Identification of the Substance/Mixture and of the Company/Undertaking

1. 1. Product Identifier

Product Name: Polyurethane Dispersion PU 52
Article No.: 76805

1. 2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses: Binding agent

Uses advised against:

1. 3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG
Address: Hauptstr. 41-47, 88317 Aichstetten, Germany
Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606
Internet: www.kremer-pigmente.de
EMail: info@kremer-pigmente.de
Importer: --

1. 4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

2. Hazards Identification

2. 1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)
Skin irritation, hazard category 2
Eye irritation, hazard category 2
Specific Target Organ Toxicity (single exposure), hazard category 3

H315 Causes skin irritation.
Cat.: 2
H319 Causes serious eye irritation.
Cat.: 2
H335 May cause respiratory irritation.
Cat.: 3

Possible Environmental Effects: See Section 12.

2. 2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

Hazard designation: GHS07-1
Signal word: Warning

Hazard designation:
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

Safety designation:
- P280 Wear protective gloves/ clothing/ eye/ face protection.
- P312 Call a poison center or physician if you feel unwell.
- P337+P313 If eye irritation persists: Get medical advice/ attention.

Hazardous components for labelling:
2. 3. Other Hazards

EUH208: contains 1,2-Benzisothiazol-3(2H)-one. Can cause allergic reactions.

3. Composition/Information on Ingredients

3.1. Substance

3.2. Mixture

Chemical Characterization: Aqueous polyurethane dispersion.

Information on Components / Hazardous Ingredients:
- Triethylamine (H225-302-311-314-318-331-335); REACH Reg. No. 01-2119475467-26-xxxx 1 - 1.5 % CAS-Nr: 121-44-8
  EINECS-Nr: 204-469-4
  EC-Nr: 612-004-00-5

- 1,2-Benzisothiazol-3(2H)-one (H302-315-317-318-400 (M=1)-411) < 0.01 % CAS-Nr: 2634-33-5
  EINECS-Nr: 220-120-9
  EC-Nr: 613-088-00-6

Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information: Seek medical attention in case of complaints.
Show this safety data sheet to the doctor in attendance.

After inhalation: Supply fresh air. Consult physician if symptoms persist.

After skin contact: Wash with soap and rinse with plenty of water.

After eye contact: Rinse open eyes with plenty of water for at least 15 minutes. Consult physician.

After ingestion: If symptoms persist consult physician.
4.2. Symptoms:
Irritates eyes, skin and respiratory system.
Skin contact: causes irritation and sensitization.

Effects:
No further information available.

4.3. Indication of any Immediate Medical Attention and special Treatment needed
Treatment:
Symptomatic treatment (decontamination, vital functions), no specific antidote known.

5. Fire-Fighting Measures

5.1. Extinguishing Media
Suitable extinguishing media:
CO2, extinguishing powder, water jet.
Fight larger fire with water jet or alcohol resistant foam.

Unsuitable extinguishing media:

5.2. Special Hazards arising from the Substance or Mixture
Special hazards:
Formation of hazardous decomposition products at high temperatures.
In case of fire: formation of hazard fumes possible, e.g. carbon monoxide (CO), hydrogen cyanide (HCN), toxic gases/vapors.

5.3. Advice for Firefighters
Protective equipment:
Wear self-contained respiratory protective device.

Further information:

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
Personal precautions:
Avoid contact with skin, eyes and clothing. Do not ingest or inhale.
Wear protective clothing.

6.2. Environmental Precautions
Environmental precautions:
Prevent contamination of soils, drains and surface water.

6.3. Methods and Material for Containment and Cleaning Up
Methods and material:
Contain with absorbent material (sand, diatomaceous earth, universal absorbent, Oil Dri) and dispose accordingly.

6.4. Reference to other Sections
For information for safe handling see Section 7.
Protective clothing, see Section 8.
See Section 13 for information on disposal.
7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

- Avoid contact with eyes, skin and clothing.
- Provide adequate ventilation.

Hygienic measures:

- Do not eat or drink during work. Do not smoke.
- Take off contaminated clothing immediately and reuse only after thoroughly cleaning these.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

- Protect from frost.
- Keep container tightly closed

Requirements for storage areas and containers:

- No special measures necessary.

Information on fire and explosion protection:

- No special measures necessary.

Storage class:

- 12; Non-combustible liquids

Further Information:

7.3. Specific End Use(s)

Further information:

- No information available.

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

Triethylamine (CAS 121-44-8)

MAK (TRGS 900): 4.2 mg/m3; 1 ppm

Parameters to be controlled:

Triethylamine (CAS 121-44-8) (EU): Short term value: 12.6 mg/m3; 3 ppm; Long term value: 8.4 mg/m3; 2 ppm; skin

Derived No-Effect Level (DNEL):

Triethylamine (CAS 121-44-8): 8.4 mg/m3 (worker, inhalation, long-term exposition - systemic and local effects)

12.6 mg/m3 (worker, inhalation, short-term exposition - systemic and local effects)

12.1 mg/kg bw/d (worker, skin contact, long-term exposition - systemic effects)

Predicted No-Effect Concentration (PNEC):

Triethylamine (CAS 121-44-8):

Fresh water: 0.11 mg/l
Safety Data Sheet
According to regulation (EC) No. 1907/2006 (REACH)

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Sea water: 0.011 mg/l
Fresh water sediment: 1.575 mg/kg
Sea water sediment: 0.158 mg/kg
Soil: 0.25 mg/kg
Sewage treatment system (STP): 100 mg/l

Additional Information:

8.2 Exposure Controls

Technical protective measures: No further measures, see Section 7.

Personal Protection

General protective measures: The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection: Respiratory equipment required in case of insufficient ventilation, filter type A.

Hand protection: Protective gloves. The glove material has to be impermeable and resistant to the product / substance / preparation.

Protective glove material: Nitrile rubber (480 min, 0.4 mm)
Fluoro carbon rubber - FKM (480 min, 0.7 mm).

Eye protection: Tightly fitting safety goggles (EN 166).

Body protection: Protective clothing.

Environmental precautions: Prevent contamination of open water ways and sewage system. Avoid contamination of ground water.

9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Form: liquid
Color: yellowish
Odor: characteristic
Odor threshold: No information available.

pH-Value: 7.5 - 8.5 (DIN ISO 976)
Melting temperature: 0°C
Boiling temperature: 100°C
Flash point: not applicable
Evaporation rate: not applicable

Flammability (solid, gas): not applicable

Upper explosion limit: not determined

Lower explosion limit: not determined

Vapor pressure: 23 hPa (20°C)

Vapor density: This product is a non-volatile solid.

Density: 1.05 g/cm³ (20°C)

Solubility in water: miscible

Coefficient of variation (n-Octanol/Water): not determined

Auto-ignition temperature: not applicable

Decomposition temperature: not determined

Viscosity, dynamic: 20-500 mPa.s (20°C; ISO 2555)

Explosive properties: Product does not present an explosion hazard.

Oxidizing properties: No information available.

Bulk density: not determined

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic

Burning class:

Solvent content:

Solid content: 38 - 40% (DIN EN ISO 3251)

Particle size:

Other information:

10. Stability and Reactivity

10.1. Reactivity

Stable if used according to specifications.
10.2. **Chemical Stability**

Triethylamine is released during the application and drying processes.

10.3. **Possibility of Hazardous Reactions**

No information available.

10.4. **Conditions to Avoid**

*Conditions to avoid:*

No information available.

*Thermal decomposition:*

No data available.

10.5. **Imcompatible Materials**

No information available.

10.6. **Hazardous Decomposition Products**

No information available.

10.7. **Further Information**

11. **Toxicological Information**

11.1. **Information on Toxicological Effects**

**Acute Toxicity**

**LD50, oral:**

Triethylamine: 730 mg/kg (rat)
1,2-Benzisothiazol-3(2H)-one: 1193 mg/kg (rat)

**LD50, dermal:**

Triethylamine: 580 mg/kg (rabbit)
1,2-Benzisothiazol-3(2H)-one: 580 mg/kg (rat)

**LC50, inhalation:**

Triethylamine: 7.22 mg/kg (Ratte)

**Primary effects**

**Irritant effect on skin:**

Irritating to skin.

**Irritant effect on eyes:**

Irritating to eyes.

**Inhalation:**

Irritates the respiratory tract.

**Ingestion:**

**Sensitization:**

May cause sensitization by skin contact.

**Mutagenicity:**

No relevant data found.

**Reproductive toxicity:**

No relevant data found.

**Carcinogenicity:**
Under certain circumstances triethylamine can form nitrosamines with nitrosing agents (e.g. nitrates, nitrogen oxides). Nitroseamines have shown cancerogenic effects in animal studies.

Teratogenicity:

No information available.

Specific target organ toxicity (STOT):

No relevant data found.

Additional toxicological information:

Triethylamine:

Skin contact: risk of skin absorption.

Triethylamine causes liver and kidney damage in laboratory animals.

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity:

Triethylamine: LC50: 24 mg/ml (96h, Oryzias latipes)
Triethylamine: NOEC: 3.2 mg/l (60d, Oncorhynchus mykiss)
1,2-Benzisothiazol-3(2H)-one: LC50: 2.18 mg/ml (96h, Oncorhynchus mykiss; OECD 203)

Daphnia toxicity:

Triethylamine: LC50: 17 mg/l (48h, Ceriodaphnia Dubia)
Triethylamine: NOEC: 11 mg/l (21d, Daphnia magna)
1,2-Benzisothiazol-3(2H)-one: EC50: 2.94 mg/l (48h, Daphnia magna; OECD 202)

Bacteria toxicity:

Triethylamine: EC50: 95 mg/l (17h, Pseudomonas putida)

Algae toxicity:

Triethylamine: EC50: 24.8 mg/l (96h, Desmodesmus subspicatus; OECD 201)
1,2-Benzisothiazol-3(2H)-one: ErC50: 0.11 mg/l (72h, Skeletonema costatum); NOEC: 0.027 mg/l (72h, Skeletonema costatum)

12.2. Persistency and Degradability

No data available for the mixture.

Triethylamin is readily biodegradable.

12.3. Bioaccumulation

No information available.

12.4. Mobility

No information available.

12.5. Results of PBT- und vPvP Assessment

According to Annex VIII to Regulation (EC) No. 1907/2006 (REACH): this product is neither a PBT (persistent/bioaccumulative/toxic) or vPvB (very persistent/very bioaccumulative/very toxic) substance nor does it contain a PBT or vPvB substance.
12.6. Other Adverse Effects

Water hazard class:

1, slightly hazardous
Do not let product contaminate ground water, waterways or sewage system.

Behaviour in sewage systems:

Further ecological effects:

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:

Must not be disposed together with household garbage.
Do not let product enter water systems.
Dispose of according to official national and local regulations.

European Waste Code (EWC):

Uncleaned packaging:

Dispose of according to official local regulations.

Waste Code No.:

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA

14.2. UN Proper Shipping Name

ADR/RID:

No hazardous goods according to ADR (land transportation).

IMDG/IATA:

No hazardous goods according to IMDG.

14.3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel restriction code:

IMDG Class (sea):

Hazard no.:

EmS No.:

IATA Class:

not applicable

Hazard no.: 
14. 4. Packaging Group

ADR/RID: not applicable
IMDG:
IATA:

14. 5. Environmental Hazards

None

14. 6. Special Precautions for User

Not classified as a dangerous good under transport regulations.

14. 7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

not applicable

14. 8. Further Information

15. Regulatory Information

15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:
1, slightly hazardous for water (according to the German Regulation AwSV)

Local regulations on chemical accidents:

Employment restrictions:
The employment restrictions for young workers in accordance with the Youth Employment Protection Law (94/33/EC) are to be observed.

Restriction and prohibition of application:

Technical instructions on air quality:

15. 2. Chemical Safety Assessment

A Chemical Safety Assessment is not necessary for this product.

15. 3. Further Information

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.