Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking
   Product identifier:
   - Product name: EMI-BF4
   - Product code (SDS NO): 2862E-2

   Details of the supplier of the safety data sheet
   Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
   Address: 3-1, Honmachibashi, Chuo-ku,Osaka 540-0029,JAPAN
   Division: Safety Management Dept. of Chemicals
   Telephone number: +81-6-6946-8061
   FAX: +81-6-6946-1607
   e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification
   GHS classification and label elements of the product
   Classification of the substance or mixture
   HEALTH HAZARDS
   - Specific target organ toxicity - single exposure: Category 3 (Respiratory tract irritation)
   - Specific target organ toxicity - repeated exposure: Category 1 (Bone)

   Label elements
   - Signal word: Danger

   HAZARD STATEMENT
   - May cause respiratory irritation
   - Causes damage to organs through prolonged or repeated exposure

   PRECAUTIONARY STATEMENT
   Prevention
   - Do not breathe dust/fume/gas/mist/vapors/spray.
   - Use only outdoors or in a well-ventilated area.
   - Wash contaminated parts thoroughly after handling.
   - Do not eat, drink or smoke when using this product.

   Response
   - Get medical advice/attention if you feel unwell.

   IF INHALED:
   - Remove person to fresh air and keep comfortable for breathing.

   Storage
   - Store in a well-ventilated place. Keep container tightly closed.

   Disposal
   - Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients
   Mixture/Substance selection:
   - Substance
     - Ingredient name: 1-Ethyl-3-methyl imidazolium tetrafluoroborate
     - Content (%): 95 (min)
     - Chemical formula: C6H11N2BF4
4. First-aid measures

Descriptions of first-aid measures

General measures
Get medical attention/advice if you feel unwell.

IF INHALED
Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)
Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

IF SWALLOWED
Rinse mouth.
Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Use appropriate extinguishing media suitable for surrounding facilities.

Specific hazards arising from the substance or mixture
Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters
Specific fire-fighting measures
Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters
Wear fire/flame resistant/retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures
Ventilate area until material pick up is complete.
Wear proper protective equipment.

Methods and materials for containment and cleaning up
Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident
Collect spillage.
7. Handling and storage
Precautions for safe handling
Preventive measures
(Exposure Control for handling personnel)
Do not breathe dust/fume/gas/mist/vapors/spray.
(Protective measures against fire and explosion)
Keep away from heat/sparks/open flames/hot surfaces. ~ No smoking.
Exhaust/ventilator
Exhaust/ventilator should be available.
Safety treatments
Avoid contact with skin.
Avoid contact with eyes.
Safety Measures/Incompatibility
Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing or face protection.
When using do not eat, drink or smoke.
Conditions for safe storage, including any incompatibilities
Recommendation for storage
Keep container tightly closed.
Store in a cool, dry place. Do not store in direct sunlight.
keep under lock and key.

8. Exposure controls/personal protection
Exposure controls
Appropriate engineering controls
Do not use in areas without adequate ventilation.
Eye wash station should be available.
Washing facilities should be available.
Individual protection measures
Respiratory protection
Wear respiratory protection.
Hand protection
Wear protective gloves.
Eye protection
Wear eye/face protection.
Safety and Health measures
Wash contaminated parts thoroughly after handling.
Do not eat, drink or smoke when using this product.

9. Physical and Chemical Properties
Information on basic physical and chemical properties
Physical properties
Appearance: Liquid (20°C)
Color: Colorless to light yellow, clear
Odor: Odorless
pH data N.A.
Phase change temperature
Initial Boiling Point/Boiling point data N.A.
Boiling range data N.A.
Melting point/Freezing point data N.A.
Decomposition temperature data N.A.
Flash point data N.A.
Auto-ignition temperature data N.A.
Explosive properties data N.A.
Vapor pressure data N.A.
Specific gravity/Density: 1.283g/cm³ (20°C)
Solubility
   Solubility in water: Soluble
   n-Octanol/water partition coefficient data N.A.

10. Stability and Reactivity
Reactivity
   N.A.
Chemical stability
   Stable under normal storage/handling conditions.
Possibility of hazardous reactions
   React with oxidizing agent.
Conditions to avoid
   Contact with incompatible materials.
   Contact with fire source.
Incompatible materials
   Oxidizing agents
Hazardous decomposition products
   Carbon oxides, Nitrogen oxides, Fluorine, Hydrogen fluoride

11. Toxicological Information
Information on toxicological effects
   No Acute toxicity data available
   No Irritant properties data available
   No Allergenic and sensitizing effects data available
   No Mutagenic effects data available
   No Carcinogenic effects data available
   No reproductive toxicity data available
   Delayed and immediate effects and also chronic effects from short- and long-term exposure
   STOT
       STOT—single exposure
       [cat.3 (resp. irrit.)]
       [Company proprietary data]
       (1-Ethyl-3-methyl imidazolium tetrafluoroborate)
       Respiratory tract irritation (ACGIH-TLV(2005): May cause respiratory irritation)
       STOT—repeated exposure
       [cat.1]
       [Company proprietary data]
       (1-Ethyl-3-methyl imidazolium tetrafluoroborate)
       Bone (ACGIH-TLV(2005): fluorosis (As fluoride))
   No Aspiration hazard data available

12. Ecological Information
Ecotoxicity
   No Aquatic toxicity data available
   No Persistence and degradability data available
   No Bioaccumulative potential data available
13. Disposal considerations
Waste treatment methods
Dispose of contents/container in accordance with local/national regulation.

14. Transport Information
Not applicable to UN No.
IMDG Code (International Maritime Dangerous Goods Regulations)
Not applicable to IMDG Code
IATA Dangerous Goods Regulations
Not applicable to IATA Dangerous Goods Regulations
Environmental hazards
MARPOL Annex III – Prevention of pollution by harmful substances
Marine pollutants (yes/no) : no
MARPOL Annex V – Prevention of pollution by garbage discharge
Specific target organ toxicity – repeated exposure: cat.1
1-Ethyl-3-methyl imidazolium tetrafluoroborate

15. Regulatory Information
Other regulatory information
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information
GHS classification and labelling
STOT SE 3: H335 May cause respiratory irritation
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure
Reference Book
Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN
IMDG Code, 2018 Edition (Incorporating Amendment 39–18)
IATA Dangerous Goods Regulations (60th Edition) 2019
Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2018 TLVs and BEIs. (ACGIH)
http://monographs.iarc.fr/ENG/Classification/index.php
Supplier’s data/information
General Disclaimer
This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products’ properties.
The GHS classification data given here is based on current Japan official data (NITE published in 2017).