

SAFETY DATA SHEET

Revision Date 08/04/2023

1. PRODUCT AND COMPANY IDENTIFICATION

- 1.1 Product identifiers**
 Product name : EDC·HCl
 Product Number : RC8102
 Brand : Advanced ChemTech
 CAS-No. : 25952-53-8
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
 Identified uses : Laboratory chemicals, Manufacture of substances
- 1.3 Details of the supplier of the safety data sheet**
 Company : Advanced ChemTech
 5609 Fern Valley Rd, Louisville, KY 40228 USA
 Telephone : +1 833-317-5620
 Fax : +1 502-968-1000
- 1.4 Emergency telephone number** : +1 800-424-9300 Chemtrec

2. HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
 Acute toxicity, Oral (Category 4), H302
 Acute toxicity, Dermal (Category 3), H311
 Skin irritation (Category 2), H315
 Serious eye damage (Category 1), H318
 Skin sensitization (Category 1), H317
 Specific target organ toxicity - repeated exposure, Oral (Category 2), Stomach, large intestine, lymph node, H373
 Short-term (acute) aquatic hazard (Category 1), H400
 Long-term (chronic) aquatic hazard (Category 1), H410
 For the full text of the H-Statements mentioned in this Section, see Section 16.
- 2.2 GHS Label elements, including precautionary statements:**
 Pictogram



Signal word

Danger

Hazard statement(s)

- H302 Harmful if swallowed.
 H311 Toxic in contact with skin.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H373 May cause damage to organs (Stomach, large intestine, lymph node) through prolonged or repeated exposure if swallowed.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
 P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
 P314 Get medical advice/ attention if you feel unwell.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.
 P391 Collect spillage.
 P405 Store locked up.
 P501 Dispose of contents/ container to an approved waste disposal plant.

- 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – none**

3. COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substances**
 Synonyms : N-(3-dimethylaminopropyl)-N'-ethylcarbodiimide Hydrochloride
 Formula : $C_8H_{17}N_3 \cdot HCl$
 Molecular Weight : 155.25-36.46g/mole
 CAS-No. : 25952-53-8

Hazardous Components

Component	Classification	Concentration
1-(3-(Dimethylamino)propyl)-3-ethyl-carbodiimide hydrochloride		

SAFETY DATA SHEET

	Acute Tox. 4; Acute Tox. 3; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H311, H315, H318, H317, H373, H400, H410 M-Factor - Aquatic Acute:1	<= 100 %
--	---	----------

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Consult a physician.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11

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

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture:

Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

5.3 Advice for firefighters:

Wear self-contained breathing apparatus for fire fighting if necessary.

5.4 Further information:

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, protective equipment, and emergency procedure:

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections:

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature -20 °C Moisture sensitive. Store under inert gas. Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects.

7.3 Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Form: White to Off-White solid
b) Odor	no data available
c) Odor Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	Melting point/range: 105 - 118 °C
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available

SAFETY DATA SHEET

k) Vapor pressure	no data available
l) Vapor density	no data available
m) Relative density	no data available
n) Water solubility	no data available
o) Partition coefficient: n- octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available
9.2 Other safety information:	no data available

10. STABILITY AND REACTIVITY

- 10.1 **Reactivity:** No data available
- 10.2 **Chemical stability:** Stable under recommended storage conditions.
- 10.3 **Possibility of hazardous reactions:** No data available
- 10.4 **Conditions to avoid:** No data available
- 10.5 **Incompatible materials:** Strong oxidizing agents, Strong acids
- 10.6 **Hazardous decomposition products:** Other decomposition products - no data available. In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

- 11.1 **Information on toxicological effects**
- Acute toxicity:** LD50 Oral - Rat - female - 500 mg/kg (OECD Test Guideline 423)
- Inhalation:** No data available
- Dermal:** LD50 - Rat - male and female - > 200 - 1,000 mg/kg (OECD Test Guideline 402)
- LD50 Intravenous - Mouse - 56 mg/kg
- Skin corrosion/irritation:** Skin - Rabbit; Result: Severe skin irritation (OECD Test Guideline 404)
- Serious eye damage/eye irritation:** Eyes - Rabbit; Result: Severe eye irritation (OECD Test Guideline 437)
- Respiratory or skin sensitization:** Local lymph node assay (LLNA) - Mouse; May cause allergic skin reaction. (OECD Test Guideline 429)
- Germ cell mutagenicity:** Rat - male, Result: negative.
- Carcinogenicity:**
- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
- Reproductive toxicity:** No data available
- Specific target organ toxicity - single exposure:** No data available
- Specific target organ toxicity - repeated exposure:** No data available
- Aspiration hazard:** No data available
- Additional Information:** RTECS: FF2200000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

- 12.1 **Toxicity:**
- Toxicity to fish static test LC50 - Cyprinus carpio (Carp) - 4.6 mg/l - 96 h (OECD Test Guideline 203)
- Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 0.41 mg/l - 48 h (ISO 6341)
- Toxicity to bacteria EC50 - activated sludge - > 347 - < 470 mg/l - 3 h (OECD Test Guideline 209)
- 12.2 **Persistence and degradability:** Biodegradability: aerobic Chemical oxygen demand - Exposure time 28 d. Result: - Not readily biodegradable. (OECD Test Guideline 301)
- 12.3 **Bioaccumulative potential:** No data available
- 12.4 **Mobility in soil:** No data available
- 12.5 **Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- 12.6 **Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects. No data available

13. DISPOSAL CONSIDERATIONS

- 13.1 **Waste treatment methods**
- Product:** Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contaminated packaging:** Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (1-(3-(Dimethylamino)propyl)-3-ethylcarbodiimide hydrochloride)

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

IMDG

UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (1-(3-(Dimethylamino)propyl)-3-ethylcarbodiimide hydrochloride)

Marine pollutant : yes

IATA

UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (1-(3-(Dimethylamino)propyl)-3-ethylcarbodiimide hydrochloride)

SAFETY DATA SHEET

15. REGULATORY INFORMATION

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: No SARA Hazards

Massachusetts Right to Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

EDC·HCl	CAS-No.	Revision Date
	25952-53-8	

New Jersey Right to Know Components

EDC·HCl	CAS-No.	Revision Date
	25952-53-8	

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Advanced ChemTech shall not be liable for any damage resulting in the handling or from contact with the above product.