

SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

EPIKURETM Curing Agent 3140

Section 1. Product and company identification

GHS product identifier : EPIKURE™ Curing Agent 3140

MSDS Number : K8137_US
Product type : Curing Agent
Material uses : Epoxy Resin Systems

Manufacturer/Supplier/Importer : Westlake Epoxy Inc.

12650 DIRECTORS DR STE 100

Stafford, Texas 77477

USA

Contact person : epoxyservice@westlake.com

Telephone : For additional health and safety or regulatory information, call

1 380 251 9900

Emergency telephone number: For Emergency Medical Assistance

Call Health & Safety Information Services

1-866-303-6949

For Emergency Transportation Information CHEMTREC US Domestic (800) 262-8200 CANUTEC CA Domestic (613) 996-6666

Section 2. Hazards identification

Classification of the substance or

mixture

: SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITISATION - Category 1

GHS label elements

Hazard pictograms

(!)

Signal word : Warning

Hazard statements : H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

Precautionary statements

General : Not applicable.

Prevention: Wear protective gloves.

Wear eye or face protection. Avoid breathing vapor.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Response

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

IF ON SKIN:

Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or 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 or attention.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local,

regional, national and international regulations.

Other hazards which do not result

None known.

in classification

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% by weight	CAS
		number
Fatty Acids, C18-Unsatd., Dimers, Polymers with Tall-Oil	90 - 100	68082-29-1
Fatty Acids and Triethylenetetramine		
Triethylenetetramine	0 - 10	112-24-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the

upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable

for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments
Protection of first aid personnel

No specific treatment.

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media

: Use dry chemical, CO2, alcohol-resistant foam or water spray (fog).

: Do not use water jet.

Specific hazards arising from the chemical

Hazardous thermal decomposition products

In a fire or if heated, a pressure increase will occur and the container may burst.

 Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

Special protective actions for fire-

Promptly isolate the scene by removing all persons from the vicinity

fighters

Special protective equipment for fire-fighters

of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Fire-fighters should wear appropriate protective equipment and selfcontained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without For non-emergency personnel

suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is

inadequate. Put on appropriate personal protective equipment. For emergency responders If specialised clothing is required to deal with the spillage, take note of

any information in Section 8 on suitable and unsuitable materials. See

also the information in "For non-emergency personnel".

Avoid dispersal of spilled material and runoff and contact with soil, **Environmental precautions** waterways, drains and sewers. Inform the relevant authorities if the

product has caused environmental pollution (sewers, waterways, soil

or air).

Methods and material for containment and cleaning up

Small spill Stop leak if without risk. Move containers from spill area. Dilute with

water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste

disposal container. Dispose of via a licensed waste disposal contractor.

Large spill Stop leak if without risk. Move containers from spill area. Approach

release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for

emergency contact information and section 13 of SDS for waste

disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures Put on appropriate personal protective equipment (see section 8 of

SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.

Empty containers retain product residue and can be hazardous. Do not

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Advice on general occupational hygiene

reuse container.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

one.
IHA WEEL (1999-01-01) WA - TLV and PEL 1 ppm Totes: Absorbed through skin.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to

remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Viscous liquid.
Color : Reddish-brown

Odor : amine.
Odor threshold : Not available

pH : Not available

Melting point/ **Freezing point** : Not available **Boiling point** : Not available

Flash point : Open cup: Greater than > 110 °C (> 230 °F) (ASTM D 4206)

Burning time: Not availableBurning rate: Not availableEvaporation rate: Not available

Flammability (solid, gas) : Not available

Lower and upper explosive : **Lower:** Not available

(flammable) limits Upper: Not available

Vapor pressure : Negligible

Vapor density : Greater than 1 [Air = 1]

Relative density : Not available

Density 970 kg/m3

Solubility : Not available Solubility in water : Slightly

Partition coefficient: n-

octanol/water

Not available Not applicable.

Auto-ignition temperature : Not available

Decomposition temperature : Not available

SADT : Not available

Viscosity : Dynamic: 130 Pa·s @ 25 °C (77 °F)

Kinematic: Not available

Other information

No additional information.

Section 10. Stability and reactivity

Reactivity : Stable under normal conditions.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will

not occur.

Conditions to avoid : Avoid exposure - obtain special instructions before use. Avoid all

possible sources of ignition (spark or flame). No specific data.

Incompatible materials : strong oxidizing agents, No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition

products should not be produced.

Other hazards Heating this substance above 300 deg. F in the presence of air may

cause slow oxidative decomposition; above 500 deg. F polymerization

may occur.

Some combinations of resins and curing agents can produce exothermic reactions which in large masses can cause runaway

polymerization and charring of the reactants

Fumes and vapors from the thermal and chemical decompositions

vary widely in composition and toxicity.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	
Fatty Acids, C18-Unsatd., Dir	Fatty Acids, C18-Unsatd., Dimers, Polymers with Tall-Oil Fatty Acids and Triethylenetetramine				
	LD50 Oral	.D50 Oral Rat > 2,000 mg/kg -			
Remarks - Inhalation:	No applicable toxic	No applicable toxicity data.			
Remarks - Dermal:	No applicable toxic	No applicable toxicity data.			
Triethylenetetramine					
	LD50 Oral	Rat	1,716 mg/kg	-	
Remarks - Inhalation:	No applicable toxicity data.				
	LD50 Dermal	Rat	1,465 mg/kg	-	

Conclusion/Summary : Not available

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Fatty Acids, C18-Unsatd., Dimers, Polymers with Tall-Oil Fatty Acids and Triethylenetetramine					-
Remarks:	Causes skin ir	ritation. Caus	ses severe eye	irritation.	
Triethylenetetramine	Skin OECD- Guideline 404 (Acute Dermal Irritation/Co rrosion)	Rabbit	3.5 - 8	24 hrs	-
	eyes OECD- Guideline 405 (Acute Eye Irritation/Co rrosion)	Rabbit	2 - 4	< 1 hrs	1 hrs
Remarks:	Severely corre	osive to the ey	yes.		

Conclusion/Summary

Skin : Classification according to test study data of a similar product.

eyes : Classification according to test study data of a similar product.

Respiratory : Not available

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Triethylenetetramine	Skin	Guinea pig	Sensitizing OECD-
			Guideline 406 (Skin

		Sensitisation)
Remarks:	- allergic skin reaction	

Conclusion/Summary

Skin: Not availableRespiratory: Not available

Mutagenicity

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

Reproductive toxicity

Conclusion/Summary : Not available

Teratogenicity

Conclusion/Summary : Not available

Specific target organ toxicity (single exposure)

Not available

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Not available

Information on likely routes of

exposure

Not available

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

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

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain or irritation

watering redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

irritation redness

Ingestion : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available
Potential delayed effects : Not available

Long term exposure

Potential immediate effects : Not available **Potential delayed effects** : Not available

Potential chronic health effects

Fatty Acids, C18-Unsatd.,		-
Dimers, Polymers with Tall-		
Oil Fatty Acids and		
Triethylenetetramine		

Conclusion/Summary : Not available

General : Once sensitized, a severe allergic reaction may occur when

subsequently exposed to very low levels.

Carcinogenicity: No known significant effects or critical hazards.Mutagenicity: No known significant effects or critical hazards.Teratogenicity: No known significant effects or critical hazards.Developmental effects: No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards. No known significant

effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
EPIKURE™ Curing Agent 3140	21450 mg/kg	18312.5 mg/kg	N/A	N/A	N/A
Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine	2500 mg/kg	N/A	N/A	N/A	N/A
1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)-	1716 mg/kg	1465 mg/kg	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Fatty Acids, C18-Unsatd., Dime	cids, C18-Unsatd., Dimers, Polymers with Tall-Oil Fatty Acids and Triethylenetetramine		
Remarks - Acute - Fish:	No applicable toxicity data.		
Remarks - Acute - Aquatic	not available		
invertebrates.:			

Remarks - Acute - Aquatic	No applicable toxicity data.		
invertebrates.:			
Remarks - Acute - Aquatic	not available		
plants:			
Remarks - Acute - Aquatic	No applicable toxicity data.		
plants:			
Remarks - Acute - Micro-	not available		
organism:			
Remarks - Chronic - Fish:	No applicable toxicity data.		
Remarks - Chronic - Aquatic	No applicable toxicity data.		
invertebrates.:			
Triethylenetetramine			
	Acute LC50 330 mg/l Fresh water	Fish - Fathead minnow	96 h
	Acute LC50 31.1 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 20 mg/l Fresh water	Aquatic plants - Green algae	72 h
Remarks - Chronic - Fish:	No applicable toxicity data.		
	Chronic EC10 1.9 mg/l Fresh water	Aquatic invertebrates. Water flea	21 d

Conclusion/Summary : Not available

Persistence/degradability

Conclusion/Summary : Not available

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Triethylenetetramine	-1.661.4	•	low

Mobility in soil

Soil/water partition coefficient

(KOC)

: Not available

Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal

of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International transport regulations

CFR Non-regulated

TDG Non-regulated

IMO/IMDG Not dangerous goods

IATA (Cargo) Not dangerous goods

*PG: Packing group

Special precautions for user

: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

United States

U.S. Federal regulations

: United States - TSCA 12(b) - Chemical export notification: None

required.

United States - TSCA $5\alpha 2$ - Final significant new use rules: Not listed United States - TSCA $5\alpha 2$ - Proposed significant new use rules: Not

listed

United States - TSCA 5(e) - Substances consent order: Not listed SARA 311/312 Classification - SKIN IRRITATION, Category 2 SARA 311/312 Classification - EYE IRRITATION, Category 2A SARA 311/312 Classification - SKIN SENSITISATION, Category 1

SARA 311/312 Classification - Not applicable

California Prop. 65:

This product does not require a Safe Harbor warning under California Prop. 65.

United States inventory (TSCA: All components are active or exempted.

8b)

International regulations

International lists

Australia inventory (AICS) All components are listed or exempted.

Canada inventory All components are listed or exempted. **Japan inventory** All components are listed or exempted.

China inventory (IECSC) All components are listed or exempted. **Korea inventory (KECI)** All components are listed or exempted.

New Zealand Inventory (NZIoC) All components are listed or exempted. **Philippines inventory (PICCS)** All components are listed or exempted. United States inventory (TSCA 8b) All components are active or exempted.

Taiwan inventory (TCSI) All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System III (U.S.A.):

Health	*	2
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Full text of abbreviated H

statements

Not applicable.

History

Date of printing 04/10/2025 Date of issue/Date of revision 03/06/2024 09/22/2022 Date of previous issue

Version 24.0

Prepared by Product Safety Stewardship ATE = Acute Toxicity Estimate Key to abbreviations

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

RID = The Regulations concerning the International Carriage of Dangerous Goods by

UN = United Nations

Not available References

Notice to reader

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The

information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.