



Boron Trifluoride

Product Stewardship Summary

Chemical Name:	Boron Trifluoride
Synonyms:	Trifluoroborane, Boron fluoride (BF ₃), Borane, trifluoro-
CAS Number:	7637-07-2
EC (EINECS) Number:	231-56-5
Revision number:	1-2024

- **Chemical identification and uses:** Boron Trifluoride is a pungent, colorless, and inorganic gas that is typically used in chemical-technical applications as a reagent in organic synthesis. It is also used as a catalyst in a variety of chemical reactions such as isomerization and alkylation. Boron Trifluoride is typically shipped as a compressed gas.
- **Potential exposures:** Exposure to Boron Trifluoride can occur in industrial/manufacturing facilities and/or during laboratory use where the compound is handled. Workers and laboratory personnel risk exposure primarily through inhalation, skin and eye contact. Good manufacturing and industrial hygiene practices should be followed to prevent or reduce contact. See the Safety Data Sheet (SDS) for additional information.
- **Human Health hazards:** As a toxic gas, Boron Trifluoride is fatal if inhaled and causes severe skin burns and eye damage upon exposure. Additionally, as it is typically a gas under pressure, it may explode if heated and may displace oxygen and cause rapid suffocation under. Boron Trifluoride may also cause damage to organs through prolonged or repeated exposure. One should refer to See the Safety Data Sheet (SDS) for additional information and any protective information. It is not considered a carcinogen by OSHA, NTP or IARC.
- **Environmental Health hazards:** While Boron Trifluoride is not classified as toxic to aquatic life, its vapor reacts rapidly with water in the air to form BF₃ hydrates. Reaction with excess water forms fluoroboric acid (a strong acid), boric acid and hydroxy fluoroboric acids. As such, it should not be flushed into surface water or sanitary sewer systems and should instead be disposed of in accordance with all federal, state, and local environmental regulations.
- Please contact us at ESSPSCustomerCare@Honeywell.com for more information. Additional information may also be found at the following links:

[EPA - Boron Trifluoride](#)

[Pubchem - Boron Trifluoride](#)

This product stewardship summary is intended to give general information about the chemical or categories of chemicals addressed. It is not intended to provide an in-depth discussion of all health and safety information. Additional information on the chemical is available through the applicable Material Safety Data Sheet which should be consulted before use of the chemical. The product stewardship summary does not supplant or replace required regulatory and/or legal communication documents. Statements concerning use of our products are made without warranty that any such use is free of patent infringement and are not recommendations to infringe any patent.