

# SAFETY DATA SHEET (SDS)



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**Product Name:** *TransducelT™* Transduction Reagent

**Product Number:** MIR 6620

**Revision Date:** FEB 14 2017

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## 1. PRODUCT AND COMPANY IDENTIFICATION

1.1. **Product Name:** *TransducelT™* Reagent

1.2. **Product Numbers:** MIR 6620

1.3. **Identified Product Use:** For research use only

1.4. **Supplier Details:**

1.4.1. **Company:** Mirus Bio LLC, 545 Science Drive, Madison, WI 53711, USA

1.4.2. **Telephone:** 888.530.0801 (Toll Free within the U.S.) or +1.608.441.2852

1.4.3. **Fax:** +1.608.441.2849

1.4.4. **Emergency Phone No.:** US and Canada: 1.800.633.8253; International: +1.801.629.0667

1.5. **Precautionary Labeling:** The components of *TransducelT™* Reagent (< 1.00% by weight) are potentially harmful, although the chemical, physical, and toxicological properties have not been thoroughly investigated by Mirus Bio LLC. Handle with care, and practice safe laboratory techniques. The information included within this SDS pertains to ethanol, which is used as a solvent.

## 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

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

**GHS label elements, including precautionary statements:**

Pictogram	
Signal word	Warning
Hazard statement(s)	
H302	Harmful if swallowed.
Precautionary statement(s)	
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P501	Dispose of contents/ container to an approved waste disposal plant.

1.1. **Other Hazards which do not result in the classification or are not covered by GHS:** None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substances

Chemical Name	CAS-No	EINECS-No	Common Name(s)	Weight %
Hexadimethrine bromide	28728-55-4		1,5-Dimethyl-1,5-diazaundecamethylene polymethobromide	1% w/v
Water	7732-18-5	231-791-2	n/a	100% v/v

**Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance:** none

### 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. Move out of dangerous area.

**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**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2. Most important symptoms/effects, acute and delayed

See sections 2 and 11 (hazard and toxicological information) for the most important symptoms and effects.

#### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

No data available

### 5. FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing media

##### 5.1.1. Suitable Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

##### 5.1.2. Unsuitable extinguishing media

None

#### 5.2. Specific hazards arising from the substance or mixture

No data available

#### 5.3. Special protective equipment and precautions for firefighters

Wear self-contained breathing apparatus for firefighting if necessary

#### 5.4. Further information

Use water spray to cool unopened containers.

### 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection, refer to section 8.

### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3. Methods and Materials for Containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4. References 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 inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - no smoking. Take measures to prevent the buildup of electrostatic charge. 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. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters e.g. occupational exposure limit values or biological limit values.

Contains no substances with occupational exposure limit values

### 8.2. Appropriate engineering controls.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 8.3. Individual protection measures, such as personal protective equipment.

Appropriate engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.
Personal protective equipment:	Avoid all unnecessary exposure.
Materials for protective clothing:	GIVE EXCELLENT RESISTANCE: butyl rubber. viton. GIVE GOOD RESISTANCE: neoprene. tetrafluoroethylene. GIVE LESS RESISTANCE: nitrile rubber. polyethylene. GIVE POOR RESISTANCE: natural rubber. PVA. PVC.
Hand protection:	Gloves.
Eye protection:	Safety glasses.
Skin and body protection:	Protective clothing.
Respiratory protection:	Wear gas mask with filter type A if conc. in air > exposure limit.
Other information:	Do not eat, drink or smoke during use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1. **Appearance (physical state, color etc.):** Form: liquid, clear  
Color: colorless
- 9.2. **Odor:** No data available
- 9.3. **Odor threshold:** No data available
- 9.4. **pH:** No data available
- 9.5. **Melting point/freezing point:** No data available
- 9.6. **Initial boiling point and boiling range:** No data available
- 9.7. **Flash point:** No data available
- 9.8. **Evaporation rate:** No data available
- 9.9. **Flammability (solid, gas):** No data available
- 9.10. **Upper/lower flammability or explosive limits:** No data available
- 9.11. **Vapor pressure:** No data available
- 9.12. **Vapor density:** No data available
- 9.13. **Relative density:** No data available
- 9.14. **Solubility(ies):** Water soluble – 100 g/L
- 9.15. **Partition coefficient: n-octanol/water** No data available
- 9.16. **Auto-ignition temperature:** No data available
- 9.17. **Decomposition temperature:** No data available
- 9.18. **Viscosity:** 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 (e.g. static discharge, shock or vibration):** No data available
- 10.5. **Incompatible materials:** Strong oxidizing agents
- 10.6. **Hazardous decomposition products:** Other decomposition products – no data available. In the event of a fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects: Ethanol

#### Acute toxicity

LD50 Oral – Mouse >1,000 mg/kg

Inhalation – No data available

Dermal: No data available

#### Skin corrosion/irritation

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**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 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

**Information on toxicological effects: Water**

LD50 Oral - Rat - > 90000 mg/kg

**Water summary:** There is no data available for the teratogenic, mutagenic, or reproductive toxicity effect of water. No data available to designate as causing specific target organ toxicity through single or repeated exposure. No data available to designate as an aspiration hazard or as a respiratory skin sensitizer.

**12. ECOLOGICAL INFORMATION**

**12.1. Ecotoxicity (aquatic and terrestrial, where available):** No data available

**12.2. Persistence and degradability:** No data available

**12.3. Bioaccumulative potential:** No data available

**12.4. Mobility in the soil:** No data available

**12.5. Other adverse effects:** No data available

**13. DISPOSAL CONSIDERATIONS****13.1. Waste Treatment Recommendations:**

Remove waste in accordance with local and/or national regulations. Hazardous waste should not be mixed with other waste or different types of hazardous waste if mixing leads to pollution or increased difficulty in

properly disposing of the waste. All entities that store, transport or handle hazardous waste should take the necessary measures to prevent risks of pollution or damage to people or animals.

Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into surface water. May be discharged to wastewater treatment installation.

#### 14. TRANSPORT INFORMATION

- 14.1. **UN number:** Not applicable, not a dangerous good
- 14.2. **UN proper shipping name:** Not applicable, not a dangerous good
- 14.3. **Transport hazard class(es):** Not applicable, not a dangerous good
- 14.4. **Packing group, if applicable:** Not applicable
- 14.5. **Environmental hazards (e.g.: Marine pollutant (Yes/No)):** No
- 14.6. **Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Not applicable
- 14.7. **Special precautions which a user needs to be aware of, or needs to comply with, in connection with the transport or conveyance within or outside their premises:** Refer to section 8

**Covers specifications required for DOT(US), IMDG, and IATA.**

#### 15. REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations specific for the product in question:

**OSHA Hazards:** Flammable liquid, Target Organ Effect, Irritant

**SARA 311/312 Hazards:** Fire Hazard, Chronic Health Hazard

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

**WHMIS Classification:** B2 – Flammable and combustible material – flammable liquid  
D2B – Poisonous and infectious material – other effects – Toxic

## 16. OTHER INFORMATION

**Full text of H-phrases: see section 16:**

**Acute Tox.** Acute toxicity

H302	Harmful if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H370	Causes damage to organs

NFPA health hazard: 1  
NFPA fire hazard: 0  
NFPA reactivity: 0

**HMIS Rating**

Health: 1  
Flammability: 0  
Physical: 0

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