



MATERION

SAFETY DATA SHEET

1. Identification

Product identifier	Gallium Fluoride (GaF3)	
Other means of identification		
SDS number	2OR	
Materion Code	2OR	
CAS number	7783-51-9	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Materion Advanced Chemicals Inc.	
Address	407 N 13th Street 1316 W. St. Paul Avenue Milwaukee, WI 53233 United States	
Telephone	414.212.0290	
E-mail	advancedmaterials@materion.com	
Contact person	Laura Hamilton	
Emergency phone number	Chemtrec	800.424.9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation.
Precautionary statement	
Prevention	Do not breathe dust/fume/gas/mist/vapors Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well ventilated area.
Response	IF exposed: Call a POISON CENTER or doctor/physician. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Gallium Fluoride (GaF3)		7783-51-9	100

4. First-aid measures

Inhalation	Move into fresh air and keep at rest. If breathing stops, provide artificial respiration. Do not use mouth-to-mouth method if victim inhaled the substance. Call a physician or poison control center immediately.
Skin contact	Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Call a physician or poison control center immediately.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician or poison control center immediately.
Ingestion	Immediately call a poison center/doctor. Do not induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
Most important symptoms/effects, acute and delayed	Corrosive effects.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

5. Fire-fighting measures

Suitable extinguishing media	Use dry chemical, carbon dioxide (CO2), or a dry, non-combustible material such as dry sand or earth to extinguish flames.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear suitable protective clothing, gloves and eye/face protection. Immediately evacuate personnel to safe areas. Avoid contact with skin and eyes. Change contaminated clothing.
Methods and materials for containment and cleaning up	Sweep up or gather material and place in appropriate container for disposal. Avoid dust formation.
Environmental precautions	Avoid release to the environment. Refer to special instructions/safety data sheets. Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling	Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin, and clothing. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level.
Conditions for safe storage, including any incompatibilities	Corrosive storage. Store in tightly closed original container in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
Gallium Fluoride (GaF3) (CAS 7783-51-9)	PEL	2.5 mg/m3 (as fluoride)

US. OSHA Table Z-2 (29 CFR 1910.1000)

Material	Type	Value	Form
Gallium Fluoride (GaF3) (CAS 7783-51-9)	TWA	2.5 mg/m3	Dust.

US. ACGIH Threshold Limit Values

Material	Type	Value
Gallium Fluoride (GaF3) (CAS 7783-51-9)	TWA	2.5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Gallium Fluoride (GaF3) (CAS 7783-51-9)	TWA	2.5 mg/m3

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Material	Type	Value
Gallium Fluoride (GaF3) (CAS 7783-51-9)	PEL	2.5 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
Gallium Fluoride (GaF3) (CAS 7783-51-9)	3 mg/l	Fluoride	Urine	*
	2 mg/l	Fluoride	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

Eye/face protection	Use eye protection.
Skin protection	
Hand protection	Use protective gloves.
Other	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	If ventilation is insufficient, suitable respiratory protection must be provided.
Thermal hazards	Not available.

9. Physical and chemical properties

Appearance	Solid.
Physical state	Solid.
Form	Not available.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.

Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0.0000001 kPa (77 °F (25 °C))
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Molecular formula	F3Ga
Molecular weight	19 g/mol

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Instability caused by excessive moisture.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Acids. Alkalies.
Hazardous decomposition products	Hydrogen fluoride. Gallium oxide

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms related to the physical, chemical and toxicological characteristics Contact with this material will cause burns to the skin, eyes and mucous membranes.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Not available.

Serious eye damage/eye irritation Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Not available.

Germ cell mutagenicity Not available.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Gallium Fluoride (GaF3) (CAS 7783-51-9) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity No ecotoxicity data noted for the ingredient(s).

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from residues / unused products Not available.

Contaminated packaging Not available.

14. Transport information

DOT

UN number UN3260

UN proper shipping name Corrosive solid, acidic, inorganic, n.o.s. (Gallium (III) fluoride)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group III

Special precautions for user Not available.

IATA

UN number UN3260

UN proper shipping name Corrosive solid, acidic, inorganic, n.o.s. (Gallium (III) fluoride)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group III

Environmental hazards No.

Special precautions for user Not available.

IMDG

UN number	UN3260
UN proper shipping name	Corrosive solid, acidic, inorganic, n.o.s. (Gallium (III) fluoride)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Not available.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated.
(SDWA)

16. Other information, including date of preparation or last revision

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Version # 01

Disclaimer Not available.