


Sovchem[®] DETU


| 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION | |
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| Manufacturer Sovereign Chemical Company 1225 West Market Street Akron, OH 44313 | Emergency Contact Chemtrec: 1-800-424-9300 (continental USA) (1)703-527-3887 (outside continental USA) |
| Trade Name(s): Sovchem@ DETU Crystal | Synonyms: DETU, N,N'-diethylthiourea 1,3-diethylthiourea |
| Chemical Name: Thiourea, N,N'-diethyl | CAS Number: 105-55-5 |
| Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available. | Application of the substance/the preparation: Chemicals for synthesis. |
| Issued By: Sovereign Chemical Company According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS | SDS Number: 1848 Date of Issue: November 18, 2013 Revision Number: 2 (supersedes August 24, 2010) Change(s): Revision to GHS requirement |

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
 Classification according to Regulation (EC) No 1272/2008


 GHS07
 Acute Tox. 4 H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

 Xn; Harmful
 R22 Harmful if swallowed.

Information concerning particular hazards for human and environment: Not applicable.

2.2 Label elements
 Labeling according to Regulation (EC) No 1272/2008
 The substance is classified and labeled according to the CLP regulation.
 Hazard pictograms

 GHS07
 Signal word: Warning
 Hazard-determining components of labeling: 1,3-diethyl-2-thiourea
 Hazard statements
 H302 Harmful if swallowed.
 Precautionary statements
 P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description
WHMIS-symbols
D1B - Toxic material causing immediate and serious toxic effects



NFPA ratings (scale 0-4)



Health = 2
Fire = 0
Reactivity = 0

HMIS ratings (scale 0-4)



Health = 2
Fire = 0
Reactivity = 0

HMIS Long Term Health Hazard Substances: Substance is not listed.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

CAS No., Description: 105-55-5 1, 3-diethyl-2-thiourea

Identification number(s)

EC number: 203-308-5

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information

Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact

Clean with water and soap.

If skin irritation continues, consult a doctor.

After eye contact

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Gastric or intestinal disorders

Dizziness

Hazards: Danger of disturbed cardiac rhythm.

4.3 Indication of any immediate medical attention and special treatment needed

Medical supervision for at least 48 hours.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons, unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture: During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters

Protective equipment

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information: Cool endangered receptacles with water spray.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

Avoid formation of dust.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

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.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No special precautions are necessary if used correctly.

Prevent formation of dust.

Any unavoidable deposit of dust must be regularly removed.

Information about fire and explosion protection: Dust can combine with air to form an explosive mixture.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles

Store in a cool location.

Protect from humidity and water.

Avoid storage near extreme heat, ignition sources or open flame.

Information about storage in one common storage facility

Store away from foodstuffs.

Do not store together with oxidizing and acidic materials.

Further information about storage conditions: Store in cool, dry conditions in well-sealed receptacles.

7.3 Specific end use(s): No further relevant information available.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

DNELs No further relevant information available.

PNECs No further relevant information available.

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Respiratory protection

Use suitable respiratory protective device in case of insufficient ventilation.

Use suitable respiratory protective device when high concentrations are present.

Protection of hands



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests, no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

Neoprene gloves

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection



Safety glasses with side shields or face shield strongly

Body protection: Protective work clothing

Limitation and supervision of exposure into the environment

No special requirements.

No further relevant information available.

Risk management measures

See Section 7 for additional information.

No further relevant information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information

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| Appearance Form: Crystalline Powder. Color: White. | Change in Condition Melting Point/Melting Range: 147 °F/64 °C Boiling Point/Boiling Range: Undetermined. |
| Odor: Characteristics. | Octanol/Water Partition Coefficient: Not determined. |
| Odor threshold: Not determined. | Solvent Content: Organic solvents: Not determined. |
| pH Value: Not applicable. | Solids content: Not determined. |
| Vapor Pressure: Not applicable. | Flash point: Not applicable. |
| Density at 20 °C: 1.1 g/cm³. | Flammability (solid, gaseous): Product is not flammable. |
| Relative Density: Not determined. | Ignition temperature: Not determined. |
| Vapor Density: Not applicable. | Decomposition temperature: Not determined. |
| Evaporation rate: Not applicable. | Self-igniting: Not determined. |
| Solubility in / Miscibility with water: Soluble. | Danger of explosion: Product does not present an explosion hazard. |
| Viscosity Dynamic: Not applicable. Kinematic: Not applicable. | Explosion limits Lower: Not determined. Upper: Not determined. |

9.2 Other information No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition / conditions to be avoided No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Toxic fumes may be released if heated above the decomposition point.
 Reacts with strong oxidizing agents.
 Reacts with strong acids.
 Contact with acids releases toxic gases.

10.4 Conditions to avoid: Keep away from heat and direct sunlight.

10.5 Incompatible materials: Contact with acids liberates toxic gases.

10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide.
 Sulfur oxides (SOx).
 Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

| | | |
|---|------|-----------------|
| LD/LC50 values relevant for classification: | | |
| 105-55-5 1,3-diethyl-2-thiourea | | |
| Oral | LD50 | 316 mg/kg (rat) |

Primary irritant effect

on the skin: Slight irritant effect on skin and mucous membranes.
 on the eye: Slight irritant effect on eyes.

Sensitization: No sensitizing effects known.

Additional toxicological information: Harmful.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: biodegradable

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information

General notes

This statement was deduced from products with a similar structure or composition.

Due to available data on eliminability/decomposition and bioaccumulation potential a prolonged damage of the environment is unlikely.

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

14. TRANSPORTATION INFORMATION

14.1 UN-Number

DOT, ADR, ADN, IMDG, IATA N/A

14.2 UN proper shipping name

DOT, ADR, ADN, IMDG, IATA N/A

14.3 Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA N/A

14.4 Packing group

DOT, ADR, IMDG, IATA N/A

14.5 Environmental hazards

Marine pollutant No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

UN "Model Regulation"

15. REGULATORY INFORMATION

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

United States (USA)

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|--|--------------------------|
| SARA Section 355 (extremely hazardous substances) | Substance is not listed. |
| SARA Section 313 (Specific toxic chemical listings) | Substance is not listed. |
| TSCA (Toxic Substances Control Act) | Substance is listed. |
| Proposition 65 (California) | |
| Chemicals known to cause cancer | Substance is not listed. |
| Chemicals known to cause reproductive toxicity for females | Substance is not listed. |
| Chemicals known to cause reproductive toxicity for males | Substance is not listed. |

| | |
|--|------------------------------------|
| Chemicals known to cause developmental toxicity | Substance is not listed. |
| Carcinogenic Categories | |
| EPA (Environmental Protection Agency) | Substance is not listed. |
| IARC (International Agency for Research on Cancer) | 105-55-5 1,3-diethyl-2-thiourea, 3 |
| TLV (Threshold Limit Value established by ACGIH) | Substance is not listed. |
| NIOSH-Ca (National Institute for Occupational Safety and Health) | Substance is not listed. |
| OSHA-Ca (Occupational Safety & Health Administration) | Substance is not listed. |
| Canada | |
| Canadian Domestic Substances List (DSL) | Substance is listed. |
| Canadian Ingredient Disclosure list (limit 0.1%) | Substance is not listed |
| Canadian Ingredient Disclosure list (limit 1%) | Substance is not listed. |

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent