

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/08/2025

Version 3.0

Reviewed on 09/08/2025

1 Identification

Other means of identification

Trade name: **Resin solution X 50**

Article number: 1234567890

Application of the substance / the mixture Raw material for resins

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Any Business Inc.

Any Street 123

Any Town 12345

Information department: Product safety department

Emergency telephone number:

During normal opening times: environment protection department, Ext 123

at other times: factory fire brigade, Ext 222

24-Hour Emergency Telephone Number: (800) 123-4567

24-Hour Emergency Telephone Number (Outside of the U.S. and Canada): (123) 456-7890

2 Hazard(s) identification

Classification of the substance or mixture



GHS02 Flame

Flammable liquids 3

H226 Flammable liquid and vapor.



GHS08 Health hazard

Reproductive toxicity 2

H361 Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (repeated exposure) 2 H373 May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard 1

H304 May be fatal if swallowed and enters airways.



GHS07

Skin irritation 2

H315 Causes skin irritation.

Eye irritation 2A

H319 Causes serious eye irritation.

Sensitization - skin 1

H317 May cause an allergic skin reaction.

Specific target organ toxicity (single exposure) 3 H336 May cause drowsiness or dizziness.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS02



GHS07



GHS08

Signal word Danger

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Hazard-determining components of labeling:reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

toluene

ethyl acetate

butanol

Hazard statements

Flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground / bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take action to prevent static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label).

Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO₂, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 2

Fire = 3

Reactivity = 0

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Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Classification according to (d)(1)(ii) of § 1910.1200**

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

Hazards not otherwise classified

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/information on ingredients

Chemical characterization: Mixtures**Description:** Mixture of the substances listed below with nonhazardous additions.**Dangerous components:**

25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq$ 700)	30-60% *
108-88-3	toluene	$\geq 20-\leq 30\%$ *
141-78-6	ethyl acetate	$\geq 20-\leq 30\%$ *
67-63-0	propan-2-ol	1-5% *
78-92-2	butanol	1-5% *

* Actual concentration ranges are withheld as a trade secret.

4 First-aid measures

Description of first aid measures**General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.**After swallowing:** If symptoms persist consult doctor.**Information for doctor:****Most important symptoms and effects, both acute and delayed** No further relevant information available.**Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

Extinguishing media**Suitable extinguishing agents:**CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.**Advice for firefighters****Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:

25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq$ 700)	90 mg/m ³
108-88-3	toluene	67 ppm
141-78-6	ethyl acetate	1,200 ppm
67-63-0	propan-2-ol	400 ppm
78-92-2	butanol	150 ppm

PAC-2:

25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq$ 700)	990 mg/m ³
108-88-3	toluene	560 ppm
141-78-6	ethyl acetate	1,700 ppm
67-63-0	propan-2-ol	2000* ppm
78-92-2	butanol	220 ppm

PAC-3:

25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq$ 700)	5,900 mg/m ³
108-88-3	toluene	3700 ppm
141-78-6	ethyl acetate	10000** ppm
67-63-0	propan-2-ol	12000** ppm
78-92-2	butanol	10000** ppm

7 Handling and storage

Handling:

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Information about protection against explosions and fires:

Do not spray on a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

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Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep receptacle tightly sealed.**Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

Appropriate engineering controls No further data; see section 7.**Control parameters****Components with limit values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

108-88-3 toluene

PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm
TLV	Long-term value: 20 ppm BEI, OTO, A4

141-78-6 ethyl acetate

PEL	Long-term value: 1400 mg/m ³ , 400 ppm
REL	Long-term value: 1400 mg/m ³ , 400 ppm
TLV	Long-term value: 1440 mg/m ³ , 400 ppm

67-63-0 propan-2-ol

PEL	Long-term value: 980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 491 mg/m ³ , 200 ppm BEI, A4

78-92-2 butanol

PEL	Long-term value: 450 mg/m ³ , 150 ppm
REL	Short-term value: 455 mg/m ³ , 150 ppm Long-term value: 305 mg/m ³ , 100 ppm
TLV	Long-term value: 303 mg/m ³ , 100 ppm

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Ingredients with biological limit values:**108-88-3 toluene**

BEI	0.02 mg/L
	Medium: blood
	Time: prior to last shift of workweek
	Parameter: Toluene
	0.03 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Toluene
	0.3 mg/g creatinine
	Medium: urine
	Time: end of shift
	Parameter: o-Cresol with hydrolysis (background)

67-63-0 propan-2-ol

BEI	40 mg/L
	Medium: urine
	Time: end of shift at end of workweek
	Parameter: Acetone (background, nonspecific)

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

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9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Liquid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value at 20 °C (68 °F): 3

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	77 °C (170.6 °F)

Flash point: 25 °C (77 °F)

Flammability: Flammable.

Auto igniting: 390 °C (734 °F)

Decomposition temperature: Not determined.

Ignition temperature: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Explosion limits:

Lower:	1.2 Vol %
Upper:	11.5 Vol %

Vapor pressure at 20 °C (68 °F): 97 hPa (72.8 mm Hg)

Density: Not determined.

Relative density: Not determined.

Vapor density: Not determined.

Evaporation rate: Not determined.

Solubility in / Miscibility with

Water: Fully miscible.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

Solvent content:

Organic solvents:	50.0 %
VOC content:	50.00 %
	500.0 g/l / 4.17 lb/gal

Solids content: 50.0 %

Other information

Particle characteristics	Not applicable.
Physical state	Liquid

10 Stability and reactivity

Reactivity No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

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Conditions to avoid No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

108-88-3 toluene

Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	5,320 mg/l (mouse)

141-78-6 ethyl acetate

Oral	LD50	5,620 mg/kg (rabbit)
Inhalative	LC50/4 h	1,600 mg/l (rat)

67-63-0 propan-2-ol

Oral	LD50	5,045 mg/kg (rat)
Dermal	LD50	12,800 mg/kg (rabbit)
Inhalative	LC50/4 h	30 mg/l (rat)

78-92-2 butanol

Oral	LD50	6,480 mg/kg (rat)
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Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:** Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)

108-88-3	toluene	3
67-63-0	propan-2-ol	3

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

Alternative sources for toxicological information No non-standard sources for toxicological information where used.**Interactive effects** No interactive effects between components are known.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.**Persistence and degradability** No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

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Mobility in soil No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

13 Disposal considerations

Waste treatment methods**Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.**Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

UN-Number**DOT, IMDG, IATA**

UN1866

UN proper shipping name**DOT**

Resin solution

IMDG

RESIN SOLUTION, MARINE POLLUTANT

IATA

RESIN SOLUTION

Transport hazard class(es)**DOT****Class**

3 Flammable liquids

Label

3

IMDG**Class**

3 Flammable liquids

Label

3

IATA**Class**

3 Flammable liquids

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Label	3
Packing group DOT, IMDG, IATA	III
Environmental hazards:	Product contains environmentally hazardous substances: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)
Marine pollutant:	Yes Symbol (fish and tree)
Special precautions for user Hazard identification number (Kemler code): EMS Number: Stowage Category	Warning: Flammable liquids 30 F-E, <u>S</u> -E A
Transport in bulk according to Annex II of MARPOL/73/78 and the IBC Code	Not applicable.
Transport/Additional information: DOT Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
IMDG Limited quantities (LQ) Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1866 RESIN SOLUTION, 3, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

No further relevant information available.

Sara

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

108-88-3 toluene

67-63-0 propan-2-ol

78-92-2 butanol

TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

Hazardous Air Pollutants

108-88-3 toluene

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

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Chemicals known to cause developmental toxicity:

108-88-3 toluene

Carcinogenic categories**EPA (Environmental Protection Agency)**

108-88-3 toluene

II

TLV (Threshold Limit Value)

108-88-3 toluene

A4

67-63-0 propan-2-ol

A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Environment protection department.**Contact:** Dr. Peter Mayer**Date of previous version** 11/16/2022**Version number of previous version:** 2.0**Date of preparation** 09/08/2025**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable liquids 3: Flammable liquids – Category 3

Skin irritation 2: Skin corrosion/irritation – Category 2

Eye irritation 2A: Serious eye damage/eye irritation – Category 2A

Sensitization - skin 1: Skin sensitisation – Category 1

Reproductive toxicity 2: Reproductive toxicity – Category 2

Specific target organ toxicity (single exposure) 3: Specific target organ toxicity (single exposure) – Category 3

Specific target organ toxicity (repeated exposure) 2: Specific target organ toxicity (repeated exposure) – Category 2

Aspiration hazard 1: Aspiration hazard – Category 1

*** Data compared to the previous version altered.**

US