

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** *EPOLAM 2080 RESIN*
- **Application of the substance / the preparation** *Epoxy resin*
- **Manufacturer/Supplier:**
AXSON FRANCE
Rue de l'Equerre
F-95310 SAINT OUEN L'AUMONE
Tél.(33-1)34 40 34 60
- **Further information obtainable from:**
DPT HSE -(33) 01 34 40 34 60
safety@axson.fr
- **Information in case of emergency:** *ORFILA : (33)01 45 42 59 59*

2 Hazards identification

- **Hazard description:**



Xn Harmful
N Dangerous for the environment

- **Information concerning particular hazards for human and environment:**
R 21/22 Harmful in contact with skin and if swallowed.
R 36/38 Irritating to eyes and skin.
R 40 Limited evidence of a carcinogenic effect.
R 43 May cause sensitisation by skin contact.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Contains epoxy constituents. See information supplied by the manufacturer.

3 Composition/information on ingredients

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

- **Dangerous components:**

28768-32-3	Tetraglycidylether methylene bis aniline	Xn, Xi, N; R 21/22-40-43-51/53	50-100%
	Epoxy derivatives	Xi; R 36/38-43-52/53	25-50%

- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

4 First-aid measures

- **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. Then consult a doctor.

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- **After swallowing:** Do not induce vomiting; call for medical help immediately.

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards caused by the substance, its products of combustion or resulting gases:**
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NO_x)
- **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** See Section 8 for information on personal protection equipment.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.

* 8 Exposure controls/personal protection

- **Ingredients 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.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not necessary if room is well-ventilated.

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· **Protection of hands:**

Protective gloves

· **Material of gloves**

Nitrile rubber, NBR

Butyl rubber, BR

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **General Information**

Form: Fluid
Colour: Amber coloured
Odour: Light

· **Change in condition**

Melting point/Melting range: NA°C
Boiling point/Boiling range: >200°C (DIN 53171)

- **Flash point:** >110°C (ISO 2719)
- **Ignition temperature:** >300°C (DIN 51 794)
- **Decomposition temperature:** >200°C (DIN 53171)
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density at 20°C:** 1.14 g/cm³ (ISO 1675:1985)
- **Solubility in / Miscibility with water:** Insoluble.
- **organic solvents:** Soluble in many organic solvents.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Dangerous reactions**
May produce violent reactions with bases and numerous organic substances including alcohols and amines.

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Exothermic polymerization.

· **Dangerous decomposition products:** *Irritant gases/vapours*

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *Irritant to skin and mucous membranes.*
- **on the eye:** *Irritating effect.*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Sensitisation** *May cause sensitisation by skin contact.*

12 Ecological information

· **Ecotoxicological effects:**

· **Acquatic toxicity:**

28768-32-3 Tetraglycidylether methylene bis aniline

LC 50 (96h) 7 mg / l (fish)

13 Disposal considerations

· **Product:**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Dispose of the product by burning in a suitable incinerator or bury in an approved landfill following all applicable local and/or national regulations.

· **Uncleaned packaging:**

· **Recommendation:**

Empty containers may not be disposed of unless any remaining material adhering to the internal walls has been removed.

Disposal must be made according to official regulations.

14 Transport information

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 9 *Miscellaneous dangerous substances and articles.*

· **Danger code (Kemler):** 90

· **UN-Number:** 3082

· **Packaging group:** III

· **Hazard label** 9

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· **Description of goods:** 3082 Environmentally hazardous substance, liquid, n.o.s., tetraglycidylether methylene bis aniline

· **Maritime transport IMDG:**



· **IMDG Class:** 9
 · **UN Number:** 3082
 · **Label** 9
 · **Packaging group:** III
 · **Marine pollutant:** No
 · **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tetraglycidylether methylene bis aniline)

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 9
 · **UN/ID Number:** 3082
 · **Label** 9
 · **Packaging group:** III
 · **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tetraglycidylether methylene bis aniline)

15 Regulatory information

· **Labelling according to EU guidelines:**

The product has been marked in accordance with EU Directives / respective national laws.

· **Code letter and hazard designation of product:**

Xn Harmful

N Dangerous for the environment

· **Hazard-determining components of labelling:**

Tetraglycidylether methylene bis aniline

Epoxy derivatives

· **Risk phrases:**

21/22 Harmful in contact with skin and if swallowed.

36/38 Irritating to eyes and skin.

40 Limited evidence of a carcinogenic effect.

43 May cause sensitisation by skin contact.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**

23 Do not breathe gas/fumes/vapour/spray.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

28 After contact with skin, wash immediately with plenty of water.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

57 Use appropriate container to avoid environmental contamination.

60 This material and its container must be disposed of as hazardous waste.

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- **Special labelling of certain preparations:**
Contains epoxy constituents. See information supplied by the manufacturer.
- **National regulations:**
- **Waterhazard class:** *Water hazard class 2 (Self-assessment): hazardous for water.*

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.

· Relevant R-phrases

21/22 Harmful in contact with skin and if swallowed.

36/38 Irritating to eyes and skin.

40 Limited evidence of a carcinogenic effect.

43 May cause sensitisation by skin contact.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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- **Trade name:** EPOLAM 2080 HARDENER
- **Application of the substance / the preparation** Epoxy curing agent
- **Manufacturer/Supplier:**
 AXSON FRANCE
 Rue de l'Equerre
 F-95310 SAINT OUEN L'AUMONE
 Tél.(33-1)34 40 34 60
- **Further information obtainable from:**
 DPT HSE -(33) 01 34 40 34 60
 safety@axson.fr
- **Information in case of emergency:** ORFILA : (33)01 45 42 59 59

2 Hazards identification

- **Hazard description:**



T Toxic
 C Corrosive
 N Dangerous for the environment

- **Information concerning particular hazards for human and environment:**
 R 22 Harmful if swallowed.
 R 23/24 Toxic by inhalation and in contact with skin.
 R 35 Causes severe burns.
 R 43 May cause sensitisation by skin contact.
 R 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
 R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 68479-98-1	diethylmethylbenzenediamine	25-50%
EINECS: 270-877-4	Xn, Xi, N; R 21/22-36-48/22-50/53	
CAS: 6864-37-5	2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)	25-50%
EINECS: 229-962-1	T, C, N; R 22-23/24-35-51/53	
CAS: 2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	10-25%
EINECS: 220-666-8	C, Xn; R 21/22-34-43-52/53	

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 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.

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Take affected persons out of danger area and lay down.

· **After inhalation:**

Supply fresh air or oxygen; call for 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.

Cover wound with a sterile dressing.

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

· **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** *Do not induce vomiting; call for medical help immediately.*

5 Fire-fighting measures

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards caused by the substance, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

· **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

· **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Mount respiratory protective device.

· **Measures for environmental protection:**

Prevent seepage into sewage system, workpits and cellars.

In case of seepage into the ground inform responsible authorities.

· **Measures for cleaning/collecting:**

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

Dispose contaminated material as waste according to item 13.

7 Handling and storage

· **Handling:**

· **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· **Information about fire - and explosion protection:** *Protect from heat.*

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Use only receptacles specifically permitted for this substance/product.

Prevent any seepage into the ground.

· **Information about storage in one common storage facility:** *Store away from foodstuffs.*

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- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients 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.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not necessary if room is well-ventilated.
- **Protection of hands:**



Protective gloves

- **Material of gloves**
Neoprene 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:**



Safety glasses

Tightly sealed goggles

- **Body protection:** Impervious protective clothing

9 Physical and chemical properties

· General Information

Form:	Fluid
Colour:	Amber coloured
Odour:	Amine-like

· Change in condition

Melting point/Melting range:	NA°C
Boiling point/Boiling range:	>200°C

- **Flash point:** >100°C

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- **Ignition temperature:** >300°C (DIN 51 794)
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density at 20°C:** 1 g/cm³ (ISO 1675:1985)
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **organic solvents:** Soluble in many organic solvents.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** Strong exothermic reaction with acids.
- **Dangerous decomposition products:**
Poisonous gases/vapours
Corrosive gases/vapours

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

68479-98-1 diethylmethylbenzenediamine

Oral	LD50	738 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)

6864-37-5 2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)

Oral	LD50	320-460 mg/kg (rat)
Dermal	LD50	200-400 mg/kg (rabbit)
Inhalative	LC50/4 h	0.42 mg/l (rat)

2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine

Oral	LD50	1030 mg/kg (rat)
Dermal	LD50	1840 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Sensitisation** May cause sensitisation by skin contact.

12 Ecological information

- **Ecotoxicological effects:**

- **Acquatic toxicity:**

6864-37-5 2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)

EC/LC 50 (72h)	2.1 mg/l (alga)
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EC/LC50 (17h)	96 mg/l (bacteria)
EC/LC50 (48h)	15.2 mg/l (daphnies)
LC 50 (96h)	22 à 46 mg / l (fish)

2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine

EC50 (24h)	44 mg / l (daphnies)
EC50 (72h)	37 mg/l (alga)
LC 50 (96h)	110 mg / l (fish)

13 Disposal considerations

· **Product:**

· **Recommendation**

Dispose of the product by burning in a suitable incinerator or bury in an approved landfill following all applicable local and/or national regulations.

· **Uncleaned packaging:**

· **Recommendation:**

Disposal must be made according to official regulations.

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

14 Transport information

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 8 Corrosive substances.

· **Danger code (Kemler):** 86

· **UN-Number:** 2922

· **Packaging group:** II

· **Hazard label** 8+6.1

· **Description of goods:** 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine))

· **Maritime transport IMDG:**



· **IMDG Class:** 8

· **UN Number:** 2922

· **Label** 8+6.1

· **Packaging group:** II

· **EMS Number:** F-A,S-B

· **Marine pollutant:** No

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· **Proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine))

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 8
 · **UN/ID Number:** 2922
 · **Label:** 8+6.1
 · **Packaging group:** II
 · **Proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine))

15 Regulatory information

· **Labelling according to EU guidelines:**

The product has been marked in accordance with EU Directives / respective national laws.

· **Code letter and hazard designation of product:**

T Toxic

C Corrosive

N Dangerous for the environment

· **Hazard-determining components of labelling:**

diethylmethylbenzenediamine

3-aminomethyl-3,5,5-trimethylcyclohexylamine

2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)

· **Risk phrases:**

22 Harmful if swallowed.

23/24 Toxic by inhalation and in contact with skin.

35 Causes severe burns.

43 May cause sensitisation by skin contact.

48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**

3 Keep in a cool place.

4 Keep away from living quarters.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

57 Use appropriate container to avoid environmental contamination.

· **National regulations:**

· **Waterhazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.

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.

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· Relevant R-phrases*21/22 Harmful in contact with skin and if swallowed.**22 Harmful if swallowed.**23/24 Toxic by inhalation and in contact with skin.**34 Causes burns.**35 Causes severe burns.**36 Irritating to eyes.**43 May cause sensitisation by skin contact.**48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.**50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.***· Department issuing MSDS: Product Safety and Toxicology**

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