

Safety Data Sheet

SECTION I: Product and Company Identification

1.1 Product identifiers

Product name: TR40 Transfection Reagent

Product Number: C4610

Brand: MEDNA

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

Identified uses: For research use.

1.3 Details of the supplier of the safety data sheet

Company : MEDNA Scientific, Inc.
9160 Sterling Street, Suite 110
Irving, TX 75063
Office: 469-250-4424

Emergency phone number: 469-250-4424

SECTION II: 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
Eye irritation (Category 2A), H319
Skin sensitisation (Category 1), H317
Short-term (acute) aquatic hazard (Category 2), H401
Long-term (chronic) aquatic hazard (Category 2), H411
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 Warning

Hazard statement(s)

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ 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/ eye protection/ face protection.
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P363 Wash contaminated clothing before reuse.
 P391 Collect spillage.
 P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

No additional information available.

SECTION III: Composition/information on ingredients

No ingredients are hazardous according to OSHA criteria.

CAS#	Chemical Name	Concentration	Classification
[REDACTED]	[REDACTED]	[REDACTED]	Acute Tox. 4; Eye Irrit. 2A; Skin Sens. 1; Aquatic Acute 2; Aquatic Chronic 2; H302, H319, H317, H401, H411
[REDACTED]	[REDACTED]	[REDACTED]	EC-No.: 200-296-3

SECTION IV: First aid measures

4.1 Description of first aid measures

If inhaled

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

In case of skin contact

Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated

clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In case of eye contact

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.

If swallowed

Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects, Both Acute and Delayed:

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION V: Firefighting measures**5.1 Flammable properties**

Not flammable.

5.2 Flash point

Not determined.

5.3 Suitable extinguishing media

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Unsuitable extinguishing media

None known

5.4 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes. Keep upwind of fire.

5.5 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides

SECTION VI: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Contain spill and collect, as appropriate.

Transfer to a chemical waste container for disposal in accordance with local regulations

SECTION VII: Handling and storage

7.1 Precautions for safe handling

Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): 10: Combustible liquids.

SECTION VIII: Exposure controls/personal protection

8.1 Control parameters

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2 Exposure controls

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits

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 and body 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.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

Environmental exposure controls

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

Other information

Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION IX: Physical and chemical properties

9.1 Basic physical and chemical properties

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a) Appearance Form: Colorless

- b) Odor: No data available
- c) Odor threshold: No information available
- d) pH: 11 - DIN 19268.
- e) Physical state at 20 degrees C: Liquid
- f) Flash point: > 110 °C (> 230 °F) - closed cup
- g) Decomposition temperature: No information available.
- h) Flammability limits in air: No information available.
- i) Explosion limits: No information available.
- j) Specific gravity: No information available.
- k) Water Solubility: Soluble.
- l) Evaporation rate: No information available
- m) Vapor Pressure @20°C (kPa): No information available
- n) Vapor density: No data available
- o) VOC Content(%): Not applicable
- p) Relative density: 1.03 g/cm³ at 25 degrees C (77 F).
- q) Auto-ignition temperature: > 200 degrees C
- r) Decomposition temperature: > 250 degrees C

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a) Appearance

Form: Crystalline powder

Colour: colourless

b) Odour No data available

c) Odour Threshold No data available

d) pH 5.0 - 6.5 at 238 g/l at 25 °C (77 °F)

e) Melting point/freezing point

Melting point/range: 212.6 °C (414.7 °F) - Decomposes before melting.

f) Initial boiling point and boiling range

Decomposes below the boiling point.

g) Flash point No data available

h) Evaporation rate No data available

i) Flammability (solid, gas)

The product is not flammable. - Flammability (solids)

j) Upper/lower flammability or explosive limits

No data available

k) Vapour pressure No data available

l) Vapour density No data available

m) Relative density 1.439 g/cm³ at 20 °C (68 °F)

n) Water solubility 703.6 g/l at 20 °C (68 °F) - OECD Test Guideline 105

o) Partition coefficient: n-octanol/water

log Pow: < -3.85

p) Auto-ignition temperature

does not ignite

q) Decomposition temperature

No data available

r) Viscosity No data available

s) **Explosive properties** Not explosive

t) **Oxidizing properties** The substance or mixture is not classified as oxidizing.

9.2 Other safety information

No data available

SECTION X: Stability and reactivity

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Light sensitive.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Incompatible materials, light, dust generation, excess heat.

10.5 Incompatible materials

Strong oxidizers.

10.6 Hazardous decomposition products

Carbon monoxide, carbon dioxide, nitrogen oxides. Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides.

SECTION XI: Toxicological information



Acute toxicity:

LD50 Oral - Rat - > 500 - < 2,000 mg/kg
(OECD Test Guideline 423)

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitisation

Maximisation Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

reverse mutation assay

Escherichia coli/Salmonella typhimurium

Result: negative

Mutagenicity (mammal cell test): chromosome aberration.

Human lymphocytes

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.

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 on OSHA's list of regulated carcinogens.

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: TL6809000

SECTION XII: Ecological information

12.1 Toxicity

█:

Toxicity to fish LC50 - Danio rerio (zebra fish) - 7.2 mg/l - 96.0 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 8.84 mg/l - 48 h (OECD Test Guideline 202)

█:

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - >100 mg/l - 72 h (OECD Test Guideline 201)

static test NOEC - Pseudokirchneriella subcapitata (green algae) - >100 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria Respiration inhibition EC50 - activated sludge - > 1,000 mg/l - 3 h
(OECD Test Guideline 209)

12.2 Persistence and degradability

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Biodegradability Result: - According to the results of tests of biodegradability this product is not readily biodegradable. (OECD Test Guideline 302B)

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Biodegradability aerobic - Exposure time 28 d
Result: 0 % - Not readily biodegradable.
(OECD Test Guideline 301D)

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

No data available

SECTION XIII: Disposal considerations

13.1 Waste treatment methods

Product

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Do not reuse empty containers.
Dispose of as unused product.

SECTION XIV: Transport information

DOT (US)

Not dangerous goods

IMDG

█:

UN number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Aziridine, homopolymer) Marine pollutant : yes

IATA

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SECTION XVI: Other information**Further 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 regarding appropriate safety precautions. It does not represent any guarantee of the properties of the product. MEDNA Scientific shall not be held liable for any damage resulting from handling or from contact with the above product.