

# SAFETY DATA SHEET (SDS)



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**Product Name:** *TransIT-TKO*® Transfection Reagent

**Product Number:** MIR 2150, MIR 2152, MIR 2154, MIR 2155, MIR 2156

**Revision Date:** JUL 28 2020

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## SECTION 1. IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product Identifier:

1.1.1. **Product Name:** *TransIT*-TKO® Transfection Reagent

1.1.2. **Product Code:** MIR 2150, MIR 2152, MIR 2154, MIR 2155, MIR 2156

1.1.3. **CAS No.:** Not applicable.

### 1.2. Relevant Identified Uses of the Mixture and Uses Advised Against:

1.2.1. **Identified Uses:** For research use only.

1.2.2. **Uses Advised Against:** Not known.

### 1.3. Details of the Supplier of the SDS:

1.3.1. **Company:** Mirus Bio LLC

1.3.2. **Address:** 5602 Research Park Blvd, Suite 210, Madison, WI 53719, USA

1.3.3. **Telephone No.:** 888.530.0801 (Toll Free within the U.S.) or +1.608.441.2852

1.3.4. **Fax:** +1.608.441.2849

1.3.5. **Email:** [info@mirusbio.com](mailto:info@mirusbio.com)

### 1.4. Emergency Telephone No.:

1.4.1. US and Canada: +1.800.633.8253

1.4.2. International: +1.801.629.0667

## SECTION 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture:

US CFR 1910.1200

Flammable liquids (Category 2), H225

Eye damage (Category 1), H318

### 2.2. Label Elements:

2.2.1. **Product Name:**

*TransIT*-TKO® Transfection Reagent



2.2.2. **Hazard Pictogram(s):**

2.2.3. **Signal Word(s):**

Danger

2.2.4. **Hazard Statement(s):**

H225: Highly flammable liquid and vapor.

H318: Causes serious eye damage.

2.2.5. **Precautionary Statement(s):**

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233: Keep container tightly closed.

P240: Ground and bond container and receiving equipment.

P241: Use explosion-proof electrical, ventilating, and lighting equipment.

P242: Use non-sparking tools.

P243: Take action to prevent static discharges.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.

P310: Immediately call a POISON CENTER/doctor.

P370+P378: In case of fire: Use water spray, dry powder or carbon dioxide to extinguish.

P403+P235: Store in a well-ventilated place. Keep cool.

P501: Dispose of contents in accordance with local, state or national legislation.

**2.3. Other Hazards:** None known.

**2.4. Additional Information:** None.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**3.1. Substances:**  
Not applicable.

**3.2. Mixtures:**

Hazardous Ingredient(s)	CAS No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Ethanol	64-17-5	>99	Flam. Liq. 2 H225 Eye Dam. 1 H318	GHS 02 GHS 05

### SECTION 4. FIRST AID MEASURES

**4.1. Description of First Aid Measures:**

**4.1.1. Inhalation:** Treat symptomatically.

**4.1.2. Skin Contact:** Take off all contaminated clothing immediately. Rinse skin with water.

**4.1.3. Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a poison center and/or doctor.

**4.1.4. Ingestion:** Rinse mouth with water. Treat symptomatically.

**4.2. Most Important Symptoms and Effects, Both Acute and Delayed:**  
May cause irritation.

**4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed:**  
Immediately call a poison center and/or doctor. Treat symptomatically.

## SECTION 5. FIREFIGHTING 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:

Water jet spray.

### 5.2. Specific Hazards Arising from the Mixture:

Highly flammable liquid and vapor. May decompose in a fire, giving off toxic and irritant vapors.

### 5.3. Advice for Firefighters:

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures:

Provide adequate ventilation. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Wear suitable protective clothing, gloves and eye/face protection.

### 6.2. Environmental Precautions:

This material and its container must be disposed of in a safe way.

### 6.3. Methods and Materials for Containment and Cleaning Up:

Absorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Containers must not be punctured or destroyed by burning, even when empty.

## SECTION 7. HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities:

Store in a well-ventilated place. Keep cool.

#### 7.2.1. Storage Temperature: 4°C.

#### 7.2.2. Storage Life: Stable under normal conditions.

### 7.3. Specific End Use(s): For research use only.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters:

#### 8.1.1. Occupational Exposure Limits:

Ethanol (64-17-5)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

## 8.2. Exposure Controls:

### 8.2.1. Appropriate Engineering Controls:

Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Ensure adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

### 8.2.2. Personal Protective Equipment:

- 8.2.2.1. **Eye Protection:** Tightly fitting safety glasses with side shields.
- 8.2.2.2. **Skin Protection:** Protective clothing and gloves.
- 8.2.2.3. **Respiratory Protection:** Normally no personal respiratory protection is necessary.
- 8.2.2.4. **Thermal Hazards:** None known.

## 8.3. Environmental Exposure Controls:

Avoid release to the environment.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties:

9.1.1. Appearance      Liquid

Color: colorless.

9.1.2. Odor: Alcohol

9.1.3. Odor Threshold: No data available.

9.1.4. pH: No data available.

9.1.5. Melting Point/freezing Point: -114 °C (-173 °F)

9.1.6. Initial Boiling Point and Boiling Range: 78 °C (172 °F)

9.1.7. Flash Point: 14.0 °C (57.2 °F) - closed cup

9.1.8. Evaporation Rate: No data available.

9.1.9. Flammability (Solid, Gas): No data available.

9.1.10. Upper/lower Flammability or Explosive Limits:

Upper explosion limit: 19 %(V)

Lower explosion limit: 3.3 %(V)

9.1.11. Vapor Pressure: 59.5 hPa (44.6 mmHg) at 20.0 °C (68.0 °F)

9.1.12. Vapor Density: No data available.

9.1.13. Density: No data available.

9.1.14. Relative Density: 0.789 g/mL at 25 °C (77 °F)

9.1.15. Solubility(ies): Water soluble.

9.1.16. Partition Coefficient: No data available.

9.1.17. Auto-ignition Temperature: 363.0 °C (685.4 °F)

9.1.18. Decomposition Temperature: No data available.

9.1.19. Viscosity: No data available.

9.1.20. Explosive Properties: No data available.

9.1.21. Oxidizing Properties: No data available.

9.2. Other Information: None.

## SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity: None anticipated.

10.2. Chemical Stability: Stable under recommended storage conditions.

10.3. Possibility of Hazardous Reactions: No hazardous reactions known if used for its intended purpose.

10.4. Conditions to Avoid: Avoid friction, sparks, or other means of ignition.

10.5. Incompatible Materials: No data available.

**10.6. Hazardous Decomposition Products:** No data available.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

### **11.1. Information on Toxicological Effects:**

**11.1.1. Acute Toxicity – Ingestion:** Ethanol, LD50, 3450 mg/kg (mouse)

**11.1.2. Acute Toxicity – Skin Contact:** Not classified.

**11.1.3. Acute Toxicity – Inhalation:** Ethanol, LD50, 20,000 ppm/10H (rat)

**11.1.4. Skin Corrosion/Irritation:** Not classified.

**11.1.5. Serious Eye Damage Irritation:**

Calculation method (Rabbit, OECD Test Guideline 405): Causes serious eye damage.

**11.1.6. Skin Sensitization Data:** Not classified.

**11.1.7. Respiratory Sensitization Data:** Not classified.

**11.1.8. Germ Cell Mutagenicity:** Not classified.

**11.1.9. Carcinogenicity**

IARC: Ethanol, Group I

NTP: Ethanol

OSHA: Ethanol

**11.1.10. Reproductive Toxicity:**

Reproductive toxicity - Human - female - Oral

Effects on Newborn: Apgar score (human only).

Effects on Newborn: Other neonatal measures or effects.

Effects on Newborn: Drug dependence.

**11.1.11. Lactation:** Not classified.

**11.1.12. Specific Target Organ Toxicity - Single Exposure:** Not classified.

**11.1.13. Specific Target Organ Toxicity - Repeated Exposure:** Not classified.

**11.1.14. Aspiration Hazard:** Not classified.

**11.2. Additional Information:** None.

## **SECTION 12. ECOLOGICAL INFORMATION**

**12.1. Ecotoxicity (Aquatic and Terrestrial, Where Available):** Low toxicity to invertebrates, fish, and algae.

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

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

**12.4. Mobility in Soil:** No data available.

**12.5. Other Adverse Effects:** No data available.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

**13.1. Waste Treatment Methods:** Remove waste in accordance with local and/or national regulations. Offer surplus and non-recyclable solutions to a licensed disposal company.

**13.2.** To minimize exposure, refer to Section 8 (Exposure Controls/Personal Protection) of the SDS.

## **SECTION 14. TRANSPORT INFORMATION**

**14.1. UN Number:** 1170

- 14.2. **UN Proper Shipping Name:** Ethanol
- 14.3. **Transport Hazard Class(es):** Class 3
- 14.4. **Packing Group, If Applicable:** Packing Group II
- 14.5. **Environmental Hazards:** Not classified as a marine pollutant.
- 14.6. **Guidance on Transport in Bulk (According to Annex II of MARPOL 73/783 and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code (IBC Code)):** None.
- 14.7. **Other Special Precautions Related to Transport:** None.

## **SECTION 15. REGULATORY INFORMATION**

### **15.1. Safety, Health and Environmental Regulations Specific for the Product in Question:**

#### **SARA 302/313 Components**

SARA 302: This material is not subject to the reporting requirements of SARA Title III, Section 302.

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

#### **SARA 311/312 Hazards**

Fire hazard. Acute 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.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain HAPs.

#### **WHMIS Hazard Class**

B2 Flammable liquid

D2B Toxic material causing other toxic effects

## **SECTION 16. OTHER INFORMATION**

- 16.1. **Revision Date:** 30 June 2020
- 16.2. **Reason for Revision:** Change in address of supplier.
- 16.3. **Additional Information:** None.

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