# tributyltin fluoride

## IDENTIFICATION NUMBERS

- **CAS:** 1983-10-4
- **EC/EINECS:** 217-847-9

## MORE INFORMATION

- **Molecular Formula:** C12H27FSn

## USES

fungicide, pesticide, antifouling, microbiocidal

⚠ **Black list — Substances particularly hazardous to the environment or health**

## CLASSIFICATION AND LABELLING (Regulation 1272/2008)

### Symbols



**GHS06**

Acute toxicity (oral, dermal, inhalation)



**GHS08**

Respiratory sensitisation



**GHS09**

Hazardous to the aquatic environment

**Signal word: Danger**

### H Phrases

**H301** : Toxic if swallowed

Acute Tox. (Cat. 3 *) : Acute toxicity

**H312** : Harmful in contact with skin

Acute Tox. (Cat. 4 *) : Acute toxicity

**H372** : Causes damage to organs through prolonged or repeated exposure

STOT RE (Cat. 1) : Specific target organ toxicity - repeated exposure

**H319** : Causes serious eye irritation

Eye Irrit. (Cat. 2) : Serious eye damage/eye irritation

**H315** : Causes skin irritation

Skin Irrit. (Cat. 2) : Skin corrosion/irritation

**H400** : Very toxic to aquatic life

Aquatic Acute (Cat. 1) : Hazardous to the aquatic environment

**H410** : Very toxic to aquatic life with long lasting effects

Aquatic Chronic (Cat. 1) : Hazardous to the aquatic environment

### Notes

- R.1272-Note A
- R.1272-Note 1

### Labelling

| Concentration | Labelling |
|---|---|
| C >= 25 %: | T, N; R21-25-36/38-48/23/25- 50/53 |
| 2,5 % <= C < 25 %: | T, N; R21-25-36/38- 48/23/25-51/53 |
| 1% <= C < 2,5 %: | T; R21-25-36/38-48/23/ 25-52/53 |
| 0,25 % <= C < 1 %: | Xn; R22-48/20/22-52/ 53 |
| | * |

## Specific health risks

### Endocrine disruptors

Substances with endocrine disrupting activity

**DISRUPTOR LEVEL**

NS, UE2

### Occupational Exposure Limits (OEL)

Daily exposure limit values (VLA-ED) published by the Spanish National Institute of Safety and Health at Work (INSST). They represent the average concentration of a chemical agent in the worker's breathing zone, measured or calculated in a time-weighted manner for an 8-hour daily working period. (https://www.insst.es/valores-limites-de-exposicion)

### Biological Exposure Indices (BEI)

Biological limit values (VLB) published by the Spanish National Institute of Safety and Health at Work (INSST). Reference values for assessing the risk of chemical agents by measuring them or their metabolites in biological matrices (blood, urine, exhaled air) of exposed workers.

## Specific environmental risks

### Aquatic toxicity (Water Framework Directive)

Substances classified with acute aquatic toxicity under the CLP Regulation (H400 phrase, Aquatic Acute 1). They present an immediate hazard to aquatic organisms, and their use or discharge can cause rapid damage to aquatic ecosystems.

### Atmospheric emissions

Substances subject to atmospheric emission limitations under the Industrial Emissions Directive (2010/75/EU) and its Spanish transposition. Includes pollutants regulated in industrial installation emission permits and best available technique reference documents (BAT/BREF).

## Environmental regulations

### LPCIC (EPER)

Priority substances and specific pollutants within the EU water policy framework, established by the Water Framework Directive (2000/60/EC) and the Priority Substances Directive (2008/105/EC and amendments). Substances posing significant risk to European surface waters and subject to Environmental Quality Standards (EQS).

| EPER WATER | EPER AIR |
|---|---|
| 1 | 1 |

| EPER SOIL |
|---|
| 1 |

### EPER Water

Substances from List 1 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Atmospheric pollutants —including $SO_2$, NOx, heavy metals and organic compounds— that must be taken into account when setting emission limit values for IPPC installations.

### EPER Air

Substances from List 2 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Pollutants that may affect surface and groundwater bodies and must be considered in the integrated environmental authorisation of industrial installations.

### EPER Soil

Substances from List 3 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Substances present in waste generated by IPPC installations that must be controlled and minimised within the framework of best available techniques.

## Restriction/prohibition regulations

### Restricted substances under REACH

Substances listed in Annex XVII of the REACH Regulation (EC) No 1907/2006, subject to restrictions on their manufacture, placing on the market or use. Restrictions may be total or partial, limiting specific applications, maximum concentrations or user groups.

### Substances under PACT evaluation

Substances under active regulatory monitoring through ECHA's PACT (Public Activities Coordination Tool). Allows tracking which regulatory authorities are examining a substance and what potential regulatory actions are being considered (restriction, SVHC identification, harmonised classification, etc.).

### Major accident hazards (Seveso)

Hazardous substances listed in Annex I of the Seveso III Directive (Directive 2012/18/EU), transposed in Spain by Royal Decree 840/2015. Their presence in industrial establishments in quantities equal to or above established thresholds triggers obligations to implement major accident risk control measures.