



Safety Data Sheet according to (EC) No 1907/2006 as amended

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COPYDEX Adhesive (1)

SDS No. : 738921

V001.0

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Replaces version from: -

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

1.1. Product identifier

COPYDEX Adhesive (1)

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

Intended use:

Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.com.

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Respiratory sensitizer

Category 1

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitizer

Category 1

H317 May cause an allergic skin reaction.

Chronic hazards to the aquatic environment

Category 3

H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Contains**

Rubber, natural

2,2',2''-(hexahydro-1,3,5- triazine-1,3,5-triyl)triethanol

Signal word:

Danger

Hazard statement:

H317 May cause an allergic skin reaction.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statement:

P102 Keep out of reach of children.
 P101 If medical advice is needed, have product container or label at hand.

**Precautionary statement:
Prevention**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P273 Avoid release to the environment.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves.

**Precautionary statement:
Response**

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

**Precautionary statement:
Disposal**

P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

None if used properly.
 Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Following substances are present in a concentration $\geq 0,1\%$ and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in concentration \geq the concentration limit that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

| Hazardous components CAS-No. EC Number REACH-Reg No. | Concentration | Classification | Specific Conc. Limits, M-factors and ATEs | Add. Information |
|--|---|--|---|-------------------------|
| Rubber, natural 9006-04-6 232-689-0 | 40- 60 % | Skin Sens. 1, H317 Resp. Sens. 1, H334 | oral:ATE = 2.043 mg/kg | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 271-867-2 01-2119496062-39 | 0,1- < 1 % | Repr. 2, H361d Aquatic Chronic 4, H413 | | |
| ammonia, aqueous solution 1336-21-6 215-647-6 01-2119488876-14 | 0,1- < 1 % | Met. Corr. 1, H290 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Eye Dam. 1, H318 | STOT SE 3; H335; C >= 5 % ===== M acute = 1 | EU OEL |
| 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4 225-208-0 01-2119529226-41 | 0,1- < 1 % | Acute Tox. 4, Oral, H302 Acute Tox. 2, Inhalation, H330 Skin Sens. 1, H317 Eye Irrit. 2, H319 STOT RE 1, H372 | Skin Sens. 1; H317; C >= 0,1 % | |
| thiram 137-26-8 205-286-2 01-2119492301-45 | 0,025- < 0,25 % (0,25 %o- < 2,5 %o) | STOT RE 2, H373 Acute Tox. 4, Oral, H302 Acute Tox. 4, Inhalation, H332 Skin Irrit. 2, H315 Aquatic Chronic 1, H410 Aquatic Acute 1, H400 Skin Sens. 1, H317 Eye Irrit. 2, H319 | M acute = 10 M chronic = 10 | |

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Delayed effects possible after inhalation.

Skin contact:

Rinse with running water and soap. Skin care. Remove contaminated clothes immediately.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO₂) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective equipment.

Avoid contact with skin and eyes.

Ensure adequate ventilation.

Danger of slipping on spilled product.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Ensure that workrooms are adequately ventilated.

Avoid skin and eye contact.

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Store frost-free.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)

Adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

| Ingredient [Regulated substance] | ppm | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|--|-----|-------------------|-----------------------------------|--|-----------------|
| Ammonia, aqueous solution 1336-21-6 [Ammonia, anhydrous] | 35 | 25 | Short Term Exposure Limit (STEL): | 15 minutes | EH40 WEL |
| Ammonia, aqueous solution 1336-21-6 [Ammonia, anhydrous] | 25 | 18 | Time Weighted Average (TWA): | | EH40 WEL |
| Ammonia, aqueous solution 1336-21-6 [AMMONIA, ANHYDROUS] | 50 | 36 | Short Term Exposure Limit (STEL): | Indicative | ECTLV |
| Ammonia, aqueous solution 1336-21-6 [AMMONIA, ANHYDROUS] | 20 | 14 | Time Weighted Average (TWA): | Indicative | ECTLV |

Occupational Exposure Limits

Valid for
Ireland

| Ingredient [Regulated substance] | ppm | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|---|-----|-------------------|-----------------------------------|--|-----------------|
| Rubber, natural 9006-04-6 [NATURAL RUBBER LATEX (AS INHALABLE ALLERGENIC PROTEINS)] | | 0,0001 | Time Weighted Average (TWA): | | IR_OEL |
| Rubber, natural 9006-04-6 [NATURAL RUBBER LATEX] | | 0,0001 | Time Weighted Average (TWA): | | IR_OEL |
| Ammonia, aqueous solution 1336-21-6 [AMMONIA, ANHYDROUS] | 50 | 36 | Short Term Exposure Limit (STEL): | 15 minutes Indicative OELV | IR_OEL |
| Ammonia, aqueous solution 1336-21-6 [AMMONIA, ANHYDROUS] | 20 | 14 | Time Weighted Average (TWA): | Indicative OELV | IR_OEL |
| Ammonia, aqueous solution 1336-21-6 [AMMONIA, ANHYDROUS] | 50 | 36 | Short Term Exposure Limit (STEL): | Indicative | ECTLV |
| Ammonia, aqueous solution 1336-21-6 [AMMONIA, ANHYDROUS] | 20 | 14 | Time Weighted Average (TWA): | Indicative | ECTLV |
| Thiram 137-26-8 [THIRAM (ISO)] | | 0,05 | Time Weighted Average (TWA): | | IR_OEL |

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|---|------------------------------------|--------------------|------------------|-----|------------------|--------|---------|
| | | | mg/l | ppm | mg/kg | others | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | aqua (freshwater) | | 0,01 mg/l | | | | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | aqua (marine water) | | 0,002 mg/l | | | | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | sewage treatment plant (STP) | | 100 mg/l | | | | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | sediment (freshwater) | | | | 426,26 mg/kg | | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | sediment (marine water) | | | | 85,25 mg/kg | | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | Soil | | | | 85,16 mg/kg | | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | oral | | | | 1,7 mg/kg | | |
| ammonia, aqueous solution 1336-21-6 | aqua (freshwater) | | 0,001 mg/l | | | | |
| ammonia, aqueous solution 1336-21-6 | aqua (marine water) | | 0,001 mg/l | | | | |
| ammonia, aqueous solution 1336-21-6 | aqua (intermittent releases) | | 0,0068 mg/l | | | | |
| 2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5- triy)triethanol 4719-04-4 | aqua (freshwater) | | 0,0066 mg/l | | | | |
| 2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5- triy)triethanol 4719-04-4 | aqua (marine water) | | 0,00066 mg/l | | | | |
| 2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5- triy)triethanol 4719-04-4 | aqua (intermittent releases) | | 0,06 mg/l | | | | |
| 2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5- triy)triethanol 4719-04-4 | sediment (freshwater) | | | | 0,0304 mg/kg | | |
| 2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5- triy)triethanol 4719-04-4 | sediment (marine water) | | | | 0,00304 mg/kg | | |
| 2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5- triy)triethanol 4719-04-4 | Soil | | | | 0,00219 mg/kg | | |
| 2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5- triy)triethanol 4719-04-4 | sewage treatment plant (STP) | | 5,5 mg/l | | | | |
| thiram 137-26-8 | aqua (freshwater) | | 0,00046 mg/l | | | | |
| thiram 137-26-8 | sediment (freshwater) | | | | 0,047 mg/kg | | |
| thiram 137-26-8 | aqua (marine water) | | 0,000046 mg/l | | | | |
| thiram 137-26-8 | sediment (marine water) | | | | 0,0047 mg/kg | | |
| thiram 137-26-8 | Soil | | | | 0,00912 mg/kg | | |
| thiram 137-26-8 | sewage treatment plant (STP) | | 0,0311 mg/l | | | | |
| thiram 137-26-8 | oral | | | | 0,59 mg/kg | | |
| thiram 137-26-8 | aqua (intermittent releases) | | 0 mg/l | | | | |

Derived No-Effect Level (DNEL):

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|--|--------------------|-------------------|--|---------------|-------------|---------|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | Workers | dermal | Long term exposure - systemic effects | | 0,42 mg/kg | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | Workers | inhalation | Long term exposure - systemic effects | | 0,29 mg/m3 | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | General population | dermal | Long term exposure - systemic effects | | 0,21 mg/kg | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | General population | inhalation | Long term exposure - systemic effects | | 0,07 mg/m3 | |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | General population | oral | Long term exposure - systemic effects | | 0,04 mg/kg | |
| ammonia, aqueous solution 1336-21-6 | Workers | dermal | Acute/short term exposure - systemic effects | | 6,8 mg/kg | |
| ammonia, aqueous solution 1336-21-6 | Workers | dermal | Long term exposure - systemic effects | | 6,8 mg/kg | |
| ammonia, aqueous solution 1336-21-6 | Workers | Inhalation | Acute/short term exposure - systemic effects | | 47,6 mg/m3 | |
| ammonia, aqueous solution 1336-21-6 | Workers | Inhalation | Acute/short term exposure - local effects | | 36 mg/m3 | |
| ammonia, aqueous solution 1336-21-6 | Workers | Inhalation | Long term exposure - systemic effects | | 47,6 mg/m3 | |
| ammonia, aqueous solution 1336-21-6 | Workers | Inhalation | Long term exposure - local effects | | 14 mg/m3 | |
| ammonia, aqueous solution 1336-21-6 | General population | dermal | Acute/short term exposure - systemic effects | | 68 mg/kg | |
| ammonia, aqueous solution 1336-21-6 | General population | dermal | Long term exposure - systemic effects | | 68 mg/kg | |
| ammonia, aqueous solution 1336-21-6 | General population | Inhalation | Acute/short term exposure - systemic effects | | 23,8 mg/m3 | |
| ammonia, aqueous solution 1336-21-6 | General population | Inhalation | Acute/short term exposure - local effects | | 7,2 mg/m3 | |
| ammonia, aqueous solution 1336-21-6 | General population | Inhalation | Long term exposure - systemic effects | | 23,8 mg/m3 | |
| ammonia, aqueous solution 1336-21-6 | General population | Inhalation | Long term exposure - local effects | | 2,8 mg/m3 | |
| ammonia, aqueous solution 1336-21-6 | General population | oral | Acute/short term exposure - systemic effects | | 6,8 mg/kg | |
| ammonia, aqueous solution 1336-21-6 | General population | oral | Long term exposure - systemic effects | | 6,8 mg/kg | |
| thiram 137-26-8 | Workers | inhalation | Long term exposure - systemic effects | | 0,118 mg/m3 | |
| thiram 137-26-8 | Workers | inhalation | Acute/short term exposure - systemic effects | | 0,564 mg/m3 | |
| thiram 137-26-8 | Workers | dermal | Long term exposure - systemic effects | | 1,6 mg/kg | |
| thiram 137-26-8 | Workers | dermal | Acute/short term exposure - systemic effects | | 10 mg/kg | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Respiratory protection:

Not needed.

Hand protection:

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

material thickness > 0.1 mm

Perforation time > 480 minutes

Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:

Suitable protective clothing

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | |
|--|---|
| Physical state | liquid |
| Delivery form | liquid |
| Colour | white |
| Odor | no valuation |
| Melting point | Currently under determination |
| Initial boiling point | Currently under determination |
| Flammability | Currently under determination |
| Explosive limits | Currently under determination |
| Flash point | Currently under determination |
| Auto-ignition temperature | Currently under determination |
| Decomposition temperature | Currently under determination |
| pH | 10,2 |
| (; Conc.: 100 % product) | |
| Viscosity (kinematic) | Currently under determination |
| Viscosity, dynamic | 7.000 - 10.000 mPa.s Brookfield viscosity (LVT, RVT, HBT) |
| (Brookfield; Instrument: LVT; 20 °C (68 °F); speed of rotation: 12 min-1; Spindle No: 3) | |
| Solubility (qualitative) | Partially soluble |
| (23 °C (73.4 °F); Solvent: Water) | |
| Partition coefficient: n-octanol/water | Currently under determination |
| Vapour pressure | Currently under determination |
| Density | 0,94 - 0,96 g/cm ³ Density hydrometer |
| (20 °C (68 °F)) | |
| Relative vapour density: | Currently under determination |
| Particle characteristics | Currently under determination |

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

None if used for intended purpose.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

1.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|--|--|------------------------|---------|--|
| Rubber, natural 9006-04-6 | LD50 | 2.043 - 2.210 mg/kg | rat | not specified |
| Rubber, natural 9006-04-6 | Acute toxicity estimate (ATE) | 2.043 mg/kg | | Expert judgement |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | LD50 | > 5.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triyl)triethanol 4719-04-4 | LD50 | 1.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| thiram 137-26-8 | LD50 | 1.800 mg/kg | rat | not specified |

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|--|---------------|---------------|---------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triyl)triethanol 4719-04-4 | LD50 | > 4.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| thiram 137-26-8 | LD50 | > 2.000 mg/kg | rabbit | EPA OPP 81-2 (Acute Dermal Toxicity) |

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Test atmosphere | Exposure time | Species | Method |
|--|---------------|------------|-----------------|------------------|---------|---|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | LC50 | > 165 mg/l | dust/mist | 4 h | rat | not specified |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | LC50 | 0,371 mg/l | dust/mist | 4 h | rat | OECD Guideline 403 (Acute Inhalation Toxicity) |
| thiram 137-26-8 | LC50 | 4,42 mg/l | dust/mist | 4 h | rat | EPA OPP 81-3 (Acute inhalation toxicity) |

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|--|----------------|------------------|---------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | not irritating | 4 h | rabbit | EPA Guideline |
| ammonia, aqueous solution 1336-21-6 | corrosive | | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | not irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|--|------------------------|------------------|---------|---|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | slightly irritating | 24 h | rabbit | EPA Guideline |
| ammonia, aqueous solution 1336-21-6 | corrosive | | | not specified |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| thiram 137-26-8 | irritating | | rabbit | EPA OPP 81-4 (Acute Eye Irritation) |

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Test type | Species | Method |
|--|-----------------|---------------------------------------|----------------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | not sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| ammonia, aqueous solution 1336-21-6 | not sensitising | not specified | guinea pig | not specified |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| thiram 137-26-8 | sensitising | Split adjuvant test | guinea pig | EPA OPP 81-6 (Skin Sensitisation) |

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|--|---------------|--|---|----------------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| ammonia, aqueous solution 1336-21-6 | negative | bacterial reverse mutation assay (e.g Ames test) | not specified | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | positive | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| thiram 137-26-8 | positive | bacterial reverse mutation assay (e.g Ames test) | with and without | | EPA OPP 84-2 (Mutagenicity Testing) |
| thiram 137-26-8 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| thiram 137-26-8 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| ammonia, aqueous solution 1336-21-6 | negative | intraperitoneal | | mouse | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | negative | intraperitoneal | | mouse | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| thiram 137-26-8 | negative | oral: gavage | | mouse | EU Method B.24 (Mouse Spot Test) |
| thiram 137-26-8 | negative | oral: gavage | | mouse | OECD Guideline 483 (Mammalian Spermatogonial Chromosome Aberration Test) |
| thiram 137-26-8 | negative | intraperitoneal | | mouse | EPA OPP 84-2 (Mutagenicity Testing) |

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous components CAS-No. | Result | Route of application | Exposure time / Frequency of treatment | Species | Sex | Method |
|---|------------------|---------------------------------|---|----------------|------------|--|
| ammonia, aqueous solution 1336-21-6 | not carcinogenic | oral: feed | 104 w daily | rat | | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result / Value | Test type | Route of application | Species | Method |
|---|-------------------|-----------|-------------------------|---------|---|
| ammonia, aqueous solution 1336-21-6 | NOAEL P 408 mg/kg | screening | oral: unspecified | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|--|---------------------|-------------------------|--|---------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | NOAEL 500 ppm | oral: feed | 90 Days Daily | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | LOAEL 100 mg/kg | oral: gavage | 12 weeks once daily 5 times a week | rat | EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral)) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4 | NOAEL 30 mg/kg | oral: gavage | 12 weeks once daily 5 times a week | rat | EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral)) |
| thiram 137-26-8 | NOAEL 3,5 - 4 mg/kg | oral: feed | 90 d daily | rat | EU Method B.26 (Sub- Chronic Oral Toxicity Test: Repeated Dose 90- Day Oral Toxicity Study in Rodents) |

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|--------------------------------|---------------|--|---|
| Rubber, natural 9006-04-6 | LC50 | > 10.000 mg/l | 96 h | Brachydanio rerio (new name: Danio rerio) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | LC50 | Toxicity > Water solubility | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | NOELR | Toxicity > Water solubility | 34 d | Pimephales promelas | OECD Guideline 210 (fish early lite stage toxicity test) |
| ammonia, aqueous solution 1336-21-6 | LC50 | 0,16 - 1,1 mg/l | 96 h | Salmo gairdneri (new name: Oncorhynchus mykiss) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| ammonia, aqueous solution 1336-21-6 | NOEC | < 0,048 mg/l | 31 d | Channel catfish | OECD Guideline 215 (Fish, Juvenile Growth Test) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5-triyl)triethanol 4719-04-4 | LC50 | 16,07 mg/l | 96 h | Brachydanio rerio (new name: Danio rerio) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| thiram 137-26-8 | LC50 | 0,046 mg/l | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| thiram 137-26-8 | NOEC | 0,0046 mg/l | 33 d | Pimephales promelas | OECD Guideline 210 (fish early lite stage toxicity test) |

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|--------------------------------|---------------|---------------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | EC50 | Toxicity > Water solubility | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| ammonia, aqueous solution 1336-21-6 | EC50 | 25,4 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5-triyl)triethanol 4719-04-4 | EC50 | 11,9 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| thiram 137-26-8 | EC50 | 0,21 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|--------------------------------|---------------|---------------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | NOELR | Toxicity > Water solubility | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| ammonia, aqueous solution 1336-21-6 | NOEC | 0,79 mg/l | 96 h | Daphnia magna | EPA OPPTS 850.1300 (Daphnid Chronic Toxicity Test) |
| thiram | NOEC | 0,04 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia |

| | | | | | |
|----------|--|--|--|--|---------------------------|
| 137-26-8 | | | | | magna, Reproduction Test) |
|----------|--|--|--|--|---------------------------|

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---------------|-----------------------------|---------------|---|---|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | NOEC | Toxicity > Water solubility | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | EC50 | Toxicity > Water solubility | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| ammonia, aqueous solution 1336-21-6 | EC50 | > 1.000 mg/l | 72 h | Skeletonema costatum | ISO 10253 (Water quality) |
| ammonia, aqueous solution 1336-21-6 | NOEC | 1.000 mg/l | 72 h | Skeletonema costatum | ISO 10253 (Water quality) |
| 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4 | NOEC | 1,56 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4 | EC50 | 6,66 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| thiram 137-26-8 | EC50 | 1 mg/l | 96 h | Chlorella pyrenoidosa | OECD Guideline 201 (Alga, Growth Inhibition Test) |

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|---------------|---------------|----------------------------|--|
| Rubber, natural 9006-04-6 | EC 50 | > 10.000 mg/l | | | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4 | EC20 | 170 mg/l | 30 min | activated sludge, domestic | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| thiram 137-26-8 | EC0 | > 200 mg/l | | | not specified |

12.2. Persistence and degradability

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|---|------------------------------|-----------|---------------|---------------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | not inherently biodegradable | aerobic | 1 % | 28 d | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test) |
| 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4 | readily biodegradable | aerobic | > 90 - 100 % | 8 d | OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test) |
| thiram 137-26-8 | | aerobic | 20 - 40 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

| Hazardous substances CAS-No. | LogPow | Temperature | Method |
|---|--------|-------------|--|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | 7,56 | 30 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| ammonia, aqueous solution 1336-21-6 | -1,14 | | EU Method A.8 (Partition Coefficient) |
| 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4 | -2 | 24 °C | EU Method A.8 (Partition Coefficient) |
| thiram 137-26-8 | 1,73 | 20 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |

12.5. Results of PBT and vPvB assessment

| Hazardous substances CAS-No. | PBT / vPvB |
|---|---|
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene 68610-51-5 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| ammonia, aqueous solution 1336-21-6 | According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances. |
| 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5-triyl)triethanol 4719-04-4 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| thiram 137-26-8 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code

080409

SECTION 14: Transport information**14.1. UN number**

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

14.2. UN proper shipping name

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

14.3. Transport hazard class(es)

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

14.4. Packing group

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

14.5. Environmental hazards

| | |
|------|----------------|
| ADR | not applicable |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

14.6. Special precautions for user

| | |
|------|----------------|
| ADR | not applicable |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

No information available:

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):

Not applicable

Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):

thiram

CAS 137-26-8

Persistent organic pollutants (Regulation (EU) 2019/1021):

Not applicable

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H290 May be corrosive to metals.
 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.
 H330 Fatal if inhaled.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H361d Suspected of damaging the unborn child.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 H413 May cause long lasting harmful effects to aquatic life.

| | |
|-------------|---|
| ED: | Substance identified as having endocrine disrupting properties |
| EU OEL: | Substance with a Union workplace exposure limit |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148 |
| EU EXPLD 2 | Substance listed in Annex II, Reg (EC) No. 2019/1148 |
| SVHC: | Substance of very high concern (REACH Candidate List) |
| PBT: | Substance fulfilling persistent, bioaccumulative and toxic criteria |
| PBT/vPvB: | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB: | Substance fulfilling very persistent and very bioaccumulative criteria |

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