

Classified as hazardous in accordance with the criteria of EPA New Zealand

## Section 1 - Identification

### Product Identifier

|                             |   |
|-----------------------------|---|
| <b>Product Name</b>         | <u>Tetrabromophthalic anhydride</u>       |
| <b>CAS No</b>               | 632-79-1                                  |
| <b>Synonyms</b>             | 4,5,6,7-Tetrabromo-1,3-isobenzofurandione |
| <b>Molecular Formula</b>    | C8 Br4 O3                                 |
| <b>Molecular Weight</b>     | 463.7                                     |
| <b>Recommended Use</b>      | Laboratory chemicals.                     |
| <b>Uses advised against</b> | No Information available                  |

|                                |   |
|--------------------------------|---|
| <b>Product Code</b>            | <b>L08181</b>   |
| <b>Address</b>                 | Thermo Fisher Scientific New Zealand Ltd<br>244 Bush Road, Albany,<br>Auckland, New Zealand |
| <b>Emergency Tel.</b>          | <b>CHEMTREC®</b><br><b>09 980 6780 or +64 9 980 6780</b>                                    |
| <b>Telephone / Fax Numbers</b> | Tel: 09 980 6700<br>Fax: 09 980 6788  |
| <b>E-mail address</b>          | <u>ANZinfo@thermofisher.com</u>   |

## Section 2 - Hazard(s) Identification

### Classification under Work Safe New Zealand

Classified as hazardous in accordance with the criteria of EPA New Zealand

### GHS Classification

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

|  |            |
|--|------------|
| Skin Corrosion/Irritation                          | Category 2 |
| Serious Eye Damage/Eye Irritation                  | Category 2 |
| Specific target organ toxicity - (single exposure) | Category 3 |

#### Environmental hazards

Based on available data, the classification criteria are not met

### Label Elements

**Signal Word****Warning****Hazard Statements**

H315 - Causes skin irritation  
H335 - May cause respiratory irritation  
H319 - Causes serious eye irritation

**Precautionary Statements****Prevention**

P271 - Use only outdoors or in a well-ventilated area  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Response**

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P304 + P340 - IF INHALED: Remove person to fresh air and keep 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  
P312 - Call a POISON CENTER or doctor if you feel unwell  
P362 + P364 - Take off contaminated clothing and wash it before reuse

**Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other hazards which do not result in classification**

## Section 3 - Composition and Information on Ingredients

| Component                                   | CAS No   | Weight % |
|---|----------|----------|
| 1,3-Isobenzofurandione, 4,5,6,7-tetrabromo- | 632-79-1 | 98       |

## Section 4 - First Aid Measures

**Description of first aid measures****New Zealand Emergency Tel.**

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09 980 6780 or +64 9 980 6780

**Inhalation**

Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.

**Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention. Take off contaminated clothing and shoes immediately.

|  |   |
|--|---|
| <b>Ingestion</b>                           | Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately. If possible drink milk afterwards.  |
| <b>Self-Protection of the First Aider</b>  | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.  |
| <b>First Aid Facilities</b>                | Eyewash, safety shower and washroom.  |
| <b>Most important symptoms and effects</b> | May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing |
| <b>Notes to Physician</b>                  | Treat symptomatically.  |

## **Section 5 - Fire Fighting Measures**

### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### **Extinguishing media which must not be used for safety reasons**

No information available.

### **Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors.

### **Hazardous Combustion Products**

Thermal decomposition can lead to release of irritating gases and vapors.

### **Special protective equipment and precautions for fire fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## **Section 6 - Accidental Release Measures**

### **Personal Precautions, Protective Equipment and Emergency Procedures**

#### **Emergency procedures**

Ensure adequate ventilation.

#### **Environmental Precautions**

See Section 12 for additional Ecological Information.

#### **Methods for Containment and Clean Up**

Sweep up and shovel into suitable containers for disposal.

#### **Precautions to prevent secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations

#### **Reference to Other Sections**

Refer to protective measures listed in Sections 8 and 13.

## **Section 7 - Handling and Storage**

### **Precautions for Safe Handling**

#### **Advice on safe handling**

Avoid contact with skin and eyes. Avoid contact with skin and clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Avoid breathing vapors or mists. Do not ingest. If swallowed then seek immediate medical assistance. Wash thoroughly after handling.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

**Conditions for Safe Storage, Including any Incompatibilities****Storage Conditions**

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

**Incompatible Materials**

Oxidizing agent.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

## **Section 8 - Exposure Controls and Personal Protection**

**Control parameters****Exposure limits**

The product does not contain any hazardous materials with occupational exposure limits established.

**Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Appropriate engineering controls****Engineering Measures**

Ventilation systems. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Individual protection measures, such as personal protective equipment****Eye Protection**

Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection**

Protective gloves

| Glove material                                    | Breakthrough time                    | Glove thickness | AUS/NZ Standard | Glove comments        |
|---|--------------------------------------|-----------------|-----------------|-----------------------|
| Nitrile rubber, Neoprene,<br>Natural rubber, PVC. | See manufacturers<br>recommendations | -               | AS/NZS 2161     | (minimum requirement) |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

**Respiratory Protection**

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices (or AUS/NZ equivalent)

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

## Section 9 - Physical and Chemical Properties

### Information on basic physical and chemical properties

|  |                                |  |
|--|--------------------------------|--|
| <b>Physical State</b>                          | Powder Solid                   |  |
| <b>Appearance</b>                              | Off-white                      |  |
| <b>Odor</b>                                    | No information available       |  |
| <b>Odor Threshold</b>                          | No data available              |  |
| <b>pH</b>                                      | No information available       |  |
| <b>Melting Point/Range</b>                     | 274 - 280 °C / 525.2 - 536 °F  |  |
| <b>Softening Point</b>                         | No data available              |  |
| <b>Boiling Point/Range</b>                     | No information available       |  |
| <b>Flammability (liquid)</b>                   | Not applicable                 | Solid                                    |
| <b>Flammability (solid,gas)</b>                | No information available       |  |
| <b>Explosion Limits</b>                        | No data available              |  |
| <b>Flash Point</b>                             | No information available       | <b>Method -</b> No information available |
| <b>Autoignition Temperature</b>                | No data available              |  |
| <b>Decomposition Temperature</b>               | No data available              |  |
| <b>Viscosity</b>                               | Not applicable                 | Solid                                    |
| <b>Water Solubility</b>                        | insoluble (hydrolysis to acid) |  |
| <b>Solubility in other solvents</b>            | No information available       |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                                |  |
| <b>Component</b>                               | <b>log Pow</b>                 |  |
| 1,3-Isobenzofurandione,                        | 2.27                           |  |
| 4,5,6,7-tetrabromo-                            |                                |  |
| <b>Vapor Pressure</b>                          | No data available              |  |
| <b>Density / Specific Gravity</b>              | No data available              |  |
| <b>Bulk Density</b>                            | No data available              |  |
| <b>Vapor Density</b>                           | Not applicable                 | Solid                                    |
| <b>Particle characteristics</b>                | No data available              |  |
| <b>Other information</b>                       |                                |  |
| <b>Molecular Formula</b>                       | C8 Br4 O3                      |  |
| <b>Molecular Weight</b>                        | 463.7                          |  |
| <b>Evaporation Rate</b>                        | Not applicable - Solid         |  |

## Section 10 - Stability and Reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                       | None known, based on information available          |
| <b>Stability</b>                        | Stable under normal conditions. Moisture sensitive. |
| <b>Sensitivity to Mechanical Impact</b> | No information available                            |
| <b>Sensitivity to Static Discharge</b>  | No information available                            |
| <b>Hazardous Polymerization</b>         | No information available.                           |
| <b>Hazardous Reactions</b>              | No information available.                           |
| <b>Conditions to Avoid</b>              | Heat, flames and sparks.                            |
| <b>Incompatible Materials</b>           | Oxidizing agent.                                    |

**Hazardous Decomposition Products** Thermal decomposition can lead to release of irritating gases and vapors.

## Section 11 - Toxicological Information

### Acute Effects

### Information on likely routes of exposure

#### Product Information

|            |  |
|------------|--|
| Inhalation | Avoid breathing dust or spray mist. May be harmful if inhaled. |
| Eyes       | Avoid contact with eyes. Irritating to eyes.                   |
| Skin       | Avoid contact with skin. May cause irritation.                 |
| Ingestion  | May be harmful if swallowed.                                   |

### Numerical measures of toxicity

#### (a) acute toxicity;

|            |  |
|------------|--|
| Oral       | Based on available data, the classification criteria are not met |
| Dermal     | Based on available data, the classification criteria are not met |
| Inhalation | Based on available data, the classification criteria are not met |

| Component                                      | LD50 Oral              | LD50 Dermal                   | LC50 Inhalation               |
|--|------------------------|-------------------------------|-------------------------------|
| 1,3-Isobenzofurandione,<br>4,5,6,7-tetrabromo- | LD50 > 10 g/kg ( Rat ) | LD50 > 10000 mg/kg ( Rabbit ) | LC50 > 10.92 mg/L ( Rat ) 4 h |

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

#### (d) respiratory or skin sensitization;

|             |                   |
|-------------|-------------------|
| Respiratory | No data available |
| Skin        | No data available |

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available  
There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; Category 3

Results / Target organs Respiratory system

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; Not applicable  
Solid

### Symptoms / effects, both acute and delayed

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness,

lightheadedness, chest pain, muscle pain or flushing.

## Section 12 - Ecological Information

### Ecotoxicity

#### Aquatic ecotoxicity

| Component                                      | Freshwater Fish   | Water Flea | Freshwater Algae | Microtox |
|--|---|------------|------------------|----------|
| 1,3-Isobenzofurandione,<br>4,5,6,7-tetrabromo- | LC50: > 10 mg/L, 96h<br>static (Oncorhynchus<br>mykiss) |            |                  |          |

**Terrestrial ecotoxicity** There is no data for this product

### Persistence and Degradability

**Persistence** Soluble in water, Persistence is unlikely, based on information available.

**Bioaccumulative Potential** Bioaccumulation is unlikely

| Component                                      | log Pow | Bioconcentration factor (BCF) |
|--|---------|-------------------------------|
| 1,3-Isobenzofurandione,<br>4,5,6,7-tetrabromo- | 2.27    | No data available             |

**Mobility** The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

### Other adverse effects

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

### Waste treatment methods

**Waste from Residues/Unused Products** Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**Other Information** Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## Section 14 - Transport Information

**NZS 5433:2020** Not regulated

|   |   |
|---|---|
| <b>IATA</b>   | Not regulated   |
| <b>IMDG/IMO</b>   | Not regulated   |
| <b>Environmental hazards</b>  | No hazards identified   |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not applicable, packaged goods  |
| <b>Special Precautions</b>  | No special precautions required. Please refer to the applicable dangerous goods regulations for additional information. |
| <b>Additional information</b>   | None known  |

## Section 15 - Regulatory Information

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

#### National Regulations

There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

#### Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information. Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information.

#### Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

#### International Regulations

|   |  |
|---|--|
| <b>Ozone Depletion Potential</b>                        | This product does not contain any known or suspected substance |
| <b>Persistent Organic Pollutant</b>                     | This product does not contain any known or suspected substance |
| <b>Rotterdam Convention (PIC)</b>                       | Not applicable   |
| <b>Authorisation/Restrictions according to EU REACH</b> | Not applicable   |

#### International Inventories

New Zealand (NZIoC), Australia (AICS), Europe (EINECS/ELINCS/NLP), Korea (KECL), China (IECSC), Taiwan (TCSI), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component                                      | CAS No   | NZIoC | AICS | EINECS | ELINCS | NLP | KECL     | IECSC | TCSI |
|--|----------|-------|------|--------|--------|-----|----------|-------|------|
| 1,3-Isobenzofurandione,<br>4,5,6,7-tetrabromo- | 632-79-1 | X     | X    | -      | -      | -   | KE-33264 | X     | X    |

| Component | CAS No | TSCA | TSCA Inventory<br>notification - | DSL | NDSL | PICCS | ISHL | ENCS |
|-----------|--------|------|----------------------------------|-----|------|-------|------|------|
|-----------|--------|------|----------------------------------|-----|------|-------|------|------|



|  |          |   |                 |   |   |   |   |   |
|--|----------|---|-----------------|---|---|---|---|---|
|  |          |   | Active-Inactive |   |   |   |   |   |
| 1,3-Isobenzofurandione,<br>4,5,6,7-tetrabromo- | 632-79-1 | X | ACTIVE          | X | - | X | X | X |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

## Section 16 - Other Information

This safety data sheet complies with the requirements of the EPA Hazardous Substances (Hazard Classification) Notice 2020 and WorkSafe New Zealand Regulations

### Legend

NZIoC - New Zealand Inventory of Chemicals

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - Chinese Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

NZS 5433:2020 - Transport of Dangerous Goods on Land

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

WEL - Workplace Exposure Limit

DNEL - Derived No Effect Level

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

VOC - (Volatile Organic Compound)

AICS - Australian Inventory of Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

CAS - Chemical Abstracts Service

ACGIH - American Conference of Governmental Industrial Hygienists

PNEC - Predicted No Effect Concentration

OECD - Organisation for Economic Co-operation and Development

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ADG - Australian Code for the Transport of Dangerous Goods by Road and Rail

LC50 - Lethal Concentration 50%

ATE - Acute Toxicity Estimate

RPE - Respiratory Protective Equipment

NOEC - No Observed Effect Concentration

BCF - Bioconcentration factor

PBT - Persistent, Bioaccumulative, Toxic

### Key literature references and sources for data

HSNO classifications provided in the New Zealand Chemical Classification Information Database (CCID).

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

EPA Guide to classifying hazardous substances in New Zealand

EPA - Assigning a product to an existing HSNO approval guide

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

### Revision Date

13-Mar-2023

### Revision Summary

Not applicable

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

## End of Safety Data Sheet