



SikaBiresin® CR226 (formerly EPOLAM 2092) Part A

Revision Date 01/29/2024

Print Date 10/12/2024

SECTION 1. IDENTIFICATION

Product name : SikaBiresin® CR226 (formerly EPOLAM 2092) Part A

Other means of identification : No data available

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Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Acute toxicity (Oral) : Category 4

Skin irritation : Category 2

Serious eye damage : Category 1

Skin sensitization : Category 1

Germ cell mutagenicity : Category 2

Specific target organ toxicity - repeated exposure (Oral) : Category 2 (Gastro-intestinal system, Stomach, Reproductive organs)

GHS label elements

Hazard pictograms :



Signal Word : Danger



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Hazard Statements : H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs (Gastro-intestinal system, Stomach, Reproductive organs) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 + P310 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/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P405 Store locked up.

Disposal:

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

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.

Other hazards

None known.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

| Chemical name | CAS-No. | Classification | Concentration (% w/w) |
|------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Acute Tox. 4; H302 Skin Sens. 1B; H317 Muta. 2; H341 STOT RE 2; H373 | >= 30 - < 60 |
| Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis- | 1675-54-3 | Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Skin Sens. 1; H317 | >= 10 - < 30 |
| 4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline] | 28768-32-3 | Skin Sens. 1; H317 | >= 10 - < 30 |
| 1,4-bis(2,3-epoxypropoxy)butane | 2425-79-8 | Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 | >= 5 - < 10 |

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.



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- Most important symptoms and effects, both acute and delayed : irritant effects
sensitizing effects
Gastrointestinal discomfort
Allergic reactions
Excessive lachrymation
Erythema
Dermatitis
Harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Suspected of causing genetic defects.
May cause damage to organs through prolonged or repeated exposure if swallowed.
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : 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 fire-fighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Deny access to unprotected persons.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
Local authorities should be advised if significant spillages cannot be contained.
- 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



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- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products.
- Conditions for safe storage : Store in original container.
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.
Observe label precautions.
Store in accordance with local regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

- Engineering measures** : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

- Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
- The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
- 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 nec-



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- essary.
- Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : amber
- Odor : mild
- Odor Threshold : No data available
- pH : Not applicable
- Melting point/range / Freezing point : No data available
- Boiling point/boiling range : > 200 °C (> 392 °F)
- Flash point : 112 °C (234 °F)
(Method: closed cup)
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : No data available



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| | | |
|------------------------------------------|---|---------------------------------------------|
| Vapor pressure | : | 0.01 hpa |
| Relative vapor density | : | No data available |
| Density | : | 1.13 g/cm ³ (20 °C (68 °F)) |
| Solubility(ies) | | |
| Water solubility | : | soluble |
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Autoignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | > 20.5 mm ² /s (40 °C (104 °F)) |
| Explosive properties | : | No data available |
| Oxidizing properties | : | No data available |
| Volatile organic compounds (VOC) content | : | Not applicable |

SECTION 10. STABILITY AND REACTIVITY

| | | |
|------------------------------------|---|-------------------------------------------------------------|
| Reactivity | : | No dangerous reaction known under conditions of normal use. |
| Chemical stability | : | The product is chemically stable. |
| Possibility of hazardous reactions | : | Stable under recommended storage conditions. |
| Conditions to avoid | : | No data available |
| Incompatible materials | : | No data available |
| Hazardous decomposition products | : | No decomposition if stored and applied as directed. |



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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Components:

p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline:

Acute oral toxicity : LD50 Oral (Rat): 1,037 mg/kg

Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

1,4-bis(2,3-epoxypropoxy)butane:

Acute oral toxicity : LD50 Oral (Rat): 1,163 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified due to lack of data.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

Not classified due to lack of data.

IARC Not applicable

OSHA Not applicable

NTP Not applicable

Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

Not classified due to lack of data.



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STOT-repeated exposure

May cause damage to organs (Gastro-intestinal system, Stomach, Reproductive organs) through prolonged or repeated exposure if swallowed.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline:

Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-:

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

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.8 mg/l
aquatic invertebrates Exposure time: 48 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
May be harmful to the environment if released in large quantities.
Water polluting material.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental



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protection and waste disposal legislation and any regional local authority requirements.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964
Remarks : Transport in accordance with special regulation A 197

IMDG-Code

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes
Remarks : Transport in accordance with 2.10.2.7 of the IMDG-Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

DOT: As per 49 CFR 171.4, Non-bulk materials (<119 Gal) are exempt from being classified as a Marine Pollutant.
As per 49 CFR 171.4 (c) (2), IMDG 2.10.2.7 and IATA Special Provision A197, Marine Pollutants in single or combination packagings containing a net quantity per single or inner packaging equal or less than 5 L or 5 kg are not subject to the requirements of these subchapters. Material is not regulated.

IMDG: For Limited Quantity special provisions reference IMDG Code Chapter 3.4

TDG

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,



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| | |
|------------------|------------------------------------------------------------------|
| | N.O.S. (p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline) |
| Class | : 9 |
| Packing group | : III |
| Labels | : 9 |
| ERG Code | : 171 |
| Marine pollutant | : no |

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

Canadian lists

The following substance(s) is/are subject to a Significant New Activity Notification:
Oxirane, (chloromethyl)- Epichlorohydrin 106-89-8

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

| | |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADR | : Accord européen relatif au transport international des marchandises Dangereuses par Route |
| CAS | : Chemical Abstracts Service |
| DNEL | : Derived no-effect level |
| EC50 | : Half maximal effective concentration |
| GHS | : Globally Harmonized System |
| IATA | : International Air Transport Association |
| IMDG | : International Maritime Code for Dangerous Goods |
| LD50 | : Median lethal dose (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals) |
| LC50 | : Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period) |
| MARPOL | : International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 |
| OEL | : Occupational Exposure Limit |
| PBT | : Persistent, bioaccumulative and toxic |
| PNEC | : Predicted no effect concentration |
| REACH | : Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency |
| SVHC | : Substances of Very High Concern |



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vPvB : Very persistent and very bioaccumulative

Notice to Reader:

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