SAFETY DATA SHEET

1. Identification

Product identifier	**Polarbond**
Other means of identification	None.
Recommended use	Anti-stripping additive
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer:	Ergon Asphalt & Emulsions, Inc.
Address:	2829 Lakeland Drive Jackson, MS 39232
Website:	www.ergonasphalt.com
Telephone:	1-800-222-7122 (Customer Service)
E-mail:	sds@ergon.com
24 hour Emergency (CHEMTREC):	North America 1-800-424-9300; International 1-703-527-3887

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Skin corrosion/irritation	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word Danger

Hazard statement May be corrosive to metals. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage.

Precautionary statement

Prevention Keep only in original container. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling.

Response IF ON SKIN: Wash with plenty of water. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Take off contaminated clothing and wash before reuse. Specific treatment see Section 4 of this SDS. Absorb spillage to prevent material damage.

Storage Store locked up. Store in corrosive resistant container with a resistant inner liner.

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	%
POLYPHOSPHORIC ACIDS		8017-16-1/7664-38-2	90 - 99
PROPRIETARY INGREDIENTS		N/A	0 - 10
HEXAFLUOROSILICIC ACID		16961-83-4	<=1
HYDROGEN FLUORIDE, ANHYDROUS		7664-39-3	<=1

4. First-aid measures

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.

Skin contact
Wash the skin immediately with soap and water. Immediately remove contaminated clothing. Wash contaminated clothing before reuse. Contaminated leather articles, including shoes, that cannot be decontaminated should be discarded. DO NOT rub or scratch affected area. Call a physician or poison control center immediately.

Eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion
Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention immediately.

Most important symptoms/effects, acute and delayed
May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Choking. Wheezing. Shortness of breath. Corrosive effects. Nausea, vomiting.

5. Fire-fighting measures

Suitable extinguishing media
Water spray. Dry chemicals. Carbon dioxide (CO2). Dry sand. Foam.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
Irritating and toxic gases or fumes may be released during a fire.

Special protective equipment and precautions for firefighters
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Particular/heightened danger of slipping on leaked/spilled product. Do not inhale explosion gases or combustion gases. Water spray should be used to cool containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Keep upwind of the spilled material and isolate exposure. Particular danger of slipping on leaked/spilled product.

Methods and materials for containment and cleaning up
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Large Spills: Dike the spilled material, where this is possible. Stop leak if you can do so without risk. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Prevent entry into waterways, sewer, basements or confined areas.

Environmental precautions
Avoid release to the environment. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Keep away from metals and other incompatibles Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not taste or swallow. Avoid contact with skin. Avoid contact with clothing. Wear personal protective equipment. Avoid contact during pregnancy/while nursing. Do not use in areas without adequate ventilation. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store in corrosive resistant container with a resistant inner liner. Unsuitable containers: metals. Store in a cool, dry place out of direct sunlight. Store locked up. Keep away from heat, sparks and open flame. Store in a well-ventilated place. Store in a closed container away from incompatible materials. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
HEXAFLUOROSILICIC ACID (CAS 16961-83-4)	PEL	2.5 mg/m3
HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3)	PEL	2.5 mg/m3

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

Components	Type	Value	Form
HEXAFLUOROSILICIC ACID (CAS 16961-83-4)	TWA	2.5 mg/m3	Dust.
HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3)	TWA	3 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value
HEXAFLUOROSILICIC ACID (CAS 16961-83-4)	TWA	2.5 mg/m3
HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3)	Ceiling	2 ppm
	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
HEXAFLUOROSILICIC ACID (CAS 16961-83-4)	TWA	2.5 mg/m3
HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3)	Ceiling	5 mg/m3
		6 ppm
	TWA	2.5 mg/m3
		3 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
HEXAFLUOROSILICIC ACID (CAS 16961-83-4)	3 mg/l	Fluoride	Urine	*
	2 mg/l	Fluoride	Urine	*
HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3)	3 mg/l	Fluoride	Urine	*

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
	2 mg/l	Fluoride	Urine	*

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

Exposure guidelines

US - California OELs: Skin designation

HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3) Danger of cutaneous absorption

Appropriate engineering controls Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical goggles and face shield are recommended.

Skin protection

Hand protection Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Avoid contact with clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Do not get in eyes. Avoid contact with skin. When using, do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance Green liquid. Viscous.

Physical state Liquid.

Form Liquid.

Color Green

Odor Odorless.

Odor threshold Not available.

pH 0 - 1

Melting point/freezing point Not available.

Initial boiling point and boiling range 269.6 °F (132 °C)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

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.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	Strong alkalis. Metals other than stainless steel. Contact with incompatible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Protect against direct sunlight.
Incompatible materials	Reacts violently with alkalis producing heat. This material is corrosive to common metals such as mild steel, copper, brass and bronze and may generate hydrogen gas as a result of reaction. Metals. Strong bases. Strong acids.
Hazardous decomposition products	Oxides of phosphorus. Carbon dioxide. Carbon monoxide. Thermal decomposition can lead to release of irritating gases and vapors. Corrosive vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns and eye damage.
Eye contact	Causes serious eye damage.
Ingestion	Harmful if swallowed. Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
Symptoms related to the physical, chemical and toxicological characteristics	May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. Nausea, vomiting. Shortness of breath.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
HEXAFLUOROSILICIC ACID (CAS 16961-83-4)		
Acute		
Oral		
LD50	Rat	430 mg/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	Not available.
Germ cell mutagenicity	Not available.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3) 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	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1805
UN proper shipping name	Phosphoric acid solution
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Special precautions for user	Not available.
Special provisions	A7, IB3, N34, T4, TP1
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN1805
UN proper shipping name	Phosphoric acid, solution
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1805
UN proper shipping name	PHOSPHORIC ACID SOLUTION
Transport hazard class(es)	
Class	8
Subsidiary risk	-

Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Not available.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	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)

HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3) Listed.

SARA 304 Emergency release notification

Hydrofluoric acid (CAS 7664-39-3) 100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
HYDROGEN FLUORIDE, ANHYDROUS	7664-39-3	100	100		

SARA 311/312 Hazardous chemical	Yes
Classified hazard categories	Corrosive to metal Acute toxicity (any route of exposure) Skin corrosion or irritation

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
HYDROGEN FLUORIDE, ANHYDROUS	7664-39-3	<=1

Other federal regulations

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

HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3)

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

HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

HEXAFLUOROSILICIC ACID (CAS 16961-83-4)
HYDROGEN FLUORIDE, ANHYDROUS (CAS 7664-39-3)

California Proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 11-16-2020

Revision date 07-12-2022

Version # 03

NFPA ratings Health: 3
Flammability: 1
Instability: 0

Disclaimer Not available.

Revision information Physical & Chemical Properties: Multiple Properties
Regulatory information: California Proposition 65