GPS Safety Summary
Potassium Fluoride (KF)

Reference number: AIL-GPS-078 Issue date: 14/04/2025 Version: 1.0 **CL-4: PUBLIC**

1. General Statement

Potassium Fluoride (KF) is white, odourless, powder- like solid .Non-combustible substance.Freely soluble in water.Strongly hygroscopic.On contact with acids hydrogen fluoride develops.Acute or chronic health hazards result from the substance.

2. Chemical identification.

Name :Potassium Fluoride (KF)
CAS number(s) :7789-23-3
EC number :232-151-5
Molecular formula : KF
Structure :

3. Uses and Benefits

In the fluorination of organic compounds; in flux for hard solder; to prevent unwanted fermentations; in insecticide formulations; for etching glass.It is also used as Bactericide as well as Insecticide

4. Physical / chemical properties

Property	Value
Physical state :	Solid
Colour :	Off-white to white
Odour :	Odourless
pH :	NDA
Melting point :	856 °C at 101 325 Pa
Boiling point :	1505 °C (1013 hPa)
Flash point :	NDA
Density :	2490 kg/m3 (22 °C)
Solubility in Water:	92.3 g/100ml

GPS Safety Summary

Potassium Fluoride (KF)

CL-4:PUBLIC

---

5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal)	Toxic if swallowed,Toxic in contact with skin,Toxic if inhaled
Irritation / corrosion Skin / eye/ respiratory tract	NA
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure Oral / inhalation / dermal	NA
Genotoxicity / Mutagenicity	NA
Carcinogenicity	NA
Toxicity for reproduction	NA

6. Environmental Effects

Effect Assessment	Result
Aquatic toxicity	No
Fate and behavior	**Result**
Persistence and degradability	Biodegradability: not applicable.
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

7. Exposure

Human health

Potassium Fluoride (KF) is toxic if swallowed, is toxic in contact with skin and is toxic if inhaled.It also causes causes serious eye damage.The exposure must be kept as minimum as possible by the use of appropriate risk management measures suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals.Industrial workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

Environment

Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

8. Risk Management Recommendations

Human health measures

Organizational	A basic standard of occupational hygiene is recommended. Ensure operatives are well informed of the hazards and trained to minimise exposures. Ensure regular inspection and maintenance of equipment and machines. Handle and store according to the indications of the Safety Data Sheet.	
Protection	Eye protection:	Face shield (EN 166). In case of dust production: protective goggles (EN 166)
	Skin and body protection:	Protective clothing (EN 14605 or EN 13034). In case of dust production: head/neck protection. In case of dust production: dustproof clothing (EN 13982)
	Respiratory protection:	Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus (EN 136 + EN 137)
Engineering controls	Process controls which involve changing the way a job activity or process is done to reduce the risk.Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.	
Environment protective measures		
Avoid release to the environment		

9. First-aid measures

First-aid measures after inhalation: Remove victims into fresh air. Immediately consult a doctor/medical service. Doctor:administration of corticoid spray.

First-aid measures after skin contact: If possible, wipe up/dry remove chemicals. Then rinse/shower immediately for 30 minutes with (lukewarm) water. Cut clothing; never remove burnt clothing from the wound. Do not give any pain medication. Consult a doctor/medical service.

First-aid measures after eye contact: Rinse immediately with (lukewarm) water. Remove contact lenses, if present and easy to do.Continue rinsing. If irritation persists, consult a doctor/medical service.

First-aid measures after ingestion : Rinse mouth with water. Immediately consult a doctor/medical service. Do not wait for symptoms to occur to consult the Poison Center.

10. Fire-fighting measures

Extinguishing media
Suitable extinguishing media: Adapt extinguishing media to the environment for surrounding fires.

Unsuitable extinguishing media : No information available.

Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire: On burning: release of toxic and corrosive gases/vapours (hydrofluoric acid).

Advice for firefighters
Precautionary measures fire :Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions: Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

11. Accidental release measures

Protective equipment :Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137). Dust cloud production: dust-tight suit (EN 13982).

Environmental precautions: Prevent soil and water pollution. Prevent spreading in sewers.

For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply.Dam up the solid spill. Knock down/dilute dust clouds with water spray. Take account of toxic/corrosive precipitation water.

12. Disposal consideration

Regional legislation (waste) : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

GPS Safety Summary
Potassium Fluoride (KF)
CL-4:PUBLIC

---

13. Handling and storage

Precautions for safe handling: Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately.Clean contaminated clothing. Keep the container tightly closed. Do not discharge the waste into the drain.

Hygiene measures : Observe strict hygiene.

14. Classification and Labeling

Hazard pictograms (GHS US) :

Signal word (GHS US)	:	Danger
Hazard statements (GHS US)	:	H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
Precautionary statements (GHS US)	:	P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 - If swallowed: Immediately call a poison center or doctor. P302+P352 - If on skin: Wash with plenty of water. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P311 - Call a poison center or doctor. P312 - Call a poison center or doctor if you feel unwell. P321 - Specific treatment (see supplemental first aid instruction on this label). P322 - Specific treatment (see supplemental first aid instruction on this label) P330 - Rinse mouth. P361+P364 - Take off immediately all contaminated clothing and wash it before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

15. Conclusion

Potassium Fluoride (KF) is white, odourless, powder- like solid .Non-combustible substance.Freely soluble in water.Strongly hygroscopic.On contact with acids hydrogen fluoride develops.Acute or chronic health hazards result from the substance..Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies.The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.

16. Contact Information within company

Manufacturer
Aarti Industries Limited
Udyog Kshetra, 2nd Floor, Mulund Goregaon Link Road, Mulund (West)

GPS Safety Summary

Potassium Fluoride (KF)

CL-4:PUBLIC

400080 Mumbai - India
T +91-22-6797-6666 - F +91-22-2565 3234
info@aarti-industries.com - www.aarti-industries.com

This GPS safety summary is intended to give general information about the health, safety and environment and not intended to provide in-depth details. To obtain the most accurate and current information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.