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# Material Safety Data Sheet

Revision Date: 3-Aug-2021



## 1. Product and Company Information

Product Name        *TransZol Up Plus* RNA Kit  
Cat. No.             ER501  
Company             TransGen Biotech Co., Ltd.  
Technical Phone     +86-400-898-0321  
Fax                    +86-10-57815011  
E-mail Address      trans@transgen.com.cn

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Chemical Name	CAS No.	Concentration or concentration range (w/w %)
Phenol 108-95-2 (30-60)	108-95-2	30-60
Guanidine Thiocyanate 593-84-0 (25-40)	593-84-0	25-40
Ammonium Thiocyanate 1762-95-4 (7-13)	1792-95-4	7-13

Contact with acids or bleach liberates toxic gases. Don't add acids or bleach to the liquid waste containing this product. It is recommended to handle all chemicals with caution.

## 3. Hazards Identification

### Health Hazards

Acute oral toxicity	Category 3
Acute dermal toxicity	Category 3
Acute Inhalation toxicity - Vapour	Category 3
Skin corrosion/irritation	Category 1B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

### Physical Hazards

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Not Hazardous

**Environmental Hazards**

Chronic aquatic hazard                      Category 3

**Signal Word**

Danger

**Hazard Symbol**



**Hazard Statements**

H301 - Toxic if swallowed  
H311 - Toxic in contact with skin  
H331 - Toxic if inhaled.  
H314 - Causes severe skin burns and eye damage  
H318 - Causes severe eye damage  
H335 - May cause respiratory irritation  
H373 - May cause damage to organs through prolonged or repeated exposure  
H341 - Suspected of causing genetic defects  
H412 - Harmful to aquatic life with long lasting effects

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**4. First Aid Measures**

Eye contact	Rinse immediately with plenty of water for at least 15 minutes, including under the eyelids. Immediate medical attention is required.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Before reuse, remove and wash contaminated clothing and gloves, including inside. Immediate medical attention is required.
Inhalation	Move to fresh air. If person is not breathing, give artificial respiration. If symptoms persist, call a physician.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by a medical personnel. If symptoms occur, seek medical attention.
Notes to physicians	Treat symptomatically.
Special tips to physicians	If on skin (or hair): Take off all contaminated clothing immediately and wash skin with water/shower. If

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swallowed: Call a poison center or doctor/physician immediately. If in eyes: rinse carefully with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled by mistake: Move the victim to fresh air and keep comfortable for breathing. In case of exposure or doubt: Seek medical advice/attention. If swallowed: Rinse mouth, do not induce vomiting.

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## 5. Fire-Fighting Measures

### Extinguishing media

Suitable extinguishing media	Water spray, Carbon dioxide (CO <sub>2</sub> ), Foam, Dry powder
Unsuitable extinguishing media	No data available

### Special dangers

No data available

### Firefighters' protective equipment and precautions

Wear positive-pressure self-contained breathing apparatus and protective clothing.

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## 6. Accidental Release Measures

Personal precautions	Ensure adequate ventilation and use personal protective equipment, including protective clothing and safety glasses. Avoid contact with skin, eyes or clothing.
Methods for cleaning up	Use inert absorbent material to soak up spill.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Avoid discharging into drains or waterways whenever possible.

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## 7. Handling and Storage

Precautions for safe handling	Use recommended personal protective equipment. Strictly prevent getting into eyes, touching skin or clothing. Do not ingest. If respiratory hazards are caused during normal use of the material, please take adequate ventilation measures and/or wear appropriate respirators.
Conditions for safe storage	Keep container sealed in a dry, cool and well-ventilated place. Keep in properly labeled

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Specific use	containers. Prevent direct sunlight. Store in accordance with local regulations. For research use only. Not for diagnostic use.
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## 8. Exposure Controls/Personal Protection

### Control parameter

MAC(mg/m <sup>3</sup> )	Phenol (20 mg/m <sup>3</sup> ), Ammonium Thiocyanate (No standards available), Guanidine Thiocyanate (No standards available)
PC-TWA(mg/m <sup>3</sup> )	Phenol (10 mg/m <sup>3</sup> ), Ammonium Thiocyanate (No standards available), Guanidine Thiocyanate (No standards available)
PC-STEL(mg/m <sup>3</sup> )	No standards available
TLV-C(mg/m <sup>3</sup> )	No standards available
TLV-TWA(mg/m <sup>3</sup> )	No standards available
TLV-STEL(mg/m <sup>3</sup> )	No standards available

### Exposure controls

#### Personal protective equipment

Respiratory protection	If ventilation is poor, use respirators with their components tested and approved under appropriate government standards.
Hand Protection	Wear appropriate gloves based on compatibility of glove material chemical resistant to specific chemicals.
Eye Protection	Tightly sealed goggles
Skin and Body Protection	Wear appropriate protective clothing
Hygiene Measures	Operate in accordance with good industrial hygiene and safety practice.
Environmental exposure control	No special environmental precautions required.

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## 9. Physical and Chemical Properties

Form	Liquid
Solubility in water	Soluble
pH	4-9.4

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Others	No data available
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## 10. Stability and Reactivity

Reactivity	Not known
Stability	Stable under normal storage conditions
Hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	Contact with acids or bleach liberates toxic gases. Don't add acids or bleach to any liquid wastes containing this product.
Materials to avoid	No dangerous reaction known under conditions of normal use.
Hazardous polymerization	Hazardous polymerization does not occur.
Decomposition products	No data available

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## 11. Toxicological Information

### Information on toxicological effects

Acute Toxicity	No data available
Oral-rat LD50 (mg/kg)	Phenol (340 mg/kg), Ammonium Thiocyanate (750 mg/kg), Guanidine Thiocyanate (593 mg/kg)
Dermal-rat LD50 (mg/kg)	No data available
Inhalation-rat LC50 (mg/m <sup>3</sup> )	Phenol (316 mg/kg), Ammonium Thiocyanate (No data available), Guanidine Thiocyanate (No data available)
Subcutaneous-rat LD50 (mg/kg)	No data available
Intravenous-rat LD50 (mg/kg)	No data available
Peritoneal cavity-rat LD50 (mg/kg)	No data available
Oral-mouse LD50 (mg/kg)	2000
Dermal- mouse LD50 (mg/kg)	No data available
Intravenous-mouse LD50 (mg/kg)	No data available
Peritoneal cavity-mouse LD50 (mg/kg)	No data available

### Health effects of routine exposure

Acute Toxicity	Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.
Skin corrosion/ irritation	Causes severe skin burns.

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Serious eye damage/irritation	Causes severe eye damage.
Respiratory or skin allergy	Data are conclusive but insufficient for classification
Specific target organ toxicity(STOT) – single exposure	May cause respiratory irritation
Specific target organ toxicity (STOT) – repeated exposure	May cause damage to organs through prolonged or repeated exposure
Carcinogenicity	Data are conclusive but insufficient for classification
Germ cell mutagenicity	The product is or contains chemicals that may cause mutations in human germ cells
Reproductive toxicity	Data are conclusive but insufficient for classification
Aspiration hazard	Data are conclusive but insufficient for classification

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## 12. Ecological Information

Carcinogenic effects	The environmental impact of this product has not been fully studied.
Mobility	No data available
In vivo degradation	No data available
Bioaccumulation	No data available

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## 13. Disposal Considerations

Waste should be avoided or minimized as much as possible. Empty containers or liners may retain some product residues. The substance and its container must be disposed of in accordance with approved disposal techniques. The disposal of the product, its solution or any by-products should refer to relevant national and local regulations. Do not dispose into drains or sewers

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## 14. Transport Information

UN number	1760
UN proper shipping name	Corrosive liquid, n.o.s. (phenol - guanidine thiocyanate solution)
Transport hazard class	8
Packing group	II
Packing method	No data available

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Environmental hazards	Yes
Transportation considerations	Package should be intact upon departure. Loading should be handled carefully. During transportation, prevent the containers from leakage, collapse, fall or damage. Transportation combined with oxidants, edible chemicals, etc. is strictly prohibited. It should be protected from exposure to sun light, rain and high temperature during transportation. The vehicle should be thoroughly cleaned after transportation. Road transportation must follow the prescribed route.

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## 15. Regulatory Information

The following laws, regulations and standards have made corresponding provisions on the safe use, storage, transportation, loading and unloading , classification and marking of chemicals: The Production Safety Law of the People's Republic of China (adopted at the 27th meeting of the Standing Committee of the Ninth People's Congress on June 29, 2002); The Environmental Protection Law of the People's Republic of China (adopted at the 11th meeting of the Standing Committee of the Seventh National People's Congress on December 26, 1989).

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## 16. Other Information

For research use only. Not intended for human or animal diagnostic or therapeutic uses. The above information was acquired by diligent search and/or investigation. These recommendations are based on prudent professional judgment. This information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. **Since the Company cannot control the actual methods, quantities, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. The information in this MSDS does not constitute a warranty of marketability or suitability for any particular purpose, expressed or implied.**

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End of Safety Data Sheet