

Itaconix® TSI® 422

Revision number: EU 1.0

Revision date: 29 July 2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product name	Itaconix® TSI® 422
Product CAS number	1052620-22-0
Other identification	Poly (itaconic acid co AMPS, sodium salt)

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

Recommended use	Scale inhibitor for use in detergent and cleaner formulations
Uses advised against	No information available

1.3 Details of the supplier of the safety datasheet

Company	Itaconix Corporation
Address	2 Marin Way, Stratham, NH 03885, USA
Telephone	+1 (603) 775-4400
E-mail	info@itaconix.com

1.4 Emergency Telephone Number

+1 (603) 775-4400 (Monday – Friday 09:00 – 17:00 US EST)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification (Regulation (EC) No. 1272/2008)
Not classified as hazardous

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

The product does not need to be labelled

Hazard pictograms	None
Signal word	None
Hazard statements	None
Precautionary statements	None

2.3 Other hazards

The mixture contains <0.1% of unknown impurities

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

Chemical name	CAS number	Classification	Concentration
Poly (itaconic acid co AMPS, sodium salt)	1052620-22-0	None	~85%

Itaconix® TSI® 422

Revision number: EU 1.0

Revision date: 29 July 2022

Water	7732-18-5	None	~15%
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SECTION 4: First aid**4.1 Description of first aid measures**

If inhaled	Move person to fresh air. If respiratory symptoms develop, call a physician.
In case of skin contact	Flush skin with water.
In case of eye contact	Rinse immediately with plenty of water and seek medical advice.
If ingested	Do not induce vomiting, rinse mouth with water. If large quantities of this material are swallowed, call a physician.

First aid responders shall wear standard personal protective equipment (safety glasses, medical examination gloves)

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	None known
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4.3 Indication of any immediate medical attention and special treatment needed

Treatment	Treat symptomatically.
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SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: decomposition products may be produced such as carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

Itaconix® TSI® 422

6.1 Personal precautions protective equipment and emergency procedures

Use personal protective equipment in accordance with good industrial practices (gloves, eye protection, labcoat/overalls, dust mask). Provide sufficient ventilation and control dust.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain/absorb with non-combustible absorbent material (eg, sand, earth, vermiculite, chemical absorbent). Vacuum, or sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

For protective clothing see Section 8. For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Normal measures as prevention against fire. Minimise exposure to dust in accordance with good industrial practises. Wear appropriate PPE. Wash hands thoroughly after handling. Do not eat, drink nor smoke in work areas. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed to avoid contamination. Store in a cool place below 45C. No special restrictions on storage with other products.

7.3 Specific end use(s)

Scale inhibitor for use in detergent and cleaner formulations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls: Ensure good ventilation. Arrange for eye wash (recommended). Handle in accordance with good industrial hygiene and safety practice.

Itaconix® TSI® 422

Revision number: EU 1.0

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Personal protective equipment: Eye and hand protection, laboratory lab coat or overalls are recommended.

Respiratory protection: In case of dust, wear dust mask (N95 or equivalent or better).

Eye/face protection: Safety glasses with side-shields conforming to NIOSH (US) or EN166 are recommended.

Hand protection: Handling with gloves is recommended. Butyl rubber gloves may be suitable.

Skin protection: Laboratory coat or overalls are recommended.

Environmental exposure control: minimize release of material to drains, ground or surface water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state	Solid granules
b) Color	Off-white
c) Odor	No odour
d) Melting point/freezing point	No data available
e) Boiling point	No data available
f) Flammability (solid, gas)	No data available
g) Upper/Lower flammability or explosive limits	No data available
h) Flash point	Not applicable
h) Evaporation Rate	No data available
i) Auto ignition temperature	No data available
j) Decomposition temperature	No data available
k) pH	5.2 (@10% aq. solution)*
l) Kinematic Viscosity	Not applicable
m) Solubility	Highly water soluble
n) Partition coefficient: n-octanol/water	No data available
o) Vapor pressure	No data available
p) Density	Bulk 0.7g/cm ³ *
q) Vapor density	No data available
r) Particle characteristic	Typical weight average particle size ~ 400 to 500 microns

* Internal test protocol

9.2 Other safety information

Explosive properties

Not explosive (St-0) Based on experimental data on close analogue, for the specific particle size distribution of the "G" grade product

Itaconix® TSI® 422

Oxidizing properties

No ingredients have these properties

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable product under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions

None known under normal processing.

10.4 Conditions to avoid

Heat above 90°C, flames.

10.5 Incompatible materials

Avoid strong oxidising agents.

10.6 Hazardous decomposition products

Hazardous decomposition products may be formed under fire conditions such as carbon oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Some data available on mixture. Where not tested, data derived from or based on individual components are shown below:

(a) acute toxicity	Cat 5 – potentially harmful if swallowed (Human Cell-based screen, non-regulatory test). Inhalation potential: not considered toxic by inhalation (Human EpiAirway model, non-regulatory).
(b) skin corrosion/irritation	No skin irritation (OECD 439).
(c) serious eye damage/irritation	No eye irritation (OECD 492).
(d) respiratory or skin sensitisation	Skin: non sensitiser (OECD 442 C and D).
(e) germ cell mutagenicity	Not mutagenic (OECD 471 – AMES test).
(f) carcinogenicity	No data available.
(g) reproductive toxicity	No data available.
(h) STOT-single exposure	No data available.
(i) STOT-repeated exposure	No data available.

Itaconix® TSI® 422

(j) aspiration hazard

No data available.

Likely routes of exposure: Contact with skin and eyes or by inhalation of dust.

11.2 Information on other hazards

None known.

SECTION 12: Ecological information

12.1 Toxicity

OECD 201: Algae growth EC50 = 198 mg/l (72 hr)

OECD 202: Daphnia growth EC50 >100 mg/l (48hr)

OECD 249: Fish Cell EC50 = 1095 mg/L (24hrs)

Not classified as hazardous to aquatic life.

12.2 Persistence and degradability

OECD 302B: Inherently biodegradable. 68% ultimate biodegradation at 28 days.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

No data available. None known.

12.7 Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product: Treat as non-hazardous waste. Dispose to landfill. Avoid and minimize disposal to sewage. Dispose of in accordance with local regulations.

Itaconix® TSI® 422

Contaminated packaging: Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transportation information

14.1 UN number	Not regulated as a dangerous good
14.2 UN proper shipping name	Not regulated as a dangerous good
14.3 Transport hazard class(es)	Not regulated as a dangerous good
14.4 Packing group	Not regulated as a dangerous good
14.5 Environmental hazards	Not regulated as a dangerous good
14.6 Special precautions for user	Not regulated as a dangerous good
14.7 Maritime transport in bulk according to IMO instruments	Not applicable

SECTION 15: Regulatory information

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

The components of this product are reported in the following inventories:

US-EPA	All chemical substances in this product are listed on the TSCA Inventory.
EU-REACH	Polymer exemption. All the raw materials above 2 wt.% are registered by Itaconix or by its suppliers.
Canada	On DSL inventory.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out on this mixture.

SECTION 16: Other information

Supersedes Version	-
Nature of revision	Initial issue.

This SDS is a non-mandated SDS and is based on EU Regulation 2020/878 as amended by Regulations 453/2010 and 2015/830

The above information is believed to be correct at the time of preparation but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.