

Date: 22 June 2022

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

1.1 Product identifier

Chem-Fix Cartridge Part A- Resin component of a polyether polyurethane system

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

Use: Polyurethane systems.

1.3 Details of the supplier of the safety data sheet

Address: Unit A7, The Palisades, 39 Kelly Road, Jet Park, Boksburg, Gauteng, South Africa

Tel: +27 011 552 8073

Email: info@chemtrust-solutions.com

1.4 Emergency telephone number

+27 82 262 4267 / +27 82 326 8277

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation 1272/2008/EC: This product is not classified according to CLP Regulation.

2.2 Label elements

2.2.1. Labelling according to Directive 67/548/EEC:

Hazard pictograms: Not classified

Signal word: Warning

S-phrases:

S7 Keep container tightly closed
S9 Keep container in a well-ventilated place.
S28 After contact with skin, wash immediately with plenty of water
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards: The substance does not meet the criteria for persistent, bioaccumulation and toxicity (PBT) or the criteria for Very Persistent and Very Bioaccumulative (vPvB) in accordance with Annex XIII of 1907/2006/EC.

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Section 3: Composition/information on ingredients

3.1 Substances

Product/Ingredient name	Identifiers	%	Classification 67/548/EEC	Classification Regulation (EC) No 1272/2008 (CLP)
Glycerol, propoxalated	25791-96-2	25-75	Not classified	Not classified
Polytetramethylene Ether	25190-06-1	25-75	Not classified	Not classified
Diethylmethylbenzenediamine	68479-98-1	5-10	68479-98-1	
Additives (Catalysts, defoamers, moisture scavengers)	Proprietary	0-5	Not classified	Not classified

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Section 4: First aid measures

4.1 Description of first aid measures

Eye Contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is laboured, oxygen should be administered by qualified personnel.
Skin contact:	After contact with skin, wash immediately with plenty of warm soapy water: Get medical attention if irritation develops. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion:	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

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

Depending on the degree of exposure, periodic medical examination is suggested.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing Media:

Foam, CO₂, dry powder, water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effective.

Unsuitable extinguishing media: Do not use direct water stream which can spread fire.

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5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture: No specific hazard.

Hazardous thermal decomposition products Decomposition products may include the following materials:
Carbon Dioxide
Carbon Monoxide
Nitrogen Oxides

5.3 Advice for firefighters

Special precautions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. PVC boots, gloves, safety helmet and protective clothing should be worn.

Additional information: Due to reaction with water producing CO₂-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency Personnel: Remove not affected people. Inform the relevant authorities.
For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental Precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

6.3 Methods and materials for containment and cleaning up

Small spill: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Large spill: Larger spills should be collected for disposal

6.4 Reference to other Sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

Section 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

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7.1 Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10), food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations: Not available
Industrial sector specific Solutions Not available

Section 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Glycerol, propoxylated	Not established

Recommended monitoring

Procedures:

Medical supervision of all employees who handle or come in contact with respiratory sensitisers is recommended.

The Occupational Exposure Limits listed do not apply to previously sensitised individuals. Sensitised individuals should be removed from any further exposure.

Derived effect levels

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Product/ingredient name	Type	Exposure	Value	Population	Effects
Glycerol, propoxylated	DNEL	Short term Dermal	13.9mg/kg bw/day	Workers	Systemic
	DNEL	Short term inhalation	98mg/m ³	Workers	Systemic
	DNEL	Short term inhalation	29 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term oral	8.3 mg/cm ²	Consumers	Systemic
	DNEL	Short term dermal	8.3 mg/m ³	Consumers	Systemic

Predicted effect concentrations

Product/Ingredient name	Type	Compartment Detail	Value	Method Detail
Glycerol, propoxylated	PNEC	Fresh water	0.002mg/l	Assessment Factors
	PNEC	Marine	0.002mg/l	Assessment Factors
	PNEC	Soil	0.00305 mg/kg	Assessment Factors

8.2 Exposure controls

Appropriate engineering

Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

Individual protection measures

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin protection

Hand protection:

Use chemical resistant gloves classified under Standard EN374: protective gloves against chemicals and microorganisms. Examples of glove materials that might provide suitable protection include: Butyl rubber, Chlorinated polyethylene, Polyethylene, Ethyl vinyl alcohol copolymers laminated ("EVAL"), Polychloroprene (Neoprene*), Nitrile/butadiene rubber ("nitrile" or "NBR"), Polyvinyl chloride ("PVC" or "vinyl"), Fluoroelastomer (Viton*).

When prolonged or frequently repeated contact may occur, a glove with protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN374) is recommended.

When only brief contact is expected, a glove with protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN374) is recommended. Contaminated gloves should be decontaminated and disposed of.

Notice: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: other chemicals that may be handled, physical

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requirements (cut/puncture protection, dexterity, thermal protection), as well as instructions/specifications provided by the glove supplier.

Protective gloves should be worn when handling freshly made polyurethane products to avoid contact with trace residual materials which may be hazardous in contact with skin.

Use gloves approved to relevant standards e.g. EN 374 (Europe), F739 (US). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers. Additional information can be found for instance at www.gisbau.de.

Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Body: Recommended: Overall (preferably heavy cotton) or Tyvek-Pro Tech 'C' , Tyvek-Pro 'F' disposable coverall.

Other skin protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure Controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical State	Liquid
Colour	Not available
Odour	Not available
Odour Threshold	Not available
pH	Not available
Melting point/Freezing point	-5 °C
Initial boiling point and boiling range	Not available
Flash point	Closed cup >230 °C
Evaporation rate	Not available
Flammability	Not available
Burning time	Not available
Burning rate	Not available
Upper/lower flammability or explosive limits	Not available
Vapour pressure	0.0000066 kPa [room temperature]
Vapour density	Not available
Relative density	Not available

Section 10: Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability: Stable at room temperature.

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10.3 Possibility of hazardous reactions: Avoid contact with oxidizing materials and strong acids. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: Strong acids, moisture, open flames.

10.6 Hazardous decomposition products Combustion products may include: carbon oxides (CO, CO₂) , nitrogen oxides (NO, NO₂ etc.) , hydrocarbons , HCN.

Section 11: Toxicological information

No results of animal experiments with this mixture are available.

11.1 Information on toxicological effects

11.1.1 Acute toxicity

Data are in reference to Glycerol, propoxylated (CAS 25791-96-2):

Acute toxicity – oral:	LD50 > 738 mg/kg bw
Rats :Acute toxicity – dermal: Rats	LD50 > 2000 mg/kg bw (24h)
Rats: Acute toxicity – inhalation:	LC50 = 1.7 - 5.8 mg/L (6 h)
Rats: Acute toxicity – dermal: Rats	LD50 = 380 mg/kg bw (14 days)

11.1.2 Skin corrosion/irritation

Data are in reference to Glycerol, propoxylated (CAS 25791-96-2):

Rabbits: Not irritating (72h)

11.1.3 Serious eye damage

Data are in reference to Glycerol, propoxylated (CAS 25791-96-2):

Rabbits: Not irritating (72h)

11.1.4 Respiratory or skin sensitisation

Data are in reference to Glycerol, propoxylated (CAS 25791-96-2):

Rabbits: Not irritating (72h)

11.1.5 Germ cell mutagenicity

Data are in reference to Glycerol, propoxylated (CAS 25791-96-2):

Salmonella typhimurium strains: negative.

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11.1.6 Carcinogenicity:

No data

11.1.7 Reproductive toxicity

Data are in reference to Glycerol, propoxylated (CAS 25791-96-2):

Rats: NOAEL \geq 1000 mg/kg bw/day

11.1.8 STOT-single exposure

11.1.9 STOT-repeated exposure

Data are in reference to Glycerol, propoxylated (CAS 25791-96-2):

Rats (oral): NOAEL \geq 1000 mg/kg bw/day

11.1.10 Aspiration hazard:

No data.

Section 12: Ecological information

12.1 Toxicity

12.1.1. Aquatic toxicity

Short-term toxicity to fish:

Freshwater fish (Golden orfe)

LC50 > 194 mg/L (48h)

Long-term toxicity to fish: No data.

Short-term toxicity to aquatic invertebrates: Freshwater invertebrates (Daphnia magna)

EC50 > 1 mg/L (48h)

Long-term toxicity to aquatic invertebrates:

Freshwater invertebrates (Daphnia magna)

NOEC \geq 1 mg/L (21 days)

Toxicity to aquatic algae and cyanobacteria:

Freshwater algae (Desmodesmus subspicatus)

NOEC \geq 100 mg/L (72h)

Toxicity to microorganisms:

Microorganisms

EC10 > 170 mg/L (3h)

12.1.2. Sediment toxicity: No data.

12.1.3. Terrestrial toxicity: No data.

12.1.4. Atmospheric toxicity: No data.

12.2 Persistence and degradability

Phototransformation in air:

Half-life (DT50):

\geq 2.3 \leq 10.3 h

Biodegradation in water:

BOD5/COD:

100 % (after 14 days)

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logKow: <= 3

12.4 Mobility in soil

logKoc: <1.25 (at pH= 5.4)

12.5 Results of PBT and vPvB assessment

The substance does not meet the criteria for persistent, bioaccumulation and toxicity (PBT) or the criteria for Very Persistent and Very Bio accumulative (vPvB) in accordance with Annex XIII of 1907/2006/EC.

12.6 Other adverse effects: No other adverse effects or critical hazards.

12.7 Other ecological information

Section 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste: No

Packaging

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14: Transport information

	14.1 UN Number	14.2 UN proper shipping name
ARD/RID	3082	Diethyltoluenediamine mixture
AND	3082	Diethyltoluenediamine mixture
IMDG	3082	Diethyltoluenediamine mixture
IATA	3082	Diethyltoluenediamine mixture

	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards	14.6 Special precautions for user	Additional information
ARD/RID	9	III	Yes	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	

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ADN	9	III	Yes	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	
IMDG	9	III	Yes	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	
IATA	9	III	YES	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	

14.7 Transport in bulk Not applicable
According to Annex II of
Marpo; 73/78 and the IBC
Code

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH)

This product is compliant with the REACH Regulation EC 1907/2006.
Huntsman has pre-registered and is registering all of the substances that it manufactures in or imports into the European Economic Area (EEA) that are subject to Title II of the REACH Regulation.

Annex XIV - List of substances subject to authorisation Substances of very high concern

None of the components are listed.

Annex XIV

**Annex XVII –
on the manufacture:
placing on the market
and use of certain
dangerous substances,
mixtures and article** Not applicable

Other EU Regulations
Europe inventory: All components are listed or exempted
Black list chemicals: Not listed
Priority list chemicals: Not listed
**Integrated pollution
Prevention and control
List:** Listed
**Integrated pollution
Prevention and control
List (IPPC)-water:** Listed

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15.2 Chemical safety assessment:

In accordance with REACH Chemical Safety Assessment has not been carried out for the substance.

Section 16: Other information

16.1 Indication of changes

This version replaces supersedes previous versions.

16.2 Abbreviations and acronyms:

Acute Tox: Acute Toxicity
BCF: Bioconcentration factor
BOD: Biochemical oxygen demand
bw: bodyweight
CAS number: Chemical Abstracts Service number
CLP: Classification, labelling and packaging regulation
COD: Chemical oxygen demand
DNEL: Derived No Effect Level
dw: dry weight
EC: European Commission
EC number: EINECS and ELINCS number
EC50: Half maximal effective concentration
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
Eye Dam.: Serious eye damage
Flam. Liq.: Flammable liquid
LC50: Lethal concentration, 50%
LD50: Median Lethal dose
LOAEC: Lowest Observed Adverse Effect Concentration
logKoc: Organic carbon- referenced sorption coefficients
logKow: Octanol/water partition coefficient
NOAEC: No Observed Adverse Effect Concentration
NOEC: No Observed Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
PNEC: Predicted No Effect Concentration
REACH: The Registration, Evaluation, Authorisation and Restriction of Chemicals
Skin Corr.: Skin corrosion
STOT: Specific Target Organ Toxicity
STOT SE: Specific target organ toxicity — single exposure
STOT RE: Specific target organ toxicity — repeated exposure
STP: Sewage Treatment Plant
vPvB: Very Persistent and Very Bioaccumulative

16.3 Key literature references and sources for data:

Registration dossiers for glycerol, propoxylated (CAS 25791-96-2), ethylene oxide (CAS 75-21-8), ECHA Dissemination Portal.

16.4 Classification for mixture and used evaluation method according to Regulation (EC) 1272/2008 (CLP)

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No applicable

Full text of R-, S- and P-phrases

R21/22	Harmful in contact with skin and if swallowed.
R22	Harmful if swallowed.
R23/24	Toxic by inhalation and in contact with skin.

S-phrases:

S7	Keep container tightly closed.
S9	Keep container in a well-ventilated place.
S28 S36/37/39 S45	After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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