

Itaconix® TSI® 422

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

Product identifier

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

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 |

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 |

Emergency Telephone Number

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

SECTION 2: Hazards identification

GHS Classification of the substance or mixture

Classification (29 CFR 1910.1200)
Not classified as hazardous

GHS Label elements

Labelling (29 CFR 1910.1200)

The product does not need to be labelled

| | |
|--------------------------|------|
| Hazard pictograms | None |
| Signal word | None |
| Hazard statements | None |
| Precautionary statements | None |

Other hazards

The mixture contains <0.1% of unknown impurities

SECTION 3: Composition/information on ingredients

Mixtures

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

Itaconix® TSI® 422

Revision number: HCS2012 1.0

Revision date: 29 July 2022

| | | | |
|-------|-----------|------|------|
| Water | 7732-18-5 | None | ~15% |
|-------|-----------|------|------|

SECTION 4: First aid**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)

Most important symptoms and effects, both acute and delayed

| | |
|----------|------------|
| Symptoms | None known |
|----------|------------|

Indication of any immediate medical attention and special treatment needed

| | |
|-----------|------------------------|
| Treatment | Treat symptomatically. |
|-----------|------------------------|

SECTION 5: Firefighting measures**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. |
|------------------------------|--|

Special hazards arising from the substance or mixture

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

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

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.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

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

SECTION 7: Handling and storage

Precautions for safe handling

Normal measures as prevention against fire. Minimize exposure to dust in accordance with good industrial practices. 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.

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.

SECTION 8: Exposure controls/personal protection

Control parameters

Contains no substances with occupational exposure limit values (No OSHA and no ACGIH TLV).

Exposure controls

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

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.

Itaconix® TSI® 422

Hand protection: Handling with gloves is recommended. Nitrile rubber gloves are 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

Information on basic physical and chemical properties

| | |
|---|---|
| a) Physical state | Solid granules |
| b) Color | Off-white |
| c) Odor and odor threshold | No odor – no threshold |
| 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

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

Oxidizing properties

No ingredients have these properties

SECTION 10: Stability and reactivity

Reactivity

No data available.

Itaconix® TSI® 422

Chemical stability

Stable product under recommended storage and handling conditions.

Possibility of hazardous reactions

None known under normal processing.

Conditions to avoid

Heat above 90°C, flames.

Incompatible materials

Avoid strong oxidizing agents.

Hazardous decomposition products

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

SECTION 11: Toxicological information

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 sensitization | Skin: non sensitizer (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. |
| (j) aspiration hazard | No data available. |

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

Information on other hazards

None known

Itaconix® TSI® 422

SECTION 12: Ecological information

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.

Persistence and degradability

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

Bio accumulative potential

No data available.

Mobility in soil

No data available.

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.

Endocrine disrupting properties

No data available. None known.

Other adverse effects

None known.

SECTION 13: Disposal considerations

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.

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

SECTION 14: Transportation information

UN number

Not regulated as a dangerous good

UN proper shipping name

Not regulated as a dangerous good

Itaconix® TSI® 422

| | |
|---|-----------------------------------|
| Transport hazard class(es) | Not regulated as a dangerous good |
| Packing group | Not regulated as a dangerous good |
| Environmental hazards | Not regulated as a dangerous good |
| Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code) | Not applicable |
| Special precautions for user | Not regulated as a dangerous good |

SECTION 15: Regulatory information

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. |

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Chemical Safety Assessment

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

SECTION 16: Other information

| | |
|--------------------|----------------|
| Revision number | HCS 201 1.0 |
| Revision date | 29 July 2022 |
| Supersedes Version | - |
| Nature of revision | Initial issue. |

This SDS is a non-mandated SDS and is based on GHS HCS2012

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.