

**Pagel Spezial- Beton GmbH & Co. KG**

**EH 145 - Hardener**

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

Trade name : EH 145 - Hardener  
 Application of the substance / the preparation : Epoxi-coating, Injection resin  
 Binder for printing inks and varnish systems  
 Company : Pagel Spezial Beton GmbH & Co. KG  
 Wolfsbankring 9  
 D-45355 Essen  
 Phone number : ++49 (0)201 / 68504 0  
 Emergency phone : Toxic information headquarter Berlin  
 ++49 (0 )30 / 19 240

**2. Composition/Information on ingredients**

**Chemical characterization** : Modified polyamine preparation  
**Description** : Mixture of the substances listed below with harmless additions.  
**Dangerous components** :

| Chemical Name                                    | CAS-No.    | Symbol(s)  | R-phrase(s)         | Concentration |
|--|------------|------------|---------------------|---------------|
| benzyl alcohol<br>EC-No.: 202-859-9              | 100-51-6   | ,Xn,       | R20/22              | 25-50%        |
| isophorone diamine<br>EC-No. : 220-666-8         | 2855-13-2  | ,C,        | R21/22-34-43-52/53  | 5-15%         |
| m-xylylenediamine<br>EG-Nr. : 216-032-5          | 1477-55-0  | ,C,        | R20/22-34-43-52/53  | 5-15%         |
| 2-piperazine-1-ylethylamine<br>EC-No.: 205-411-0 | 140-31-8   | ,C,        | R21/22-34-43-52/53  | <10%          |
| nonyl-phenol<br>EC-No.: 246-672-0                | 25154-52-3 | ,C,<br>,N, | R 22-34-62-50/53-63 | 5-8%          |

**Additional information**

For the wording of the listed risk phrases refer to section 16.

**3. Hazards identification**

**Hazard designation:**



C Corrosive



N Dangerous for the environment

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**Information pertaining to particular dangers for man and environment**

Harmful if inhaled, if swallowed and by skin contact.

Causes burns.

May cause sensitization by skin contact.

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

Possible risk of impaired fertility.

Possible risk of harm to the unborn child.

**Classification system:**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished supplier companies.

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**4. First aid measures**

- General information : Seek immediate medical advice.  
Instantly remove any clothing soiled by the product.  
Take affected persons into the open air.
- After eye contact : Rinse opened eye for several minutes under running water.  
Call a doctor immediately.
- After skin contact : Instantly wash with water and soap and rinse thoroughly.
- After inhalation : Supply fresh air and call for doctor for safety reasons.
- After swallowing : Immediately give plenty of water (if possible charcoal slurry). If a person vomits when lying on his back, place him in the recovery position.  
Oxygen or artificial respiration if needed. Do not induce vomiting.
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**5. Fire fighting measures**

- Suitable extinguishing agents : Use fire fighting measures that suit the environment.
- Special hazards caused by the material, its products of combustions or flue gases : Can be released in case of fire  
Carbon monoxide (CO)  
Nitrogen oxides (NOx)
- Protective equipment : Put on breathing apparatus.
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**6. Accidental release measures**

- Personal-related safety precautions : Wear protective equipment. Keep unprotected persons away.
- Measures for environmental protection : Prevent material from reaching sewage system, holes and cellars.
- Measures for cleaning/collecting : Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.
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**7. Handling and storage**

**Handling:**

- Information for safe : Open and handle container with care.

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handling : Ensure good ventilation/exhaustion at the workplace.  
 Information about protection against explosions and fires : Keep ignition sources away - Do not smoke.

**Storage:**

Requirements to be met by storerooms and containers : No special requirements.  
 Information about storage in one common storage facility : Not required.  
 Further information about storage conditions : Store in a cool place.. Heat will increase pressure and may lead to the container exploding.

**8. Exposure controls/personal protection**

**Components with workplace control parameters**

| Components        | CAS-No.   | Control parameters    | Update | Basis |
|-------------------|-----------|-----------------------|--------|-------|
| m-xylylenediamine | 1477-55-0 | 0.1 mg/m <sup>3</sup> |        |       |
|                   |           |                       |        |       |

**Additional information about design of technical systems :** No further data; see item 7.

**Components with critical 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 : Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments.  
 Wash hands during breaks and at the end of the work.  
 Avoid contact with the eyes and skin.

Breathing equipment : Not necessary if room is well-ventilated. Only during spraying without adequate removal by suction.  
 Self-contained breathing apparatus.

Eye protection : Tightly fitting safety glasses. Goggles.

Body protection : Protective work clothing.  
 Apron.  
 Boots.

Protection of hands : Material of gloves for long term application (BTT > 480 min):  
 Butyl rubber  
 Ethyl Vinyl Alcohol Laminate (EVAL)  
 Material of gloves for short term/splash application (10 min < BTT < 480 min):  
 Nitrile rubber  
 Use gloves approved to relevant standards e.g. EN 374 (Europe), F739 (US).  
 Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers.  
 Additional information can be found for instance at [www.gisbau.de](http://www.gisbau.de)

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.

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9. Physical and chemical properties

Physical state : liquid  
 Colour : yellow  
 Odour : amine-like  
 Thermal decomposition : > 250 °C  
 Boiling point : > 200 °C  
 Self-inflammability : Product is not selfigniting.  
 Danger of explosion : Product is not explosive.  
 Flash point : approx. 130 °C method: DIN 51758  
 Density : approx. 1,00 g/cm<sup>3</sup> at (20 °C) method: DIN 51757  
 Solubility in / Miscibility with water : Not miscible or difficult to mix.  
 Viscosity kinematic : approx. 20 s at 23 °C (6mm)

10. Stability and reactivity

Thermal decomposition / conditions to be avoided : No decomposition if used according to specifications.  
 Dangerous reactions : No dangerous reactions known  
 Dangerous products of composition : No dangerous decomposition products known.

11. Toxicological information

|                                 |  |                          |  |
|---------------------------------|--|--------------------------|--|
| <b>Acute toxicity</b>           | <b>LD/LC50 values that are relevant for classification:</b>  |                          |  |
|                                 | <b>2855-13-2 isophorone diamine</b>                          |                          |  |
|                                 | Oral   | LD50                     | 250 mg/kg (rat)  |
|                                 |  |                          | Oral<br>Dermal   |
|                                 | <b>1477-55-0 m-Xylylendiamin</b>                             |                          |  |
|                                 | Oral<br>Dermal<br>Inhalativ                                  | LD50<br>LD50<br>LC50/4 h | 1040 mg/kg (rat)<br>2000 mg/kg (rab)<br>2,4 mg/l (rat) |
|                                 |  | Oral<br>Dermal           |  |
| <b>Primary irritant effect:</b> | <b>100-51-6 benzyl alcohol</b>                               |                          |  |
|                                 | Oral<br>Dermal   | LD50<br>LD50             | 1230 mg/kg (rat)<br>2000 mg/kg (rbt)                   |
|                                 | <b>25154-52-3 nonylphenol</b>                                |                          |  |
|                                 | Oral<br>Dermal   | LD50<br>LD50             | 1620 mg/kg (rat)<br>2140 mg/kg (rabbit)                |
|                                 | on the eye:<br>Strong caustic effect.                        |                          |  |
|                                 | on the skin:<br>Caustic effect on skin and mucous membranes. |                          |  |

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**Additional toxicological information**

Sensitization  
 Sensitization possible by skin contact.

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
 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.

**12. Ecological information**

General notes : Do not allow product to reach ground water, water bodies or sewage system.

**13. Disposal considerations**

**Product:**

**Recommendation**

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

**European waste catalogue**

**08 00 00:** WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS

**08 01 00:** wastes from MFSU and removal of paint and varnish

**08 01 11:** waste paint and varnish containing organic solvents or other dangerous substances

**Uncleaned packagings:**

**Recommendation:**

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

**14. Transport information**

**Road transport :**

ADR/RID

UN-No: : 2735

Class : 8 Corrosive substances

Classification code : C7

Packaging group : III

Risk No. : 80

ADR/RID- Labels : 8

Proper shipping name : AMINES , LIQUID, CORROSIVE, N.O.S.  
 (isophorone diamine)

contains : (nonylphenol)

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**Sea transport**

IMDG :  
 UN-No: : 2735  
 Class : 8  
 Packaging group : III  
 ADR/RID- Labels : 8  
 MFAG :  
 EmS : F-A-S-B  
 Proper shipping name : AMINES , LIQUID, CORROSIVE, N.O.S.  
 (isophorone diamine)  
 contains : (nonylphenol)

**Air transport**

IATA-DGR:  
 UN/ID No. : UN 2735  
 Class : 8  
 Packaging group : III  
 Packing instruktion (cargo aircraft) : 820  
 Max. Qty/Pack. (999.00=No limit) : 60.00L  
 Packing instruktion (passenger aircraft) : 818  
 ADR/RID- Labels : 8  
 Proper shipping name : AMINES , LIQUID, CORROSIVE, N.O.S.  
 (isophorone diamine)  
 contains : (nonylphenol)

**15. Regulatory information**

Designation according to EC guidelines:

The product has been labelled in accordance with EC Directives / relevant national laws.

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



C Corrosive N Dangerous for the environment

**R-Phrases**

: R20/21/22: Harmful if inhaled, if swallowed and by skin contact.  
 R34: Causes burns  
 R43: May cause sensitization by skin contact.  
 R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R62: Possible risk of impaired fertility.  
 R63: Possible risk of harm to the unborn child.

**S-Phrases**

: S24: Avoid contact with skin.

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S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).  
S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

**Hazardous –  
determining  
components of  
labelling** : isophorone diamine  
nonyl phenol

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**16. Other information**

**List of R-phrases (section 2)**

**20/22** Harmful by inhalation and if swallowed  
**21/22** Harmful in contact with skin and if swallowed  
**34** Causes burns  
**43** May cause sensitization by skin contact  
**50/53** Very 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  
**62** Possible risk of impaired fertility  
**63** Possible risk of harm to the unborn child

**Department issuing data specification sheet:** Technic

**Contact:** laboratory

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All information is based on results gained from experience and tests and is believed to be accurate but is given without acceptance of liability for loss or damage attributable to reliance thereon as conditions of use lie outside our control. Users should always carry out sufficient tests to establish the suitability of any products for their intended applications.