

Sovchem® DPTU

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
Manufacturer Sovereign Chemical Company 4040 Embassy Parkway, Suite 190 Akron, OH 44333	Emergency Contact Chemtrec: 1-800-424-9300 (USA) (1)330-542-8400 (outside USA)
Trade Name(s): Sovchem® DPTU Powder	Chemical Name: N-N'-diphenyl thiourea
Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.	Application of the substance/the preparation: Chemical intermediate.
Issued By: Sovereign Chemical Company According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS	Date of Issue: June 1, 2023

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
 Information in accordance with US 29 CFR 1910.1200 (Hazcom 2012) and Regulation (EC) No 1272/2008

Skin sensitization, category 1A - H317
 Reproductive toxicity, Category 2 - H361
 Specific target organ toxicity — Repeated exposure, Category 2 - H373 (Thyroid)
 Hazardous to the aquatic environment — Chronic Hazard, Category 2 - H411

2.2 Label Elements



Signal word: Warning

Hazard Statements

H317 - May cause an allergic skin reaction.
 H361 - Suspected of damaging fertility or the unborn child.
 H373 - May cause damage to organs (Thyroid) through prolonged or repeated exposure.
 H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - IF ON SKIN: Wash with plenty of water.

P308+P313 - IF exposed or concerned: Get medical advice/attention.
 P405 - Store locked up.
 P501 - Dispose of contents/container in accordance with local, regional, national and/or international regulation.

2.3 Other hazards
 Results of PBT and vPvB assessment
 PBT: Not applicable.
 vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Chemical Name	CAS No	EC No	Weight %	Classification
N-N'-Diphenyl thiourea	102-08-9	203-004-2	≥95%	Skin Sens. 1A, H317 Repr. 2, H361 STOT RE 2, H373 Aquatic Chronic 2, H411

The remaining unspecified ingredients are impurities and are not hazardous.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information

Seek immediate medical advice.
 Immediately remove any clothing soiled by the product.
 In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Supply fresh air or oxygen; call for doctor.
 In case of unconsciousness, place patient stably inside position for transportation.

After skin contact

Immediately wash with water and soap and rinse thoroughly.
 Seek immediate medical advice.

After eye contact

Remove contact lenses if worn.
 Rinse opened eye for several minutes under running water. Then 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

- Nausea
- Disorientation
- Dizziness
- Headache
- Cramp
- Cyanosis
- Unconsciousness

4.3 Indication of any immediate medical attention and special treatment needed

If blue coloring appears (lips, earlobes, fingernails), give oxygen treatment as quickly as possible.
Do not administer preparations of the adrenalin-ephedrine-group.
Monitor circulation, possible shock treatment.
Medical supervision for at least 48 hours.

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: Formation of toxic gases is possible during heating or in case of fire.

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

Use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions

Damp down dust with water spray.

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

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

Any unavoidable deposit of dust must be regularly removed.

Keep receptacles tightly sealed.
Provide suction extractors if dust is formed.
Information about fire and explosion protection
Keep respiratory protective device available.
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.

Provide ventilation for receptacles

Information about storage in one common storage facility

Store away from foodstuffs.

Store away from oxidizing agents.

Do not store together with acids.

Store away from metals.

Further information about storage conditions

Store in cool, dry conditions in well-sealed receptacles.

Keep container tightly sealed.

Store receptacle in a well-ventilated area.

Protect from humidity and water.

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.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Respiratory protection

Suitable respiratory protective device recommended.

Use suitable respiratory protective device in case of insufficient ventilation.

Use suitable respiratory protective device when high concentrations are present.

For spills, respiratory protection may be advisable.

Protection of hands

The glove material must 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 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 breakthrough time must be found out by the manufacturer of the protective gloves and must be observed.

Eye protection



Safety glasses with side shields or face shield strongly

Body protection: Impervious protective work clothing

Limitation and supervision of exposure to the environment: No further relevant information available.

Risk management measures

See Section 7 for additional information.

No further relevant information is available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information

Appearance Form: Powder. Color: White.	Change in Condition Melting Point/Melting Range: 148 °C. Boiling Point/Boiling Range: 250 °C.
Odor: Odorless.	Octanol/Water Partition Coefficient: 3.6
Odor threshold: Not determined.	Solvent Content: Organic solvents: Not determined.
pH Value: Not applicable.	Solids content: Not determined.
Vapor pressure: 0.000223 Pa (25 °C)	Flash point: 141.5 - 187.8 °C (760 mmHg)
Density at 20 °C: 1.3 g/cm ³ .	Flammability (solid, gaseous): Product is not flammable.
Relative density: Not determined.	Ignition temperature: Not determined.
Vapor density: Not applicable.	Decomposition temperature: > 150 °C
Evaporation rate: Not applicable.	Self-igniting: Not determined.
Solubility in / Miscibility with water: Practically insoluble in water.	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.
- Keep away from heat and direct sunlight.
- Moist conditions

10.3 Possibility of hazardous reactions

- Reacts with strong oxidizing agents.
- Contact with acids releases toxic gases.
- Reacts with certain metals.
- Toxic fumes may be released if heated above the decomposition point.
- Risk of dust explosion if enriched with fine dust in the presence of air.

10.4 Conditions to avoid

- Store away from oxidizing agents.
- Keep away from heat and direct sunlight.

10.5 Incompatible materials: Contact with acids liberates toxic gases.

10.6 Hazardous decomposition products

- Nitrogen oxides.
- Carbon monoxide and carbon dioxide.
- Sulfur dioxides.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification		
102-08-9, 1,3-diphenyl-2-thiourea		
Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

Primary irritant effect

- on the skin: Slight irritant effect on skin and mucous membranes.
- on the eye: Slight irritant effect on eyes.
- Sensitization: Sensitizing effect by skin contact is possible by prolonged exposure.

Additional toxicological information: Toxic

Sensitization: Sensitization possible by skin contact.

Repeated dose toxicity

- Repeated exposures may result in skin and/or respiratory sensitivity.
- May cause damage to organs through prolonged or repeated exposure.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.

N-N'-Diphenyl thiourea (CAS #: 102-08-9)

LC50 96h - Fish > 33 mg/L Danio rerio (previous name: Brachydanio rerio)

EC50 48h - Crustacea 10.2 mg/L *Daphnia magna*
EC50 72h - Algae 14 mg/L *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*)
NOEC chronic Crustacea 0.15 mg/L *Daphnia magna*
NOEC chronic algae 4.7 mg/L *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*)

12.2 Persistence and degradability: Not readily biodegradable.

12.3 Bioaccumulative potential:

N-N'-Diphenyl thiourea (CAS #: 102-08-9)

BCF - Fish 82.4

Partition coefficient n-octanol/water

(Log Pow): 3.6

12.4 Mobility in soil: Log Koc: 3.07

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties

The components are not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7 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.

After prior treatment, product must be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORTATION INFORMATION

14.1 UN-Number

DOT, ADR, IMDG, IATA

UN3077

14.2 UN proper shipping name

DOT, ADR, IMDG, IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(N-N'-Diphenyl thiourea)

- 14.3 Transport hazard class(es)
DOT, ADR, IMDG, IATA Class 9
- 14.4 Packing group
DOT, ADR, IMDG, IATA III
- 14.5 Environmental hazards
Marine pollutant Yes
- 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.

15. REGULATORY INFORMATION

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture
United States (USA)

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)	Substance is not listed.
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.