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Section 1. Identification

Product identifier

Product IdentityBisphenol F Liquid Epoxy Resin BFE-170 **Other means of identification**Bisphenol F Liquid Epoxy Resin BFE 170

Relevant identified uses of the substance or mixture and uses

Adhesives Casting, potting, encapsulation for electrical components. Protective coating, laminating and civil engineering.

Details of the supplier of the safety data sheet

Company Name Silver Fern Chemical, Inc.

121 W. De La Guerra Street, Suite B

Santa Barbara, CA 93101 USA

Customer Service 1-866-282-3384 / info@silverfernchemical.com

Website - www.silverfernchemical.com

24 hour Emergency Infotrac: 1-800-535-5053

Telephone No. Outside USA & Canada +1-352-323-3500

Section 2. Hazard(s) identification

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Skin corrosion/irritation category 2;H315 Causes skin irritation.

Serious eye damage / eye irritation, category

Causes serious eye irritation.

2;H319

Skin sensitizer category 1;H317 May cause an allergic skin reaction.



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Aquatic toxicity (chronic), category 2;H411

Toxic to aquatic life with long lasting effects.

Label elements





Warning

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

[Prevention]

P261 Avoid breathing dust, fume, gas, mist, vapors, spray.

P264 Wash thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves, eye protection, and face protection.

[Response]

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+313 If skin irritation or a rash occurs: Get medical advice or attention.

P337+313 If eye irritation persists: Get medical advice or attention.

P362+364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

[Storage]

No GHS storage statements

[Disposal]

P501 Dispose of contents or container in accordance with local and national regulations.

Other hazards

This product contains no PBT/vPvB/vPvM chemicals.

This product contains no endocrine disrupting chemicals.

Does not contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per US or Canadian regulations.



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Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Bisphenol F epoxy resin	100	Skin corrosion/irritation category 2;H315	
CAS Number: 28064-14-4		Serious eye damage / eye irritation, category	No data
Synonyms: Bisphenol F nhựa epoxy		2;H319	
(av.mol.wt<700)		Skin sensitizer category 1;H317	available
		Aquatic toxicity (chronic), category 2;H411	

The actual concentration or concentration range is withheld as a trade secret.

Section 4. First aid measures

Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or

stopped, give artificial respiration. If unconscious, place in the recovery position

and obtain immediate medical attention. Give nothing by mouth.

Eyes Rinse with plenty of clean water for at least 15 minutes, holding the eyelids

apart and seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or

use a recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce

vomiting.

Most important symptoms and effects, both acute and delayed

Overview No specific symptom data available.

No chronic toxicity or long term toxicity information available. Treat

^{*}PBT/vPvB - PBT, vPvM or vPvB-substance.

The full texts of the phrases are shown in Section 16.



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symptomatically. See section 2 for further details.

Eyes Causes serious eye irritation.

Skin May cause an allergic skin reaction. Causes skin irritation.

Section 5. Fire-fighting measures

Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray. Unsuitable extinguishing media: Do not use; water jet.

Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available. Avoid breathing dust, fume, gas, mist, vapors, spray.

Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

ERG Guide No.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8). Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.



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Environmental precautions

Do not allow spills to enter drains or waterways.

Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

Section 7. Handling and storage

Precautions for safe handling

Handle containers carefully to prevent damage and spillage. See section 2 for further details. - [Prevention] Do not get in eyes, on skin, or on clothing. Use only in well ventilated areas.

Conditions for safe storage, including any incompatibilities

Incompatible materials: No available information Store in cool, dry place in tightly closed receptacles. Store in a cool location. Keep receptacle tightly sealed.

Specific end use(s)

No available information

Section 8. Exposure controls / personal protection

Control parameters

Exposure Limits

CAS No.	Ingredient	Source	Value
28064-14-4	Bisphenol F epoxy resin	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit



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Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit they must

use the appropriate, certified respirators.

Eyes Protective safety glasses recommended

Skin Avoid skin contact. Protective gloves recommended.

Engineering Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection

must be worn.

Other Work Use good personal hygiene practices. Wash hands before eating, drinking,

Practices smoking or using toilet. Promptly remove soiled clothing and wash

thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State Liquid
Color Light Yellow

OdorWeak-CharacteristicMelting point / freezing pointNo available informationInitial boiling point and boiling rangeNo available information

Flammability (solid, gas) Not Applicable

Upper/lower flammability or explosive Lower Explosive Limit: No available

limits information

Upper Explosive Limit: No available

information

Flash Point 257 °C (495 °F)

Auto-ignition temperatureNo available informationDecomposition temperatureNo available informationpHNo available information



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Viscosity (cSt) No available information

Solubility in WaterNot miscible or difficult to mix. **Partition coefficient n-octanol/water (Log** n-OCTANOL/WATER PARTITION

(ow) COEFFICIENT

Vapor pressure (Pa)No available informationRelative DensityNo available informationVapor DensityNo available information

Evaporation rate (Ether = 1)No available informationOxidising propertiesNo available informationExplosive propertiesNo available informationDensity1.19 g/cm³(9.931 lbs/gal)

Other information

No other relevant information.

Section 10. Stability and reactivity

Reactivity

Hazardous Polymerization will not occur.

Chemical stability

Stable under normal circumstances.

Possibility of hazardous reactions

No available information

Conditions to avoid

Avoid high temperatures and contact with incompatible material To avoid thermal decomposition do not overheat. Avoid temperature above 300 °C. Potentially violent decomposition can occur above 350 °C.

Incompatible materials

Strong oxidizing agents

Acids, Alkalis, Amines

Hazardous decomposition products

Phenol, Phenolics, Carbon monoxide and carbon dioxide

Decomposition products depend upon temperature, air supply and the presence of other materials.



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Section 11. Toxicological information

Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Bisphenol F epoxy resin - (28064-14-4)	No data available.	No data available.	No data available.	No data available.	No data available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
28064-14-4	Bisphenol F epoxy resin	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No;
		ACGIH	No Established Limit

Classification	Category	Hazard Description
Acute toxicity (oral)		Not Applicable
Acute toxicity (dermal)		Not Applicable
Acute toxicity (inhalation)		Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization		Not Applicable
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity		Not Applicable
Carcinogenicity		Not Applicable
Reproductive toxicity		Not Applicable
STOT-single exposure		Not Applicable
STOT-repeated exposure		Not Applicable
Aspiration hazard		Not Applicable

Possible routes of entry: No available information



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Symptoms and effects, both acute and delayed:

No specific symptom data available.

No chronic toxicity or long term toxicity information available. Treat symptomatically.

Eyes Causes serious eye irritation.

Skin May cause an allergic skin reaction. Causes skin irritation.

Section 12. Ecological information

Toxicity

Toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish,	48 hr EC50 crustacea,	ErC50 algae,
	mg/L	mg/L	mg/L
Bisphenol F epoxy resin - (28064-14-4)	9.00, Oncorhynchus mykiss	9.00, Daphnia magna	No data available.

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

No available information

Mobility in soil

No available information

Results of PBT and vPvB assessment

This product contains no PBT/vPvB/vPvM chemicals.

Other adverse effects

No available information



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Section 13. Disposal considerations

Waste treatment methods

Observe all federal, provincial and local regulations when disposing of this substance.

Section 14. Transport information

Not regulated for packages under 5L (1.3 gallons) or 5.0 kg (11 lbs).

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN number	UN3082	UN3082	UN3082
UN proper shipping name	UN3082,Environmentally hazardous substances, liquid, n.o.s. (Bisphenol F epoxy resin),9,III	Environmentally hazardous substances, liquid, n.o.s. (Bisphenol F epoxy resin)	Environmentally hazardous substances, liquid, n.o.s. (Bisphenol F epoxy resin
Transport	Class:9	Class:9	Class:9
hazard class(es) Packing	Sub Class:Not Applicable III	Sub Class:Not Applicable III	Sub Class:Not Applicable III
group			

Environmental hazards

IMDG Marine Pollutant: Yes; (${\sf Bisphenol}\,{\sf Fepoxy}\,{\sf resin}$)

Special precautions for user

No available information



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Section 15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only

selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Toxic Substance Control Act (TSCA)

CAS Number	Ingredient	Toxic Substance Control Act (TSCA)	Comments	Status
0028064-14-4	Bisphenol F epoxy resin	Yes	UVCB XU	ACTIVE

The following flags are used:

- •Active indicates commercial status designation of active
- •E indicates a substance that is the subject of a Section 5(e) Consent Order under TSCA.
- •F indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- •N indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- •P indicates a commenced Premanufacture Notice (PMN) substance.
- •R indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- •S indicates a substance that is identified in a final Significant New Uses Rule.
- •SP indicates a substance that is identified in a proposed Significant New Uses Rule.
- •T indicates a substance that is the subject of a final Section 4 test rule under TSCA.
- •UVCB Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials •XU indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
- •Y1 indicates a polymer that has a number-average molecular weight greater than 1,000 and that was exempt under the 1984 polymer exemption rule.
- •Y2 indicates a polymer that is a polyester and that was exempt under the 1984 polymer exemption rule.



EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

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EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 Label Warning:

This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Mass RTK Substances (>1%):

(No Product Ingredients Listed)

New Jersey RTK Substances (>1%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Pennsylvania RTK Substances (>1%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.



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OSHA Process Safety Management Standard Highly Hazardous Chemicals, Toxics and Reactives:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US EPA List of Regulated Substances under the Risk Management Plan (RMP) Program:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) under the Minimum Risk Exemption:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA List II or Essential Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA - Exempt Chemical Mixtures - List 1 and 2:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US DHS Chemical Facility Anti-Terrorism Standards (CFATS):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Section	16. Ot	her info	ormation
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DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable.



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However, the information is provided without any warranty, express or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

The full text of the phrases appearing in section 3 is:

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

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