
 SAFETY DATA SHEET

This Safety Data Sheet is provided in compliance with the EC Regulations 1907/2006, 1272/2008, 2015/830 and 2020/878

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

- Product Name: PROTECTAKOTE
- UFI: Not available
- Product Part Number: 70X99B

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

- Use of the substance/mixture: Moisture-cured polyurethane coating

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: ZEST POLYURETHANES
- Address of Supplier: 13 Alternator Avenue
Montague Gardens
Cape Town
7441
- Telephone: +27 (021) 555-3090
- Email: zesttechnical@duram.co.za

1.4 Emergency telephone number

- Emergency Telephone: Poisons Information Helpline +27 0861 555 777
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SECTION 2: Hazards identification
2.1 Classification of the substance or mixture

- CLP: Resp. Sens. 1, Skin Sens. 1, Asp. Tox. 1, Flam. Liq. 3, Acute Tox. 3, Skin Irrit. 2, Eye Dam. 1, Muta. Cat. 1B, Carc. 1B, STOT SE 3, STOT RE 2

2.2 Label elements


GHS02



GHS08



GHS07

- Signal Word: Danger

2.2.1 Hazard statements

- H226 - Flammable liquid and vapour.
 - H350 - May cause cancer.
 - H340 - May cause genetic defects.
 - H335 - May cause respiratory irritation.
-

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SECTION 2: Hazards identification (....)

H373 - May cause damage to organs through prolonged or repeated exposure.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 - May cause an allergic skin reaction.
H304 - May be fatal if swallowed and enters airways.
EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
EUH044 - Risk of explosion if heated under confinement.
EUH204 - Contains isocyanates. May produce an allergic reaction.

2.2.2 Precautionary statements

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P203 - Obtain, read and follow all safety instructions before use.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - In case of inadequate ventilation wear respiratory protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 - Do NOT induce vomiting.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor/
P370+P378 - In case of fire: use foam, carbon dioxide or dry agent to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/containers in accordance with local regulation.

2.3 Other hazards

- No hazard expected under normal conditions of use.

SECTION 3: Composition/information on ingredients

3.1 Substances

- Not applicable

3.2 Mixtures

3.2.1 ethylbenzene

| | |
|----------------|------------|
| CAS Number: | 100-41-4 |
| EC Number: | 202-849-4 |
| Concentration: | 30.0-40.0% |

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SECTION 3: Composition/information on ingredients (....)

Specific Concentration Limits: Not available
M factor: Not available
Acute toxicity estimate: Not available
Categories: Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1
Symbols: GHS02;GHS07;GHS08
H Statements: H225;H332;H304;H373

3.2.2 xylene

CAS Number: 1330-20-7
EC Number: 215-535-7
Concentration: 20.0-30.0%
Specific Concentration Limits: Not available
M factor: Not available
Acute toxicity estimate: Not available
Categories: Acute Tox. 4; Acute Tox. 4; Skin Irrit. 2; Flam. Liq. 3
Symbols: GHS02,GHS07
H Statements: H226,H332,H312,H315
REACH Registration Number: 01-2119488216-32

3.2.3 titanium dioxide

CAS Number: 13463-67-7
EC Number: 236-675-5
Concentration: 5.0-10.0%
Specific Concentration Limits: Not available
M factor: Not available
Acute toxicity estimate: Not available
Categories: Carc. 2
Symbols: GHS08
H Statements: H351
REACH Registration Number: 01-2119489379-17

3.2.4 2-methoxy-1-methylethyl acetate

CAS Number: 108-65-6
EC Number: 203-603-9
Concentration: <2.0%
Specific Concentration Limits: Not available
M factor: Not available
Acute toxicity estimate: Not available
Categories: Flam. Liq. 3
Symbols: GHS02
H Statements: H226

3.2.5 solvent naphtha (petroleum), light arom.

CAS Number: 64742-95-6

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SECTION 3: Composition/information on ingredients (....)

| | |
|--------------------------------|--------------------------------------|
| EC Number: | 265-199-0 |
| Concentration: | <2.0% |
| Specific Concentration Limits: | Not available |
| M factor: | Not available |
| Acute toxicity estimate: | Not available |
| Categories: | Muta. Cat. 1B, Carc. 1B, Asp. Tox. 1 |
| Symbols: | GHS08 |
| H Statements: | H350;H340;H304 |

Any concentrations shown as a range is to protect confidentiality and/or is due to batch variation. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentration applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- IF exposed or concerned: Get medical advice/attention.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

- May be fatal if swallowed and enters airways.
- Harmful in contact with skin
- Risk of dermatitis
- Harmful if inhaled.
- Inhalation sensitiser with accumulative effects.

4.3 Indication of any immediate medical attention and special treatment needed

- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 - Immediately call a POISON CENTER or doctor/physician.
-

SECTION 5: Firefighting measures

5.1 Extinguishing media

- In case of fire: use foam, carbon dioxide or dry agent to extinguish.
- Fog to cool and control
- Do not use water jets
- Containers can become pressurised if contents are contaminated with water

5.2 Special hazards arising from the substance or mixture

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SECTION 5: Firefighting measures (....)

- Flammable with toxic fumes
- Hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke may be produced.

5.3 Advice for firefighters

- Wear protective equipment and respirators.
 - Blown or distorted containers should be handled with extreme caution.
-

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Wear protective clothing/equipment.
- Keep people and animals away

6.2 Environmental precautions

- Do not allow to enter public sewers and watercourses
- Contain spillage by any means possible

6.3 Methods and material for containment and cleaning up

- Ensure adequate ventilation
- Hazardous in liquid state
- Solidify by reaction with water before disposal

6.4 Reference to other sections

- See section 7 for information on safe handling.
 - See section 8 for information on personal protection equipment.
 - See section 13 for disposal information
-

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Flammable
- Keep away from sources of ignition - No Smoking
- Wash contaminated clothing before reuse.
- Dispose of contents/container to an authorised waste collection point

7.2 Conditions for safe storage, including any incompatibilities

- Store separately from any reactive substances, especially oxidisers.
- Keep container tightly closed, in a cool, well ventilated place
- Store locked up.

7.3 Specific end use(s)

- Open with care. Cover lid/ bung with a cloth while releasing pressure.
 - Generates carbon dioxide gas from reaction with water.
-

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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SECTION 8: Exposure controls/personal protection (....)

8.1.1 solvent naphtha (petroleum), light arom.

DNEL (Consumer; dermal, long term systemic effects): 11 mg/kg
DNEL (Industry; dermal, long term systemic effects): 25 mg/kg
DNEL (Consumer; inhalational, long term systemic effects): 32 mg/m³
DNEL (Industry; inhalational, long term systemic effects): 150 mg/m³
DNEL (Consumer; oral, long term systemic effects): 11 mg/kg

8.1.2 2-methoxy-1-methylethyl acetate

DNEL (Industry; dermal, long term systemic effects): 153.5 mg/kg
DNEL (Industry; inhalational, long term systemic effects): 275 mg/m³
DNEL (Consumer; dermal, long term systemic effects): 54.8 mg/kg
DNEL (Consumer; inhalational, long term systemic effects): 33 mg/m³
DNEL (Consumer; oral, long term systemic effects): 1.67 mg/kg

8.1.3 ethylbenzene

DNEL (Industry; inhalational, short term local effects): 884 mg/m³
DNEL (Industry; inhalational, long term systemic effects): 442 mg/m³
DNEL (Industry; inhalational, short term systemic effects): 884 mg/m³
DNEL (Industry; inhalational, long term local effects): 442 mg/m³
DNEL (Industry; dermal, long term systemic effects): 180 mg/kg
DNEL (Consumer; oral, long term systemic effects): 1.6 mg/kg
DNEL (Consumer; inhalational, long term systemic effects): 15 mg/m³

8.1.4 xylene

DNEL (Industry; inhalational, long term local effects): 221 mg/m³
DNEL (Industry; inhalational, short term systemic effects): 442 mg/m³
DNEL (Industry; inhalational, long term systemic effects): 221 mg/m³
DNEL (Industry; dermal, long term systemic effects): 212 mg/kg
DNEL (Industry; inhalational, short term local effects): 442 mg/m³
DNEL (Consumer; inhalational, short term local effects): 260 mg/m³
DNEL (Consumer; inhalational, short term systemic effects): 260 mg/m³
DNEL (Consumer; inhalational, long term local effects): 65.3 mg/m³
DNEL (Consumer; dermal, long term systemic effects): 125 mg/kg
DNEL (Consumer; inhalational, long term systemic effects): 65.3 mg/m³
DNEL (Consumer; oral, long term systemic effects): 12.5 mg/kg

8.1.5 titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

DNEL (Industry; inhalational, long term local effects): 10 mg/m³
DNEL (Consumer; oral, long term systemic effects): 700 mg/kg bw/day

8.2 Exposure controls



Gloves



Goggles



Respirator

- Observe normal rules of hygiene, wash hands and skin before eating, drinking or smoking.
- Wear suitable protective clothing, eye/face protection

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SECTION 8: Exposure controls/personal protection (....)

- The selection of personal protective equipment depends on marks of quality, which may vary from manufacturer to manufacturer.
 - The resistance of the glove has to be checked prior to application. For penetration of the glove material, observe the breakthrough time supplied by the manufacturer.
 - In case of insufficient ventilation, wear suitable respiratory equipment
 - A cartridge-type respirator with cartridge for organic fumes is essential for spraying conditions.
-

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Physical state: liquid
- Colour: various
- Odour: Sweet-smelling
- Melting point/Range: < -46 °C
- Boiling Point/Range: 140 °C
- Flammability: Flammable
- pH: 8.0
- Solubility in water: Not miscible, reacts with water
- Density: 1.03 g/cm³ at 20 °C
- Viscosity: 80-110 KU (Krebbs units) (Dynamic at 20 °C)
- Flashpoint: 27°C

9.2 Other information

- Please see Technical Data Sheet (TDS) for further information
-

SECTION 10: Stability and reactivity

10.1 Reactivity

- Reacts with water

10.2 Chemical stability

- Thermal decomposition/ conditions to be avoided: could produce static discharge - use earthing or non-sparking tools.

10.3 Possibility of hazardous reactions

- Stable if stored under normal conditions

10.4 Conditions to avoid

- When exposed to abnormally high temperatures, containers will bulge and possibly burst

10.5 Incompatible materials

- Incompatible with oxidizing substances
- Reacts with water liberating carbon dioxide gas

10.6 Hazardous decomposition products

- No decomposition if stored and applied as directed.
 - In case of fire and/or explosion do not breathe fumes
-

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SECTION 10: Stability and reactivity (....)

- Hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke may be produced.
-

SECTION 11: Toxicological information

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

11.1.1 Acute toxicity

Estimated LD₅₀ (oral) (ATE) : >2000 mg/kg
Estimated LD₅₀ (dermal) (ATE) : 4775.342 mg/kg
Estimated LD₅₀ (inhalational) (ATE) : 10.03528 mg/l/4hr (gas/vapour)

11.1.1.1 solvent naphtha (petroleum), light arom.

LD₅₀ (oral, rat): 3492 mg/kg
LD₅₀ (dermal, rabbit): >3160 mg/kg
LC₅₀ (inhalation, rat): >6193 mg/m³

11.1.1.2 2-methoxy-1-methylethyl acetate

LD₅₀ (oral, rat): >5.000 mg/kg

11.1.1.3 ethylbenzene

LD₅₀ (oral, rat): 3500 mg/kg
LD₅₀ (dermal, rabbit): 15400 mg/kg
LC₅₀ (inhalation, rat): 17.8 mg/l 4h vapour

11.1.1.4 xylene

LD₅₀ (oral, rat): 3523 mg/kg male
LD₅₀ (dermal, rabbit): >4200 mg/kg

11.1.1.5 titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

LD₅₀ (oral, rat): >5000 mg/kg

11.1.2 Skin corrosion/irritation

Causes skin irritation.

11.1.3 Serious eye damage/irritation

Causes serious eye irritation.

11.1.4 Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.

11.1.5 Germ cell mutagenicity

May cause genetic defects.

11.1.6 Carcinogenicity

May cause cancer

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SECTION 11: Toxicological information (....)

11.1.7 Reproductive toxicity

No evidence of reproductive effects

11.1.8 STOT (specific target organ toxicity) - single exposure

No known effects.

11.1.9 STOT (specific target organ toxicity) - repeated exposure

No known effects.

11.1.10 Aspiration hazard

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

- No further or additional information available.

SECTION 12: Ecological information

12.1 Toxicity

12.1.1 solvent naphtha (petroleum), light arom.

EC₅₀ (daphnia): 3.2 mg/l (48 hr)

12.1.2 2-methoxy-1-methylethyl acetate

| | |
|--------------------------------|----------------------|
| LC ₅₀ (fish): | 100-180 mg/l (96 hr) |
| PNEC (Fresh water): | 0.635 mg/l |
| PNEC (intermittent): | 6.35 mg/l |
| PNEC (Marine water): | 0.0635 mg/l |
| PNEC (Sediment; fresh water): | 3.29 mg/kg |
| PNEC (Sediment; marine water): | 0.329 mg/kg |
| PNEC (Soil): | 0.29 mg/kg |
| PNEC (STP): | 100 mg/l |

12.1.3 ethylbenzene

EC₅₀ (daphnia): 1.8-2.4 mg/l (48 hr)

LC₅₀ (fish): 4.2 mg/l (96 hr)

12.1.4 toluene

LC₅₀ (fish): 5.8 mg/l (96 hr)

12.1.5 xylene

| | |
|-----------------------------|-------------------|
| EC ₅₀ (daphnia): | 3.82 mg/l (48 hr) |
| LC ₅₀ (fish): | 2.6 mg/l (96 hr) |
| PNEC (Fresh water): | 0.327 mg/l |
| PNEC (Marine water): | 0.327 mg/l |

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SECTION 12: Ecological information (....)

| | |
|--------------------------------|-------------|
| PNEC (Sediment; fresh water): | 12.46 mg/kg |
| PNEC (Sediment; marine water): | 12.46 mg/kg |
| PNEC (Soil): | 2.31 mg/kg |
| PNEC (STP): | 6.58 mg/l |

12.1.6 titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

| | |
|--------------------------------|-----------------------|
| EC ₅₀ (daphnia): | >100 mg/l (48 hr) |
| LC ₅₀ (fish): | >100 mg/l (96 hr) |
| PNEC (Fresh water): | 1 mg/l |
| PNEC (intermittent): | 0.61 mg/l |
| PNEC (Marine water): | 0.127 mg/l |
| PNEC (Sediment; fresh water): | 1000 mg/kg dry weight |
| PNEC (Sediment; marine water): | 100 mg/kg dry weight |
| PNEC (Soil): | 100 mg/kg dry weight |
| PNEC (STP): | 100 mg/l |

12.2 Persistence and degradability

- Biodegradable
- Once solidified, can be disposed of in authorised landfill sites as per local regulations.

12.3 Bioaccumulative potential

- Not bioaccumulative

12.4 Mobility in soil

- Low due to solidification by reaction with water.
- Additional ecological information: considered to be harmful to terrestrial vertebrates. May have short-term environmental effects. Contain monitor and remove.
- Immiscible with water.

12.5 Results of PBT and vPvB assessment

- Not applicable

12.6 Endocrine disrupting properties

- No known effects or hazards.

12.7 Other adverse effects

- No further relevant information available.
-

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Dispose of contents/container to an authorised waste collection point
- Hazardous in liquid state. Solidify by reaction with water before disposal.
- Danger of bursting - do not seal.
- Use reputable waste disposal contractors.

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SECTION 13: Disposal considerations (....)

- Uncleaned packaging: Leave container unsealed for 3 to 4 days to solidify by evaporation. Once solid, containers may be disposed of in a landfill site. Disposal must be made according to official regulations.
-

SECTION 14: Transport information

ADR, IMDG, IATA



Flammable Liquid

14.1 UN number or ID number

- UN No.: 1263

14.2 UN proper shipping name

- Proper Shipping Name: PAINT

14.3 Transport hazard class(es)

- Hazard Class: 3

14.4 Packing group

- Packing Group: III

14.5 Environmental hazards

- On available data, substance is not harmful to the environment

14.6 Special precautions for user

- Contains: ethylbenzene
- This product contains a prepolymer based on methylenediphenyl diisocyanate. No free low molecular weight oligomers are present.
- Warning: Flammable liquids
- EMS Number: F-E, S-E
- Danger code (Kemler): 33

14.7 Maritime transport in bulk according to IMO instruments

- Not applicable
-

SECTION 15: Regulatory information

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

- Refer to current ADR Regulations
- This Safety Data Sheet is provided in compliance with the EC Regulations 1907/2006, 1272/2008, 2015/830 and 2020/878

15.2 Chemical safety assessment

- A chemical safety assessment (CSA) for this product has not yet been completed
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SECTION 16: Other information

Text not given with phrase codes where they are used elsewhere in this safety data sheet:- H225: Highly flammable liquid and vapour. H226: Flammable liquid and vapour. H304: May be fatal if swallowed and enters airways. H312: Harmful in contact with skin. H315: Causes skin irritation. H332: Harmful if inhaled. H340: May cause genetic defects. H350: May cause cancer. H351: Suspected of causing cancer. H373: May cause damage to organs through prolonged or repeated exposure.

**All information is given in good faith but without guarantee in respect of accuracy.
No responsibility is accepted for errors or omissions or the consequences thereof.**

Important Note: The information contained in this SDS is not intended to be exhaustive and believed to be correct at the date of its preparation. It is the user's responsibility to verify that this data sheets is current prior to using the product which is detailed in it. Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to its use. Where those purposes are other than as specifically recommended in this safety data sheet, the user then uses the product at their own risk.

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