

Safety Data Sheet

D.E.R.™ 324 EPOXY RESIN

Version 1.1

Revision Date: 12/14/2020

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : D.E.R.™ 324 EPOXY RESIN

Recommended use of the chemical and restrictions on use

Recommended use : Adhesives
molding / casting
Coatings

Supplier or Repackaging Details

Company : Univar Solutions México, S. de R.L. de C.V.
Address : Av. Xola, número 535, piso 2, Col. Del Valle Norte
Deleg. Benito Juárez CP 03103
Ciudad de México
Mexico

Manufactured By : GNS Technologies, LLC

Emergency telephone number:

Transport North America: CHEMTREC (1-800-424-9300)

CHEMTREC INTERNATIONAL Tel # 703-527-3887

SETIQ 800 00 214 00 / 55 55 59 15 88

Additional Information: : Responsible Party: Product Compliance Department
E-Mail: SDSLA@univarsolutions.com
SDS Requests: 55 1107 0170
Website: www.univarsolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 2

Eye irritation : Category 2B

Skin sensitisation : Sub-category 1B

Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 2

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 + H320 Causes skin and eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

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P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin 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.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

This SDS was prepared according to NOM-018-STPS-2015.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical name	Weight percent
25085-99-8	Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer	70 - 90
68609-97-2	Oxirane, 2-[(C12-14-alkyloxy)methyl] derivs.	10 - 20

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

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.

If inhaled : If breathed in, move person into fresh air.
 If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.
 Wash off immediately with soap and plenty of water.
 Remove contaminated clothing and shoes.
 Wash contaminated clothing before reuse.

In case of eye contact : Immediately flush eye(s) with plenty of water.
 Remove contact lenses.
 Protect unharmed eye.
 Keep eye wide open while rinsing.

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If swallowed	If eye irritation persists, consult a specialist. : Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
Most important symptoms and effects, both acute and delayed	: None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water spray Dry chemical Carbon dioxide (CO2) Alcohol-resistant foam Foam regular foam (such as AFFF)
Unsuitable extinguishing media	: High volume water jet
Specific hazards during fire-fighting	: Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: toxic fumes Carbon oxides
Specific extinguishing methods	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	: Normal measures for preventive fire protection.
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Advice on safe handling	: Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Hygiene measures	: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
Recommended storage temperature	: 2 - 43 °C
Storage period	: 24 Months

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
Filter type	: Organic vapour type
Hand protection	
Remarks	: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	: Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	: Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: yellow
Odour	: mild

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Odour Threshold	: No data available
pH	: No data available
Freezing point	: No data available
Boiling point (Boiling point/boiling range)	: $\geq 149\text{ °C}$ ($\geq 300\text{ °F}$) (1013 hPa)
Flash point	: 176.7 - 190.6 °C (350.1 - 375.1 °F) Method: ASTM D 93, Pensky-Martens closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 0.06 mmHg @ 20 °C (68 °F)
Relative vapour density	: No data available
Relative density	: 1.11 - 1.14 @ 20 - 25 °C (68 - 77 °F) Reference substance: (water = 1)
Density	: No data available
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: 600 - 800 mPa.s @ 25 °C (77 °F) Method: ASTM D 445

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Product can undergo hazardous polymerization.
Conditions to avoid	: Keep away from heat, flame, sparks and other ignition sources. elevated temperatures over prolonged periods Possible emission of gaseous decomposition products may lead to a dangerous pressure build-up.
Incompatible materials	: Acids Amines Bases Oxidizing agents
Hazardous decomposition products	: Thermal decomposition can lead to release of irritating gases and vapours. phenols

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Carbon monoxide
water vapor**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Components:****25085-99-8:**

Acute oral toxicity : LD50 (Rat): > 15,000 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rabbit): > 23,000 mg/kg

68609-97-2:

Acute oral toxicity : LD50 (Rat): 17,100 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Skin corrosion/irritation**Components:****25085-99-8:**

Species: Rabbit

Result: Irritating to skin.

68609-97-2:

Species: Rabbit

Result: Irritating to skin.

Serious eye damage/eye irritation**Product:**

Result: Irritation to eyes, reversing within 7 days

Components:**25085-99-8:**

Species: Rabbit

Result: Irritating to eyes.

68609-97-2:

Species: Rabbit

Result: Mild eye irritation

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Respiratory or skin sensitisation

Product:

Result: The product is a skin sensitiser, sub-category 1B.

Components:

25085-99-8:

Species: Guinea pig

Result: May cause sensitisation by skin contact.

68609-97-2:

Test Type: Maximization test

Species: Guinea pig

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Components:

25085-99-8:

Germ cell mutagenicity - Assessment : Mutagenicity classification not possible from current data

68609-97-2:

Genotoxicity in vitro : Test Type: Ames test
Species: Salmonella typhimurium
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Components:

25085-99-8:

Carcinogenicity - Assessment : carcinogenicity classification is not possible

68609-97-2:

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

Reproductive toxicity

Components:

25085-99-8:

Reproductive toxicity - Assessment : Fertility classification not possible from current data.

Teratogenicity - Assessment : teratogenicity classification is not possible

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68609-97-2:

Teratogenicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****25085-99-8:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): 11 mg/l
Exposure time: 72 h

Acute aquatic toxicity- Assessment : Toxic to aquatic life.

Chronic aquatic toxicity- Assessment : Toxic to aquatic life with long lasting effects.

68609-97-2:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6.07 mg/l
Exposure time: 48 h

Toxicity to algae : IC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h

Acute aquatic toxicity- Assessment : Toxic to aquatic life.

Chronic aquatic toxicity- Assessment : Toxic to aquatic life with long lasting effects.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

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Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information

: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

: Dispose of in accordance with all applicable local, state and federal regulations.
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-909-4897

Contaminated packaging

: Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

DOT (Department of Transportation): Not regulated as a dangerous good

MX-DG (Mexico Road Transportation):

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (BISPHENOL A/ EPICHLOROHYDRIN RESIN), 9, III

IATA (International Air Transport Association):

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (BISPHENOL A/ EPICHLOROHYDRIN RESIN) , 9, III, Flash Point:176.7 - 190.6 °C(350.1 - 375.1 °F)

IMDG (International Maritime Dangerous Goods):

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (BISPHENOL A/ EPICHLOROHYDRIN RESIN), 9, III, Marine Pollutant (BISPHENOL A/ EPICHLOROHYDRIN RESIN)

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

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DSL	: not determined
AICS	: not determined
NZIoC	: not determined
ENCS	: not determined
KECI	: not determined
PICCS	: not determined
IECSC	: not determined

SECTION 16. OTHER INFORMATION

Further information

Other information : The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (55 1107 0170) SDSLA@univarsolutions.com.

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.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Sub-	NIOSH	National Institute for Occupational

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CNS	stances List Central Nervous System	NTP	Safety & Health National Toxicolo- gy Program
CAS	Chemical Abstract Service	NZIoC	New Zealand In- ventory of Chemi- cals
EC50	Effective Concen- tration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concen- tration 50%	NOEC	No Observed Ef- fect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safe- ty & Health Ad- ministration
EOSCA	European Oilfield Specialty Chemi- cals Association	PEL	Permissible Expo- sure Limit
EINECS	European Invento- ry of Existing Chemical Sub- stances	PICCS	Philippines Invento- ry of Commercial Chemical Sub- stances
MAK	Germany Maxi- mum Concentra- tion Values	PRNT	Presumed Not Toxic
GHS	Globally Harmo- nized System	RCRA	Resource Conser- vation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Expo- sure Limit
IC50	Inhibition Concen- tration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Re- search on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Exist- ing Chemical Sub- stances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Invento- ry	UVCB	Unknown or Varia- ble Compositon, Complex Reaction Products, and Bio- logical Materials
<=	Less Than or Equal To	WHMIS	Workplace Haz- ardous Materials Information Sys- tem

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LC50

Lethal Concentration 50%