the risks related to exposure to carcinogens, mutagens or reprotoxic substances at work (Slovenia, 4/2024) [svinec, anorganski in njegove spojine]** Repr Fer 1A, Repr Dev 1A. Peak 15 minutes: 0.4 mg/m³ (calculated as Pb), 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. Form: Inhalable fraction. TWA 8 hours: 0.1 mg/m³ (calculated as Pb). Form: Inhalable fraction.
Lead (Pb)	**National institute of occupational safety and health (Spain, 1/2024)** Develop 1A. TWA 8 hours: 0.15 mg/m³.
Organic dust	**Work environment authority Regulation 2018:1 (Sweden)** TWA 8 hours: 5 mg/m³.
Lead (Pb)	**Work environment authority Regulation 2018:1 (Sweden, 11/2022) [lead, and inorg. compounds]** Repr. Ototoxicant. TWA 8 hours: 0.1 mg/m³ (as Pb). Form: inhalable fraction. TWA 8 hours: 0.05 mg/m³ (as Pb). Form: respirable fraction.
Lead (Pb)	**SUVA (Switzerland, 1/2025) [Blei und seine Verbindungen, ausser Alkylverbindungen]** Carc 2, Repr 1A. STEL 15 minutes: 0.8 mg/m³ (calculated as Pb). Form: Inhalable fraction. TWA 8 hours: 0.1 mg/m³ (calculated as Pb). Form: Inhalable fraction.
Lead (Pb)	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** Carc. TWA 8 hours: 0.15 mg/m³.

Biological exposure indices

Product/ingredient name	Exposure indices
Lead (Pb)	**VGU BEI (Austria, 9/2020) [Blei, seine Legierungen oder Verbindungen]** BEI Inadequacy - women under 50: 10 mg/l, urinary delta-aminolevulinic acid [in urine]. Sampling time: three months, for glass and accumulator works six weeks, for rust prevention work two weeks. BEI Inadequacy - men, women over 50: 20 mg/l, urinary delta-aminolevulinic acid [in urine]. Sampling time: three months, for glass and accumulator works six weeks, for rust prevention work

	two weeks. BEI Inadequacy - women under 50: 45 µg/100 ml, blood lead [in blood]. Sampling time: three months, for glass and accumulator works six weeks, for rust prevention work two weeks. BEI Inadequacy - men, women over 50: 70 µg/100 ml, blood lead [in blood]. Sampling time: three months, for glass and accumulator works six weeks, for rust prevention work two weeks. BEI Fitness - women under 50: 6 mg/l, urinary delta-aminolevulinic acid [in urine]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness - men, women over 50: 10 mg/l, urinary delta-aminolevulinic acid [in urine]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness: 30 µg/100 ml, blood lead [in blood]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness: 120 µg/100 ml RBC, erythrocyte protoporphyrin [in blood]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness - men: 35 %, hematocrit [in blood]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness - women: 30 %, hematocrit [in blood]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness - men: 12 g/dl, hemoglobin [in blood]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness - women: 10 g/dl, hemoglobin [in blood]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness - men: 3.8 million/µl, erythrocytes [in blood]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks. BEI Fitness - women: 3.2 million/µl, erythrocytes [in blood]. Sampling time: one year, For glass and accumulator works: three month, For anti-rust works (including cutting and cutting anti-rust coated parts): four weeks.
Lead (Pb)	**Biological limit values (Belgium, 12/2023) [Lood en ionenverbindingen van lood]** BEI surveillance: 40 µg /100 ml, lead [in blood]. BLV: 70 µg /100 ml, lead [in blood].
Lead (Pb)	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 10/2003 (BEI). (Bulgaria, 4/2024) [lead and its ionic compounds]** BEI surveillance: <40 µg/100 ml, lead [in blood]. BEI: 400 µg/l, lead [in blood]. BEI - women under 45: 300 µg/l, lead [in blood].

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Lead (Pb)	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023) [olovo (elementarno i anorganski spojevi)]** BEI - men: 400 µg/l, lead [in blood]. Sampling time: not critical. BEI: 2.67 µmol/l E, protoporphyrin in erythrocytes [in blood]. Sampling time: after exposure for 2-3 months (sample protected from light). BEI: 1.5 mg/l E, protoporphyrin in erythrocytes [in blood]. Sampling time: after exposure for 2-3 months (sample protected from light). BEI: 15 µ/l E, δ-aminolevulinic acid anhydride [in blood]. Sampling time: not critical. BEI - women under 45: 300 µg/l, lead [in blood]. Sampling time: not critical. **Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023) [olovo i njegovi ionski spojevi]** BEI surveillance: >40 µg/100 ml, lead [in blood]. BEI: 70 µg/100 ml, lead [in blood].
No exposure indices known.	
Lead (Pb)	**Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 9/2015) [Olovo]** Biological limit values: 0.035 µmol/mmol creatinine, koproporphyrin [in urine]. Sampling time: not set. Biological limit values: 0.2 mg/g creatinine, koproporphyrin [in urine]. Sampling time: not set. Biological limit values: 13 µmol/mmol creatinine, 5-aminolevulic acid [in urine]. Sampling time: not set. Biological limit values: 15 mg/g creatinine, 5-aminolevulic acid [in urine]. Sampling time: not set. Biological limit values: 0.4 mg/l, lead [in blood]. Sampling time: not set.
No exposure indices known.	
Lead (Pb)	**Biological exposure limits, Regulation number 193 (Estonia, 4/2024) [Plii ja selle ioonsete ühendite]** BEI: <6 european units, deltaaminolevulinic acid dehydratase activity in the blood [in blood]. BEI: 20 µg/g hemoglobin, zinc prototoporphyrin in blood [in blood]. BEI: <20 mg/g creatinine, delta aminolevulinic acid in urine [in urine]. BEI: 70 µg Pb/100 ml, lead [in blood]. BEI surveillance: <50 µg Pb/100 ml, lead [in blood].
Lead (Pb)	**EU Biological limit values (Europe, 3/2024) [lead and its inorganic compounds]** BEI surveillance: 30 µg/100 ml, lead [in blood]. BLV: 70 µg/100 ml, lead [in blood]. BEI surveillance - females of reproductive capacity: 4.5 µg/100 ml, lead [in blood].
Lead (Pb)	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 9/2020) [Lyijy ja sen epaorgaaniset yhdisteet]** BEI: 1.4 µmol/l, lead [in blood]. Sampling time: not criticial. BEI surveillance: 40 µg/dl, lead [in blood]. BEI removal: 50 µg/dl, lead [in blood].

SECTION 8: Exposure controls/personal protection

Lead (Pb)	**Biological limit values (BLV) - Labour Code / ANSES (France, 4/2023) [plomb et composés]** BLV surveillance - women: >100 µg/l, lead [in blood]. Sampling time: sample time not specified. BLV surveillance - men: >200 µg/l, lead [in blood]. Sampling time: sample time not specified. BLV binding - women: 300 µg/l, lead [in blood]. Sampling time: sample time not specified. BLV binding - men: 400 µg/l, lead [in blood]. Sampling time: sample time not specified.
Lead (Pb)	**DFG BEI-values list (Germany, 7/2024) [Lead and its compounds (except lead arsenate, lead chromate and alkyl lead compounds)]** BEI - women: 30 µg/l, lead [in blood]. Sampling time: no restriction in the steady state. BEI: 150 µg/l, lead [in blood]. Sampling time: no restriction in the steady state. BEI - men: 40 µg/l, lead [in blood]. Sampling time: no restriction in the steady state. **TRGS 903 - BEI Values (Germany, 10/2024)** BEI: 150 µg/l, lead [in whole blood]. Sampling time: no restriction in the steady state.
Lead (Pb)	**Presidential Decree 338/2001: Biological limit values (Greece, 8/2024) [μόλυβδος και οι ανόργανες του ενώσεις]** BLV surveillance: 40 µg/100 ml, lead [in blood]. BLV: 70 µg/100 ml, lead [in blood].
Lead (Pb)	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023) [ólom (szervetlen)]** BEI - men and women over 45: 300 µg/l, lead [in blood]. Sampling time: not critical. BEI - men and women over 45: 1.5 µmol/l, lead [in blood]. Sampling time: not critical. BEI - women under 45: 200 µg/l, lead [in blood]. Sampling time: not critical. BEI - women under 45: 1 µmol/l, lead [in blood]. Sampling time: not critical. BEI - men and women over 45: 100 µmol/mol Hb, zinc-protoporphyrin prescreening [in blood]. Sampling time: applied 3 months after prolonged exposure. BEI - women under 45: 80 µmol/mol Hb, zinc-protoporphyrin prescreening [in blood]. Sampling time: applied 3 months after prolonged exposure.
No exposure indices known.	
Lead (Pb)	**NAOSH (Ireland, 4/2024) [lead and its ionic compounds]** BEI surveillance: >40 µg/100ml, lead [in blood]. BLV: 70 µg/100ml, lead [in blood].
Lead (Pb)	**Legislative Decree No. 81/2008. Annex XXXIX. Mandatory biological limit values (Italy, 9/2024) [piombo e suoi composti ionici]** BEI surveillance: 40 µg/100 ml, lead [in blood]. BEI - female workers of a fertile age: 40 µg/100 ml, lead [in blood]. BEI: 60 µg/100 ml, lead [in blood].
No exposure indices known.	
Lead (Pb)	**Minister of Social Security and Labor and Minister of Health Protection, Order No. 97/406 (Lithuania, 1/2024) [Švinas ir jo joniniai junginiai]** BLV surveillance: 40 µg/100ml, lead [in blood]. Sampling time: sample time not specified. BLV: 70 µg/100ml, lead [in blood]. Sampling time: sample time not specified.

Lead (Pb)	**Grand-Duchy Regulation 2016. Biological limit values. Annex II (Luxembourg, 3/2021) [Plomb et ses composés ioniques]** BEI surveillance: 40 µg /100 ml, lead [in blood]. BLV: 70 µg /100 ml, lead [in blood].
No exposure indices known.	
Lead (Pb)	**Ministry of Social Affairs and Employment, Biological limit values (Netherlands, 5/2024) [lood]** BLV: 70 µg/100 ml, lead [in blood]. BLV for frequence of measurement: 50 µg/100 ml, lead [in blood].
No exposure indices known.	
Lead (Pb)	**Regulation of the Ministry of Health of September 16, 2016, Safety and occupational health related to the presence of chemical agents in the workplace (Poland, 7/2024) [ołów i jego związki nieorganiczne z wyjątkiem arsenianu(V) ołowiu(II) oraz chromianu(VI) ołowiu(II) – w przeliczeniu]** BLV: 50 µg Pb/100 ml, lead [in blood]. Form: Inhalable fraction. BEI surveillance: 40 µg Pb/100 ml, lead [in blood]. Form: Inhalable fraction.
Lead (Pb)	**Portuguese Institute of Quality (Portugal, 11/2014)** BEI: 30 µg/100 ml, lead [in blood]. Sampling time: not critical. **Decree-Law 301/2000 - Biological limit values and health surveillance measures for carcinogenic or mutagenic agents (Portugal, 12/2024) [chumbo e respetivos compostos iónicos]** BEI surveillance: 40 µg/100 ml, lead [in blood]. BEI: 70 µg/100 ml, lead [in blood].
Lead (Pb)	**HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2024) [plumbul și compușii săi ionici]** OBLV: 100 µg/100 ml erythrocytes, free protoporphyrin erythrocytes [in blood]. Sampling time: end of shift. OBLV: 300 µg/l, coproporphyrins [in urine]. Sampling time: end of shift. OBLV: 10 mg/l, deltaaminolevulinic acid [in urine]. Sampling time: end of shift. OBLV: 3 µg/cm, lead [in hair]. Sampling time: end of shift. OBLV: 70 µg/100 ml, lead [in blood]. Sampling time: end of shift. OBLV: 150 µg/l, lead [in urine]. Sampling time: end of shift. BEI supervision: >40 µg/100 ml, lead [in blood]. **HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2024) [plumb, compusii neionici]** OBLV: 100 µg/100 ml erythrocytes, free protoporphyrin erythrocytes [in blood]. Sampling time: end of shift. OBLV: 300 µg/l, coproporphyrins [in urine]. Sampling time: end of shift. OBLV: 10 mg/l, deltaaminolevulinic acid [in urine]. Sampling time: end of shift. OBLV: 3 µg/cm, lead [in hair]. Sampling time: end of shift. OBLV: 70 µg/100 ml, lead [in blood]. Sampling time: end of shift. OBLV: 150 µg/l, lead [in urine]. Sampling time: end of shift.
Lead (Pb)	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [olovo a jeho zlúčeniny (okrem chrómanu olovnatého, chrómanu arzenitého a alkylovaných zlúčenín)]** BLV: 3.4 µmol/l, as lead [in blood]. Sampling time: no limitation. BLV: 700 µg/l, as lead [in blood]. BLV surveillance: 400 µg/l, as lead [in blood]. BLV: 43 nmol/mmol creatinine, as coproporphyrins [in urine]. Sampling time: no limitation. BLV - women under 45: 3.48 µmol/mmol creatinine, as δ-aminolevulinic acid [in urine]. Sampling time: no limitation. BLV: 8.65 µmol/mmol creatinine, as δ-aminolevulinic acid [in urine]. Sampling time: no limitation. BLV: 0.2 mg/g creatinine, as coproporphyrins [in urine]. Sampling

	time: no limitation. BLV - women under 45: 4.03 mg/g creatinine, as δ-aminolevulinic acid [in urine]. Sampling time: no limitation. BLV: 10.03 mg/g creatinine, as δ-aminolevulinic acid [in urine]. Sampling time: no limitation. BLV: 0.45 µmol/l, as coproporphyrins [in urine]. Sampling time: no limitation. BLV - women under 45: 46.1 µmol/l, as δ-aminolevulinic acid [in urine]. Sampling time: no limitation. BLV: 114.7 µmol/l, as δ-aminolevulinic acid [in urine]. Sampling time: no limitation. BLV - women under 45: 485 nmol/l, as lead [in blood]. Sampling time: no limitation. BLV: 1933 nmol/l, as lead [in blood]. Sampling time: no limitation. BLV: 0.3 mg/l, as coproporphyrins [in urine]. Sampling time: no limitation. BLV - women under 45: 6 mg/l, as δ-aminolevulinic acid [in urine]. Sampling time: no limitation. BLV: 15 mg/l, as δ-aminolevulinic acid [in urine]. Sampling time: no limitation. BLV - women under 45: 100 µg/l, as lead [in blood]. Sampling time: no limitation. BLV: 400 µg/l, as lead [in blood]. Sampling time: no limitation.
Lead (Pb)	**Regulation on the protection of workers from the risks related to exposure to carcinogens, mutagens or reprotoxic substances at work (Slovenia, 4/2024) [svinec]** BAT - women under 45: 300 µg/l, lead [in blood]. Sampling time: not relevant. BAT - men: 400 µg/l, lead [in blood]. Sampling time: not relevant.
Lead (Pb)	**National institute of occupational safety and health (Spain, 1/2024) [Plomo y sus derivados iónicos]** VLB: 70 µg/dl, lead [in blood]. Sampling time: not critical.
Lead (Pb)	**Work environment authority Regulation 2005:6 (Sweden, 6/2023)** BEI Stop Working - women under 50: >0.5 µmol/l, lead [in blood]. Sampling time: prior to the work and every 6 months. BEI Monitoring Every 6 Months - men, women over 50: <0.8 µmol/l, lead [in blood]. Sampling time: prior to the work and every 6 months. BEI Stop Working - men, women over 50: >1.5 µmol/l, lead [in blood]. Sampling time: prior to the work and every 3 years. BEI Investigate - men, women over 50: >1 µmol/l, lead [in blood]. Sampling time: prior to the work and every 3 years. BEI No Recurring Control - men, women over 50: <0.4 µmol/l, lead [in blood]. Sampling time: prior to the work and every 3 years. BEI return - men, women over 50: <1.3 µmol/l, lead [in blood]. Sampling time: prior to the work and every 3 years.
Lead (Pb)	**SUVA (Switzerland, 1/2025) [Blei und seine Verbindungen (ausser Alkylverbindungen)]** BEI: 400 µg/l, (men, women > 45 years of age) [in blood]. Sampling time: not specified. BEI: 1.93 µmol/l, (men, women > 45 years of age) [in blood]. Sampling time: not specified. BEI: 100 µg/l, (women < 45 years of age) [in blood]. Sampling time: not specified. BEI: 0.48 µmol/l, (women < 45 years of age) [in blood]. Sampling time: not specified.

Lead (Pb)	**EU Biological limit values (Europe, 3/2024) [lead and its inorganic compounds]** BEI surveillance: 30 µg/100 ml, lead [in blood]. BLV: 70 µg/100 ml, lead [in blood]. BEI surveillance - females of reproductive capacity: 4.5 µg/100 ml, lead [in blood].

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Not available.

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommendations : Wear gloves according to EN374 to protect against skin effects from powders.

> 8 hours (breakthrough time): Nitrile gloves. thickness > 0.3 mm

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

SECTION 8: Exposure controls/personal protection

Filter type: P 2

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Solid.

Colour : Various

Odour : Slight

Odour threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range :

Ingredient name	°C	°F	Method
Zinc powder - zinc dust (stabilized)	908	1666.4	

Flammability : Not available.

Lower and upper explosion limit : Lower: Not applicable.
Upper: Not applicable.

Flash point : Closed cup: >100°C (>212°F)

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

pH : Not available.

Viscosity : Not available.

Solubility(ies) :

Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Vapour pressure : Not available.

Relative density : Not available.

Density : 2.5 g/cm³

Vapour density : Not applicable.

Particle characteristics

Median particle size : 40 µm

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidising properties : Not available.

9.2.2 Other safety characteristics

Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

N/A

Skin corrosion/irritation

Product/ingredient name	Result
Zinc powder - zinc dust (stabilized)	**Human - Skin - Mild irritant** Duration of treatment/exposure: 72 hours Amount/concentration applied: 300 ug I

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

SECTION 11: Toxicological information

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

SECTION 11: Toxicological information

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
Zinc powder - zinc dust (stabilized)	**Acute - LC50 - Fresh water** Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate 65 µg/l [48 hours] Effect: Mortality **Acute - IC50 - Marine water** Algae - Diatom - *Nitzschia closterium* - Exponential growth phase 65 µg/l [4 days] Effect: Population **Chronic - EC10 - Fresh water** Algae - Green algae - *Pseudokirchneriella subcapitata* - Exponential growth phase 27.3 µg/l [72 hours] Effect: Population **Chronic - EC10 - Fresh water** Daphnia - Water flea - *Daphnia magna* Age: <24 hours 59.2 µg/l [21 days] Effect: Reproduction **Chronic - NOEC - Fresh water** Fish - common carp - *Cyprinus carpio* Age: 13 months; Size: 10.5 cm; Weight: 27.8 g 2.6 µg/l [4 weeks] Effect: Accumulation **Acute - LC50 - Marine water** Fish - Mudskipper - *Periophthalmus waltoni* - Adult 12.21 µg/l [96 hours] Effect: Mortality
Lead (Pb)	**Acute - LC50 - Fresh water** Crustaceans - Water flea - *Ceriodaphnia reticulata* Age: <4 hours 530 µg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - common carp - *Cyprinus carpio* - Juvenile (Fledgling, Hatchling, Weanling) Size: 3.5 cm 0.44 ppm [96 hours] Effect: Mortality **Chronic - NOEC - Marine water** Algae - Green algae - *Ulva pertusa* 0.25 mg/l [96 hours] Effect: Reproduction

Chronic - NOEC - Fresh water
Fish - common carp - *Cyprinus carpio*
Age: 13 months; Size: 10.5 cm; Weight: 27.8 g
0.03 µg/l [4 weeks]
Effect: Accumulation

Acute - EC50 - Marine water
Algae - Diatom - *Chaetoceros sp.* - Exponential growth phase
105 ppb [72 hours]
Effect: Population

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient

Not available.

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Zinc powder - zinc dust (stabilized)	No	No	No	No	No	No	No
Lead (Pb)	No	No	No	No	No	No	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Zinc powder - zinc dust (stabilized)	No	No	No	No	No	No	No
Lead (Pb)	No	No	No	No	No	No	No

Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Zinc powder - zinc dust (stabilized)	No	No	No	No	No	No	No
Lead (Pb)	No	No	No	No	No	No	No

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

SECTION 12: Ecological information

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : Avoid release to the environment. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

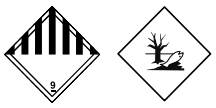
European waste catalogue (EWC) : 080111*, 200127*

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN3077	UN3077	UN3077	UN3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (PAINT)	Environmentally hazardous substance, solid, n.o.s. (PAINT)	Environmentally hazardous substance, solid, n.o.s. (PAINT)	Environmentally hazardous substance, solid, n.o.s. (PAINT)
14.3 Transport hazard class(es)	9 	9 	9 	9 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.

Additional information

ADR/RID : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Tunnel code (-)

ADN : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 14: Transport information

14.7 Maritime transport in bulk according to IMO instruments : Not relevant/applicable due to nature of the product.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Toxic to reproduction	lead	Recommended	11th recommendation	4/12/2023

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Lead (Pb)	<0.01	72

Labelling :

Synthetic polymer microparticles - Designation 78

Generic identity of polymer(s) : 3907 - Polyacetals, other polyethers and epoxide resins; polycarbonates, alkyd resins, polyallyl esters and other polyesters.

Total percentage of synthetic polymer microparticles : 17.2%

The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Industrial emissions (integrated pollution prevention and control) - Water : Listed

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
E1

SECTION 15: Regulatory information

National regulations

Austria

Limitation of the use of organic solvents : Permitted.

Belgium

Book VI carcinogenic agents annex VI.2-1 - VI.2-3

Ingredient name	Status
Plomb et ses composés inorganiques	Listed

Czech Republic

Storage code : IV

Denmark

Fire class : IV-1

MAL-code : 00-1

Protection based on MAL : **According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:**

General: Gloves must be worn for all work that may result in soiling. Apron/ coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 00-1
Application: When spraying in existing* spray booths, if the operator is outside the spray zone.

- Arm protectors must be worn.

During all spraying where atomisation occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Full mask with combined filter, coveralls and hood must be worn.

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc, must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution The regulations contain other stipulations in addition to the above.

*See Regulations.

List of undesirable substances : Listed

Finland

France

Social Security Code, Articles L 461-1 to L 461-7 : Lead (Pb) RG 1

SECTION 15: Regulatory information

Reinforced medical surveillance : Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

Germany

Storage class (TRGS 510) : 13

Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

Danger criteria

Category	Reference number
E1	1.3.1

Hazard class for water : 2

Technical instruction on air quality control (TA Luft)

Number [Class]	Description	%
5.2.1 5.2.7.1.3 5.2.10	Total dust Reproductive toxic substances Soil polluting substances	39.3 0.08 60.6

Italy

D.Lgs. 152/06 : Not determined.

Netherlands

Water Discharge Policy (ABM) : Z(1) Non biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/ reprotoxicity/ bioacumulative potential/ toxicity or persistence). Decontamination effort: Z

Norway

Sweden

Switzerland

VOC content : Exempt.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration

SECTION 16: Other information

RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aquatic Acute 1, H400 Aquatic Chronic 1, H410	Calculation method Calculation method

Full text of abbreviated H statements

H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Lact.	REPRODUCTIVE TOXICITY - Effects on or via lactation
Repr. 1A	REPRODUCTIVE TOXICITY - Category 1A

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Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.