

IN-ECO® 102

According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

Version: 2022-09-07 / EN

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**Mixture name: **IN-ECO® 102**

Chemical name: Phosphonates, zinc chloride, polyacrylates and inhibitors aqueous solution.

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

Relevant identified uses: Scale and corrosion inhibitor for cooling water treatment.

1.3. Details of the supplier of the safety data sheet

Company: JSC „Arionex LT“
Address: Ašigalio g. 6c, LT-49142, Kaunas
Telephone: +370 37 214669
E-mail: info@arionex.eu

1.4. Emergency telephone

Poisoning control and information bureau
Address: Šiltnamiu g. 29, LT -2043 Vilnius, Lithuania.
Telephone number: 8 5 236 20 52
Fax: 8 5 236 21 42
E-mail: info@tox.lt
Work time: All day (24 hours).

SECTION 2: Hazards Identification**2.1. Classification of the substance or mixture****According to Regulation (EC) No 1272/2008 [CLP]**

Skin corrosion, Category 1B	H314	Causes severe skin burns and eye damage.
Eye Damage, Category 1	H318	Causes serious eye damage.
Acute Toxicity, Category 4 oral	H302	Harmful if swallowed.
STOT SE, Category 3	H335	May cause respiratory irritation.
Aquatic Acute, Category 1	H400	Very toxic to aquatic life.
Aquatic Chronic, Category 1	H410	Very toxic to aquatic life with long lasting effects.

2.2. Label elements**According to Regulation (EC) No 1272/2008 [CLP].****Pictogram:****GHS05****GHS09****GHS07****Signal Word:** Dangerous.**Hazardous substances in the mixture:**

Zinc chloride

Hazard Statement:

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H302 Harmful if swallowed.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

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Precautionary Statements:

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 Wash hands thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301 +P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P363 Wash contaminated clothing before reuse.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor/physician.
 P273 Avoid release to the environment.
 P391 – Collect spillage.
 P501 Dispose of contents/container to accordance with local regulations.

2.3. Other hazards

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients**3.1. Substances**

Not applicable.

3.2. Mixtures

Chemical name: Phosphonates, zinc chloride, polyacrylates and inhibitors aqueous solution.

CAS No.	EINECS No.	Index No.	REACH Registration No.	Concentration range (%)	Name	Classification according to Regulation (EC) No 1272/2008 [CLP]
37971-36-1	253-733-5	-	01-2119436643-39-xxxx	30 - 45	Phosphonates	Met. Corr. 1 H290 Eye Irrit. 2 H319
7646-85-7	231-592-0	030-003-00-2	01-2119472431-44	20 - 24	Zinc chloride	Acute Tox. 4 H302, Skin Corr. 1B: H314, STOT SE 3 H335 Aquatic Acute 1 H400, Aquatic Chronic 1 H410
9003-04-7	692-137-3	-	-	20 - 25	Polyacrylates	-
2492-26-4	219-660-8	-	-	1 -2	Benzotriazole	Acute Tox. 4, H302 Eye Irrit. 2, H319 Aquatic Chronic 2, H411

For the full text of the H-statemens mentioned in the Section, see Section 16.

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SECTION 4: First-Aid Measures**4.1. Description of first aid measures**

Remove contaminated clothing.

If inhaled:

The product is not volatile.

On skin contact:

Remove contaminated clothing, footwear, watches, etc. And clean thoroughly before re-using them. Wash immediately with plenty of water. Seek medical treatment in all cases of irritation or burns.

On contact with eyes:

Immediately wash affected eyes for at least 10-15 minutes under running water with eyelids held open. Remove contact lenses if present and easy to do. Get immediate medical attention.

On ingestion:

Immediately rinse mouth and drink at least 1.5 liters of water, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed**Both acute symptoms:**

If inhaled: May cause respiratory tract irritation, coughing.

On skin contact: May cause skin irritation or corrosion.

On contact with eyes: Causes serious eye damage.

On ingestion: No information available.

Delayed symptoms:

If inhaled: Irritation, cough.

On skin contact: Irritation, redness and skin burns.

On contact with eyes: Pain, tearing, redness, eye damage.

On ingestion: No information available.

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

Treatment: No information available.

SECTION 5: Fire-Fighting Measures**5.1. Extinguishing media**

Suitable extinguishing media:

All types of extinguishing media are suitable: water, dry powder, carbon dioxide, foam, sand and other.

5.2. Special hazards arising from the substance or mixture

Dangerous products of combustion of the mixture was not observed.

5.3. Advice for fire-fighters

Wear protective working tools such boots, coveralls, gloves, eye and face protection.

EN 469 - Protective clothing for firemen.

SECTION 6: Accidental Release Measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes. Wear personal protective equipment as described under Heading 8.

6.2. Environmental precautions

Do not wash product down sewage and drainage systems or into bodies of water. If getting really happened, heavily diluted with water.

6.3. Methods and material for containment and cleaning up

Absorb the spillage into sand or other inert material, shovel into suitable containers. If containment is not possible and material enters the drain, dilute as much as possible with water.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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SECTION 7: Handling and Storage**7.1. Precautions for safe handling**

In the workplace must be good ventilation. In the workplace don't eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored in a cool, dry area in PVC or HDPE containers.

Storage stability:

Keep storage area should be dry, cool, 0 to 35 ° C. Avoid freezing.

Unsuitable (incompatible) storage of chemicals: alkalis.

7.3. Specific end use(s)

Used as an scale and corrosion inhibitor for cooling water treatment.

The concentrated product is dosed using a dosing pump proportional to the amount of treated water.

SECTION 8: Exposure Controls/Personal Protection**8.1. Control parameters**

Components with occupational exposure limits: HN: 23: 2011

Name of substance			Exposure limits					
			Long-term exposure limit value		Short-term exposure limit value		DNEL:	
No.	Name	CAS No.	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm
1.	Zinc chloride	7646-85-7	1	-	-	-	-	-

DNEL/DMEL: Information about 2-Phosphonobutane-1,2,4-tricarboxylic acid:

DNEL long-term, workers, inhalative: 15 mg/m³DNEL short-term, workers, inhalative: 158 mg/m³

DNEL long-term, workers, dermal: 4.2 mg/kg bw/d

DNEL short-term, workers, dermal: 80 mg/kg bw/d

DNEL Long-term, consumers, oral: 2.1 mg/kg bw/d

DNEL Short-term, consumers, oral: 65 mg/kg bw/d

DNEL Long-term, consumers, dermal: 2.1 mg/kg bw/d

DNEL Short-term, consumers, dermal: 40 mg/kg bw/d

DNEL Long-term, consumers, inhalative: 3.7 mg/m³DNEL Short-term, consumers, inhalative: 79 mg/m³

PNEC: Information about 2-Phosphonobutane-1,2,4-tricarboxylic acid:

PNEC water (freshwater): 3.33 mg/L

PNEC water (marine water): 0.33 mg/L

PNEC water (intermittent release): 10.42 mg/L

PNEC sediment (freshwater): 1.47 mg/kg dwt

PNEC soil: 0.491 mg/kg dwt

PNEC sewage treatment plant: 50.4 mg/L

PNEC Secondary Poisoning, oral: 94.22 mg/kg food and feedingstuffs

8.2. Exposure controls**8.2.1. Personal protective equipment****General safety and hygiene measures:** General indoor ventilation. Do not eat, drink or smoke when working with product to avoid contact with skin or mouth. Remove contaminated clothing, footwear, etc., and clean thoroughly before re-using them.**Respiratory protection.** Unnecessary.**Eye protection.** Wear approved glasses (EN 166) or safety goggles to preset contact with eyes.

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Skin protection. Wear rubber gloves (EN 374), usual work clothes, rubber boots to preset contact with skin. Information on gloves:

Material: Butyl rubber

Penetration time:> 480 min.

Thickness of gloves: 0.5 mm

Material: Viton (R)

Penetration time:> 480 min

Thickness of gloves: 0.7 mm

Material: Chloroprene

Penetration time:> 480 min.

Thickness of gloves: 0.55 mm.

Material: PVC

Penetration time:> 480 min

Thickness of gloves:> 0.5 mm

8.2.2. Environmental exposure controls

Do not wash product down sewage and drainage systems or into bodies of water.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Form:	Liquid;
Colour:	Yellow to brown;
Odour:	Weak smell product;
Odour threshold:	Not determined;
pH, (20 °C):	≤ 1,0;
Melting / freezing point:	-10°C;
Density (20 °C):	1,35 ± 0,05 g/cm ³ ;
Solubility:	Soluble in water;
Boiling point/range:	100 ÷ 130 °C;
Flash point:	Not determined;
Evaporation rate:	Not determined;
Flammability:	Not self-igniting;
Partitioning coefficient n-octanol/water (log Kow):	Not applicable;
Self-ignition:	Not determined;
Thermal decomposition:	Not determined;
Explosion hazard:	Not explosive;
Viscosity, dynamic:	Not determined;
Oxidizing properties:	None.

9.2. Other Information

No data available.

SECTION 10: Stability and Reactivity**10.1. Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated (see Heading 7).

10.3. Possibility of hazardous reactions

The heat released by mixing with strong alkalis (exothermic reaction).

10.4. Conditions to avoid

Avoid freezing.

10.5. Incompatible materials

The heat released by mixing with strong alkalis (exothermic reaction).

10.6. Hazardous decomposition productsThe product is stable, but heating may release hazardous decomposition products: CO, CO₂, NO_x, PO_x.

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SECTION 11: Toxicological Information**11.1. Information on toxicological effects****Acute toxicity****Eye contact.** Direct contact with product may irritation or eye damage.**Skin contact.** Direct contact with product may cause skin irritation or skin burn.**Acute toxicity. Zinc chloride:**

If swallowed (rats): LD50 = 350 mg / kg;

If swallowed (mouse): LD50 = 329 mg / kg;

Through the skin LD50 - No exact data found.

Inhalation LC50 - No exact data found.

Inhalation. Not volatile.

Acute toxicity. PBTC:

Skin contact. Testing with rabbits LD50 > 4000 mg / kg body weight (PBTC)

If swallowed Tests in rats LD50 > 6500 mg / kg (PBTC)

Inhalation. Not volatile. Tests in rats LD50 > 1979 mg / l (PBTC).

11.2. Chronic effects**Inhalation.** Not volatile.**Carcinogenicity.** None.**Mutagenicity.** None.**Reproductive toxicity.** None.**Contact dermatitis/Sensitizing effect.** Allergic and sensitive people may develop dermatitis.**11.3. Medical conditions aggravated by exposure**

None.

SECTION 12: Ecological Information**12.1. Toxicity**

Hazardous to aquatic organisms.

Ecotoxicity to aquatic organisms:

Zinc chloride: Fish LC50 = 0,01 mg/l ÷ 0,1 mg/l;

Daphnia magna EC50 = 0,01 mg/l ÷ 0,1 mg/l;

2-Phosphonobutane-1,2,4-tricarboxylic acid:

Algae toxicity: EC50 *Desmodesmus subspicatus* (green algae): > 1081 mg/L/72h (OECD 201)EC10 *Desmodesmus subspicatus* (green algae): 33,3 - 65,5 mg/L/72h (OECD 201)Daphnia toxicity: EC50 *Daphnia magna* (Big water flea): > 1071 mg/L/48h (OECD 202)EC50 *Daphnia magna* (Big water flea): 329 - 1071 mg/L/21d (OECD 211)NOEC *Daphnia magna* (Big water flea): 104 mg/L/21d (OECD 211)Fish toxicity: LC50 *Brachydanio rerio* (zebra-fish): > 1042 mg/L/96h (OECD 204)NOEC *Brachydanio rerio* (zebra-fish): >= 1042 mg/L/14d (OECD 204)

The addition of large amounts of product to water may cause a rise in pH (alkalinity).

12.2. Persistence and degradability

Completely soluble in water.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Not volatile.

12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

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12.6. Other adverse effects

Additional advice: No data available.

12.7. Additional information

None.

SECTION 13: Disposal Considerations**13.1. Waste treatment methods**

Not classified as harmful to aquatic organisms. Not classified as harmful to birds. Not allowed to dispose of empty containers or waste into the environment. Dispose of according to the local legislation. Empty containers should be returned to the supplier.

Waste code: 10 01 99 Wastes not otherwise specified.

Package code: 15 01 02 Plastic packaging.

SECTION 14: Transport Information**14.1. UN Number**

1719.

14.2. Proper Shipping Name

Zink chloride solution.

14.3. Transport hazard class(es)

8.

14.4. Packing Group

III.

14.5. Environmental hazards

Yes.

14.6. Special precautions for user

None.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

None.

SECTION 15: Regulatory Information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010/EC, Regulation (EC) No 1272/2008 [CLP], Directive 67/548/EEC or 1999/45/EC.

15.2. Chemical Safety Assessment

Chemical Safety Assessment not required.

SECTION 16: Other Information**IN-ECO® 102** - For professional use only.**IN-ECO® 102** safety data sheets and technical information developed by the manufacturer.**Full text of H-Statements**

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage

H319 Causes serious eye irritation.

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- H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Abbreviations:

CAS – Chemical Abstracts Service.
EINECS – European Inventory of Existing Chemical Substances.
GHS – Globally Harmonised System of Classification and Labelling of Chemicals
CLP – Classification, labelling and packaging of substances and mixtures.
DNEL – The derived no-effect level.
PNEC – The Predicted No Effect Concentration.
LC50 – The median lethal concentration.
EC50 – The term half maximal effective concentration.

IN-ECO® 102 Label

Skin corrosion, Category 1B.
Eye Damage, Category 1
Acute Toxicity, Category 4 oral
STOT SE, Category 3
Aquatic Acute, Category 1
Aquatic Chronic, Category 1

Pictogram:

Signal Word: Dangerous.

Hazardous substances in the mixture: Zinc chloride.

Hazard Statement:

- H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H302 Harmful if swallowed.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 +P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P273 Avoid release to the environment.

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The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of the product in combination with any other product or any other process, is the responsibility of the user. It is implicate that the user is responsible for determining appropriate safety measures and for applying the legislation covering his own activities. Safety data sheet available for professional user on request.

