SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: PLAST-O-FIX 90 black Component A

This safety data sheet pertains to the following products:
409393 = PLAST-O-FIX 90 black Component A
409517 = PLAST-O-FIX 90 BLACK Component A
409518 = PLAST-O-FIX 90 black Component A
409672 = PLAST-O-FIX 90 BLACK Component A

1.2 Relevant identified uses of the substance or mixture and uses advised against

General use: Two-component glue, resin.
Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company name: Berner Produkten b.v.
Street/POB-No.: Vogelzankweg 175
Postal Code, city: 6374 AC Landgraaf
Netherlands
WWW: www.berner.nl
E-mail: info@berner.nl
Telephone: +31 45 53 39 133
Department responsible for information:
E-mail: Productsafety.Chemicals@berner-group.com

1.4 Emergency telephone number

Poisons information service:
National Poisons Information Service (Birmingham Unit): 844 892 0111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Skin Irrit. 2; H315 Causes skin irritation.
Eye Dam. 1; H318 Causes serious eye damage.
Skin Sens. 1; H317 May cause an allergic skin reaction.

2.2 Label elements

Labelling (CLP)

Signal word: **Danger**

Hazard statements:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

Precautionary statements:

P280	Wear protective gloves/eye protection/face protection.
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.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

Special labelling

Text for labelling: Contains 4,4'-Methylenebis(cyclohexylamine).

2.3 Other hazards

Special danger of slipping by leaking/spilling product. Persons already sensitised to amines may develop cross-sensitization to other amines.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: Polyol mixture

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2119471485-32-xxxx EC No. 500-035-6 CAS 25214-63-5	Ethylenediamine, propoxylated Eye Irrit. 2; H319.	50 - 80 %
REACH 01-2119541673-38-xxxx EC No. 217-168-8 CAS 1761-71-3	4,4'-Methylenebis(cyclohexylamine) Acute Tox. 4; H302. Skin Corr. 1B; H314. Eye Dam. 1; H318. Skin Sens. 1B; H317. STOT RE 2; H373.	< 5 %
REACH 01-2119513215-52-xxxx EC No. 220-449-8 CAS 2768-02-7	Trimethoxyvinylsilane Flam. Liq. 3; H226. Acute Tox. 4; H332.	< 3 %

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: First aider: Pay attention to self-protection!
If medical advice is needed, have product container or label at hand.
Take off contaminated clothing and wash it before reuse.

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing. In case of respiratory difficulties seek medical attention.

Following skin contact: After contact with skin, wash immediately with plenty of water. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.

After swallowing: Rinse mouth and drink large quantities of water. Do not induce vomiting.
Never give anything by mouth to an unconscious person. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. Causes skin irritation. Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray jet, alcohol resistant foam, extinguishing powder, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

May form dangerous gases and vapours in case of fire. Danger of formation of toxic pyrolysis products.
Furthermore, there may develop: nitrogen oxides (NOx), silicon dioxide, carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information: Hazchem-Code: -

Cool endangered containers with water jetspray. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid contact with the substance. If possible, eliminate leakage. Do not breathe fume/gas/mist/vapours/spray. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal.

Additional information: Special danger of slipping by leaking/spilling product.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Have eye wash bottle or eye rinse ready at work place.

Precautions against fire and explosion:

Keep away from heat.
When handling larger quantities, take precautionary measures against electrostatic charging.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place. Keep only in the original container.
Protect from heat and direct sunlight. Store containers in upright position.
Protect from moisture contamination.
Recommended storage temperature: < 50 °C

Hints on joint storage:

Do not store together with: Oxidizing agents, isocyanates.
Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Additional information:

Contains no substances with occupational exposure limit values.

DNEL/DMEL:

Information about Ethylenediamine, propoxylated:

Systemic effects:
DNEL Long-term, workers, dermal: 5 mg/kg bw/d
DNEL Long-term, workers, inhalative: 35.2 mg/m³
DNEL Long-term, consumers, oral: 3 mg/kg bw/d
DNEL Long-term, consumers, dermal: 3 mg/kg bw/d
DNEL Long-term, consumers, inhalative: 10.4 mg/m³

Information about 4,4'-Methylenebis(cyclohexylamine):

Systemic effects:
DNEL Long-term, workers, dermal: 0.1 mg/kg bw/d
DNEL Long-term, workers, inhalative: 1 mg/m³
DNEL Long-term, consumers, oral: 0.06 mg/kg bw/d
DNEL Long-term, consumers, dermal: 0.06 mg/kg bw/d
DNEL Long-term, consumers, inhalative: 0.21 mg/m³

Information about Trimethoxyvinylsilane:

Systemic effects:
DNEL Long-term, workers, dermal: 3.9 mg/kg bw/d
DNEL Long-term, workers, inhalative: 27.6 mg/m³
DNEL Long-term, consumers, oral: 0.3 mg/kg bw/d
DNEL Long-term, consumers, dermal: 7.8 mg/kg bw/d
DNEL Long-term, consumers, inhalative: 18.9 mg/m³

PNEC:

Information about Ethylenediamine, propoxylated:
PNEC water (freshwater): 0.085 mg/L
PNEC water (marine water): 0.009 mg/L
PNEC sediment (freshwater): 0.193 mg/kg/dw
PNEC sediment (marine water): 0.019 mg/kg/dw
PNEC soil: 0.018 mg/kg/dw
PNEC sewage treatment plant: 0.193 mg/L

Information about 4,4'-Methylenebis(cyclohexylamine):
PNEC water (freshwater): 0.08 mg/L
PNEC water (marine water): 0.008 mg/L
PNEC sediment (freshwater): 137 mg/kg/dw
PNEC sediment (marine water): 13.7 mg/kg/dw
PNEC soil: 27.2 mg/kg/dw
PNEC sewage treatment plant: 3.2 mgL

Information about Trimethoxyvinylsilane:
PNEC water (freshwater): 0.4 mg/L
PNEC water (marine water): 0.04 mg/L
PNEC sediment (freshwater): 1.5 mg/kg/dw
PNEC sediment (marine water): 0.15 mg/kg/dw
PNEC soil: 0.06 mg/kg/dw
PNEC sewage treatment plant: 6.6 mg/L

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

Personal protection equipment

Occupational exposure controls

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.
Use combination filter type A-P2 according to EN 14387.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Hand protection:

Protective gloves according to EN 374.
Glove material:
Nitrile rubber - Layer thickness > 0.11 mm
Butyl caoutchouc (butyl rubber) - Layer thickness > 0.11 mm
PVC - Layer thickness > 0.11 mm
Breakthrough time: > 480 min
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Recommendation: Protect skin by using skin protective cream.

Eye protection:

Tightly sealed goggles according to BS EN ISO 16321-1:2022.

Body protection:

Wear suitable protective clothing.

General protection and hygiene measures:

Do not breathe fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.
Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Have eye wash bottle or eye rinse ready at work place.

Environmental exposure controls

Refer to "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:

Physical state at 20 °C and 101.3 kPa: liquid
Colour: black

Odour:	Characteristic
Odour threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	> 150 °C
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Density:	at 20 °C: 1.02 g/mL
Water solubility:	Insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	Not self-igniting
Decomposition temperature:	No data available
Viscosity, dynamic:	at 23 °C: 1800 mPa*s
Explosive properties:	No data available
Oxidizing characteristics:	Not oxidising

9.2 Other information

Ignition temperature:	> 300 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

Refer to subsection "Possilbility of hazardous reactions".

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reacts with oxidizing agents and isocyanates.

10.4 Conditions to avoid

Protect from moisture contamination. Protect from heat and direct sunlight.

10.5 Incompatible materials

Oxidising agent, isocyanates

10.6 Hazardous decomposition products

No hazardous decomposition products when regulations for storage and handling are observed.

Thermal decomposition:	No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects:

The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 2,000 mg/kg

Acute toxicity (dermal): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 2,000 mg/kg

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 20 mg/L/4h

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.

Serious eye damage/irritation: Eye Dam. 1; H318 = Causes serious eye damage.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Other information:

Information about Ethylenediamine, propoxylated:
LD50, Rat, oral: > 2,000 mg/kg, NOAEL: 1,000 mg/kg/28d
LD50, Rat, dermal: > 2,000 mg/kg

Information about 4,4'-Methylenebis(cyclohexylamine):
LD50, Rat, oral: 380 mg/kg
LD50, Rabbit, dermal: 2,110 mg/kg

Information about Trimethoxyvinylsilane:
LD50, Rat, oral: 7,120 mg/kg, NOAEL: 1,000 mg/kg/28d
LD50, Rabbit, dermal: 3,259 mg/kg
LC50, Rat, inhalative: 16.8 mg/L/4h

Symptoms

Persons already sensitised to amines may develop cross-sensitization to other amines.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

Information about Ethylenediamine, propoxylated:
Fish toxicity: LC50 (Leuciscus idus): 3.524 mg/L/96h
Daphnia toxicity EC50 (Daphnia magna (Big water flea)): 100 mg/L/48h, NOEC: 10 mg/L/21d (OECD 201)
Algae toxicity EC50 (Desmodesmus subspicatus (green algae)): 150.67 mg/L/72h (growth rate), NOEC: 4.25 mg/L/72h

Information about 4,4'-Methylenebis(cyclohexylamine):
Fish toxicity: LC50 (Leuciscus idus): 100 mg/L/96h
Daphnia toxicity EC50 (Daphnia magna (Big water flea)): 7.64 mg/L/48h, NOEC: 4 mg/L/21d (read across)
Algae toxicity EC50 (Desmodesmus subspicatus (green algae)): 140 mg/L/72h (growth rate)

Information about Trimethoxyvinylsilane:
Fish toxicity: LC50 (Oncorhynchus mykiss): 137 mg/L/96h
Daphnia toxicity EC50 (Daphnia magna (Big water flea)): 121 mg/L/48h, NOEC: 20 mg/L/21d
Algae toxicity EC50 (Pseudokirchneriella subcapitata (green algae)): > 89 mg/L/72h

12.2 Persistence and degradability

Further details: No data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 08 04 09* = Waste adhesives and sealants containing organic solvents or other dangerous substances
* = Evidence for disposal must be provided.

Recommendation:
Dispose of waste according to applicable legislation.
Do not dispose of with household waste.
Do not empty into drains.

Package

Waste key number: 15 01 10* = Packaging containing residues of or contaminated by dangerous substances
* = Evidence for disposal must be provided.

Recommendation:
Dispose of waste according to applicable legislation.
Handle contaminated packages in the same way as the substance itself.
Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR: not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR: Not restricted

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR: not applicable

14.4 Packing group

ADR/RID, IMDG, IATA-DGR: not applicable

14.5 Environmental hazards

Marine pollutant: no

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

SECTION 15: Regulatory information

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

National regulations - Great Britain

Hazchem-Code: -

No data available

National regulations - EC member states

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: 3

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Further information

KLASA: 351-01/20-10/1
Ur. Broj: 381-10-101-20-8038
15.12.2020

Wording of the H-phrases under paragraph 2 and 3:

H226 = Flammable liquid and vapour.
H302 = Harmful if swallowed.
H314 = Causes severe skin burns and eye damage.
H315 = Causes skin irritation.
H317 = May cause an allergic skin reaction.
H318 = Causes serious eye damage.
H319 = Causes serious eye irritation.
H332 = Harmful if inhaled.
H373 = May cause damage to organs through prolonged or repeated exposure.

Abbreviations and acronyms:
Acute Tox.: Acute toxicity
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
AS/NZS: Australian Standards/New Zealand Standards
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC: European Community
EC50: Effective Concentration 50%
EN: European Standard
EQ: Excepted quantities
Eye Dam.: Eye damage
Eye Irrit.: Eye irritation
Flam. Liq.: Flammable liquid
IATA: International Air Transport Association
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
LC50: Median lethal concentration
LD50: Lethal dose 50%
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
NOAEL: No Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
PVC: Polyvinyl chloride
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
Skin Corr.: Skin corrosion
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitisation
STOT RE: Specific target organ toxicity - repeated exposure
TRGS: Technical Rules for Hazardous Substances
vPvB: Very persistent and very bioaccumulative

Reason of change: General revision

Date of first version: 28/10/2021

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.