

1 Identification

- Product identifier

- **Trade name:** Rad-120 Epoxy
- **Synonyms:** Rad-120 High Performance Epoxy - Part B
- **Part number:** RAD120B
- **Application of the substance / the mixture** Adhesives

- Details of the supplier of the safety data sheet

- Manufacturer/Supplier:

Plastech-Weld Inc.
41871 Mitchell Rd.
Novi, MI 48377
Telephone: +1-313-963-3194
Email: plastechweld@gmail.com
Website: www.plastechweld.com

- **Information department:** Product safety department

- Emergency telephone number:

United States: 1-800-424-9300
International: +1-703-527-3887

*** 2 Hazard(s) identification**

- Classification of the substance or mixture



GHS08 Health hazard

- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Repr. 2 H361 Suspected of damaging fertility or the unborn child.
- STOT SE 1 H370 Causes damage to organs.
- STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

- Skin Corr. 1B H314 Causes severe skin burns and eye damage.
- Eye Dam. 1 H318 Causes serious eye damage.



GHS07

- Skin Sens. 1 H317 May cause an allergic skin reaction.
- STOT SE 3 H335 May cause respiratory irritation.

- Label elements

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

- Hazard pictograms



GHS05 GHS08 GHS07

- **Signal word** Danger

- Hazard-determining components of labeling:

Epikure 3072
Curing Agent
Curing agent
Nonylphenol

- Hazard statements

- H314 Causes severe skin burns and eye damage.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317 May cause an allergic skin reaction.
- H361 Suspected of damaging fertility or the unborn child.
- H370 Causes damage to organs.

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H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

- Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P260 Do not breathe dusts or mists.
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 P264 Wash face, hands and any exposed skin thoroughly after handling.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P280 Wear protective gloves.
 P280 Wear eye protection / face protection.
 P284 [In case of inadequate ventilation] wear respiratory protection.
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a poison center/doctor.
 P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P321 Specific treatment (see on this label).
 P314 Get medical advice/attention if you feel unwell.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:**- NFPA ratings (scale 0 - 4)****- HMIS-ratings (scale 0 - 4)****- Other hazards****- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

	Epikure 3072 Resp. Sens. 1B, H334; Repr. 2, H361; STOT SE 1, H370; STOT RE 1, H372; Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1B, H317; STOT SE 3, H335	30 – 39%
	Curing agent Skin Irrit. 2, H315	20 – 29%
	Curing Agent Skin Corr. 1C, H314; Eye Dam. 1, H318; Skin Sens. 1B, H317; STOT SE 3, H335	20 – 29%
	Curing agent Skin Corr. 1C, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Eye Irrit. 2A, H319	10 – 19%
84852-15-3	Nonylphenol Repr. 2, H361; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	5 – 9%
90-72-2	Aminophenol Skin Corr. 1C, H314; Acute Tox. 4, H302; Acute Tox. 4, H312	5 – 9%

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.

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In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a 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.
CO₂, sand, extinguishing powder. Do not use water.
 - **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
 - **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Wear protective clothing.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Dispose of the collected material according to regulations.
- **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.

* 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:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **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

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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- **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.
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.
Nitrile rubber, NBR

- 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.

- **As protection from splashes gloves made of the following materials are suitable:** Nitrile rubber, NBR

- Eye protection:



Tightly sealed goggles

- **Body protection:** Protective work clothing

* 9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

- **Form:** Liquid
- **Color:** Whitish
- **Odor:** Characteristic
- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- Change in condition

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** $\geq 150\text{ }^{\circ}\text{C}$ ($\geq 302\text{ }^{\circ}\text{F}$)

- **Flash point:** $95\text{ }^{\circ}\text{C}$ ($203\text{ }^{\circ}\text{F}$)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** $260\text{ }^{\circ}\text{C}$ ($500\text{ }^{\circ}\text{F}$)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- Explosion limits:

- **Lower:** Not determined.
- **Upper:** Not determined.

- **Vapor pressure at $20\text{ }^{\circ}\text{C}$ ($68\text{ }^{\circ}\text{F}$):** $\leq 13.3\text{ hPa}$ ($\leq 10\text{ mm Hg}$)

- **Density at $20\text{ }^{\circ}\text{C}$ ($68\text{ }^{\circ}\text{F}$):** $\sim 1.01186\text{ g/cm}^3$ ($\sim 8.44397\text{ lbs/gal}$)

- **Relative density:** Not determined.

- **Vapor density:** Not determined.

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- Evaporation rate	Not determined.
- Solubility in / Miscibility with	
- Water:	Not miscible or difficult to mix.
- Partition coefficient (n-octanol/water):	Not determined.
- Viscosity:	
- Dynamic at 20 °C (68 °F):	15,000 mPas
- Kinematic:	Not determined.
- Solvent content:	
- VOC content:	0.00 % ~ 0.0 g/l / ~ 0.00 lb/gl
- Solids content:	2.4 %
- Other information	No further relevant information available.

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.
- **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:	
Curing Agent	
Oral	LD50 3,160 mg/kg (rat)
Dermal	LD50 2,500 mg/kg (rabbit)
Curing agent	
Oral	LD50 1,080 mg/kg (rat)
Dermal	LD50 1,090 mg/kg (rabbit)
84852-15-3 Nonylphenol	
Oral	LD50 500 mg/kg (ATE)
90-72-2 Aminophenol	
Oral	LD50 500 mg/kg (ATE)
Dermal	LD50 1,100 mg/kg (ATE)

- **Primary irritant effect:**
 - **on the skin:** Strong caustic effect on skin and mucous membranes.
 - **on the eye:** Strong caustic effect.

- **Sensitization:**
 - Sensitization possible through inhalation.
 - Sensitization possible through skin contact.

- **Additional toxicological information:**

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

Harmful
Corrosive
Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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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.
 - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
 - **Remark:** Toxic for fish
- **Additional ecological information:**
 - **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **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.

14 Transport information

- **UN-Number**
 - **DOT, IMDG, IATA** UN3266
- **UN proper shipping name**
 - **DOT** Corrosive liquid, basic, inorganic, n.o.s. (3,3'-(Oxybis(2,1-ethane-diyloxy))bis-1-propanamine), Curing agent
 - **IMDG** CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (3,3'-(Oxybis(2,1-ethane-diyloxy))bis-1-propanamine), Curing agent), MARINE POLLUTANT
 - **IATA** CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (3,3'-(Oxybis(2,1-ethane-diyloxy))bis-1-propanamine), Curing agent)
- **Transport hazard class(es)**
 - **DOT**



- **Class** 8 Corrosive substances
 - **Label** 8
 - **IMDG**




- **Class** 8 Corrosive substances
 - **Label** 8
 - **IATA**



- **Class** 8 Corrosive substances

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- Label	8
- Packing group - DOT, IMDG, IATA	II
- Environmental hazards: - Marine pollutant:	Product contains environmentally hazardous substances: Nonylphenol Yes Symbol (fish and tree)
- Special precautions for user - Danger code (Kemler): - EMS Number: - Segregation groups - Stowage Category - Stowage Code - Segregation Code	Warning: Corrosive substances 88 F-A, S-B Alkalis B SW2 Clear of living quarters. SG35 Stow "separated from" acids.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
- Transport/Additional information: - DOT - Quantity limitations	On passenger aircraft/rail: 0.5 L On cargo aircraft only: 2.5 L
- IMDG - Limited quantities (LQ) - Excepted quantities (EQ)	0 Code: E0 Not permitted as Excepted Quantity
- UN "Model Regulation":	UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (3,3'-(OXYBIS(2,1-ETHANE-DIYLOXY))BIS-1-PROPANAMINE), CURING AGENT), 8, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

- Section 355 (extremely hazardous substances):

None of the ingredients is listed.

- Section 313 (Specific toxic chemical listings):

84852-15-3 Nonylphenol

- TSCA (Toxic Substances Control Act):

Nonylphenol

Aminophenol

- TSCA new (21st Century Act) (Substances not listed)

Epikure 3072

Curing agent

Curing Agent

Curing agent

- 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.

- Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- Carcinogenic categories

- EPA (Environmental Protection Agency)

None of the ingredients is listed.

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- TLV (Threshold Limit Value established by ACGIH)
None of the ingredients is listed.
- 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.

- **Contact:** Safety, Health and Environmental Affairs

- **Date of preparation / last revision** 05/01/2018 / 21

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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

ACGIH: American Conference of Governmental Industrial Hygienists

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

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

Resp. Sens. 1: Respiratory sensitisation – Category 1

Resp. Sens. 1B: Respiratory sensitisation – Category 1B

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Repr. 2: Reproductive toxicity – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

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

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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

- **Disclaimer**

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