

# MATERIAL SAFETY DATA SHEET-v4

Product TUF<sup>®</sup> Target Unmasking Fluid

Cat. no. Z000R.00xx

# Pan Path

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Identification of the product

Name : TUF<sup>®</sup> Target Unmasking Fluid

Product code : Z000R.00xx

### Produced and Marketed by

PanPath B.V.

Science Park Amsterdam

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## 2. COMPOSITION AND INFORMATION ON INGREDIENTS

- Salts
- Detergent
- Organic solvents
- Chelators
- Stabilizers
- Preservative

## 3. IDENTIFICATION OF HAZARDS AND EFFECTS

### Conditions to avoid

Temperatures over 130 °C, Hygroscopic, explosive with air in vapor/gassy phase

### Substances to avoid

Incompatible with strong oxidizing agents, iodine/ pyridine/sulfur trioxide, acids and bases, water separating agents.

### Hazardous combustion or decomposition products

Upon heating over 180 °C decomposition results in toxic fumes of carbon monoxide, carbon dioxide, ammonia, nitrogen oxides and hydrogen cyanide.

### Fire and explosion hazards

Inflammable. Emits toxic fumes under fire conditions. Keep away from inflammable sources.

## 4. FIRST AID MEASURES

EXPOSURE	SYMPTOMS	FIRST AID MEASURES
Inhalation	abdominal cramps, sickness, dizziness, headache, vomiting	Fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxy gen. Consult doctor if feeling unwell.
Eye contact	red, irritating	Flush with copious amounts of water with the eyelid held wide open. Summon eye specialist.
Skin contact	red, irritating	Wash with copious amounts of water. Remove contaminated clothing.
Ingestion	abdominal cramps, sickness, dizziness, headache, vomiting	<b>Summon doctor immediately!</b> Make victim drink plenty of water, induce vomiting.

## 5. FIRE FIGHTING MEASURES

Suitable extinguishing media : water spray, carbon dioxide, dry chemical powder or appropriate foam.

Special fire fighting procedure : wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

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### 6. ACCIDENTAL RELEASE MEASURES

Take up with liquid-absorbent material. Forward for disposal and clean up affected area.

### 7. HANDLING & STORAGE INFORMATION

#### Handling information

Keep closed when not in use. Wear suitable protective clothing when handling fluid. Preferably handle in a chemical fume hood. When heating the solution use sealable jar placed in water bath or incubator. Do not warm by direct heating. Make sure temperature does not exceed 130 °C.

#### Storage information

Store closed at room temperature 15-25 °C.

### 8. PERSONAL PRECAUTIONS & PROTECTION

#### Personal precautions

The usual precautions taken when handling chemicals should be observed. Refer to product data sheet for recommended specific use. Do not inhale vapors, do not get in eyes, on skin or clothing. Wash hands thoroughly after handling.

#### Personal protection

Respiratory protection : required when vapors/aerosols are generated. Preferably work in a chemical fume hood or wear adequate mask with filter (according to DIN 3181 for vapors of organic compounds).

Skin protection : Required. Wear suitable protective clothing and gloves.

Eye protection : Required. Wear safety glasses or goggles.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	liquid	Flashing point:	no data available	
Color:	light blue	Explosion limits		no data
	available			
Odor:	smells lightly after lavender	Relative density:	1.13g/cm <sup>3</sup>	
pH (20°C):	6.8 – 7.2	Solubility in water:	completely	
Viscosity <sub>dynamic</sub> (20°C):	no data available	Solubility in ethanol:	completely	
Boiling range:	133 – 138°C	log P(o/w):	no data available	
Melting range:	1 – 4°C			
Autoflammability:	> 500°C			

### 10. STABILITY & REACTIVITY

#### Stability

The product is stable when stored under the recommended conditions.

#### Reactivity

No reaction with water.

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### 11. TOXICOLOGICAL INFORMATION

#### *Toxicological information*

Long term unprotected exposure may have effect on fertility (post implantation mortality) embryo or fetus (fetotoxicity and fetal death) or lead to liver damage. Preparation is moderately irritating to skin and mucous membranes.

Effect of decomposition products: highly toxic.

#### *Acute effects*

May be harmful by inhalation, ingestion or skin absorption. Vapor or mist is irritating to the eyes, mucous membranes and upper respiratory tract. Causes skin irritation.

#### *Chronic effects*

May cause birth defects.

### 12. ECOLOGICAL INFORMATION

Biologic degradation : biodegradable.

Behavior in environmental compartments : no data available.

Ecotoxic effects : when led in properly, no impairments in the function of adapted biological waste-water-treatment plants are to be expected.

### 13. DISPOSAL CONSIDERATIONS

Product: there are no uniform EC regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging: disposal in accordance with local provisions. Contaminated packages should be treated the same as the product itself.

### 14. TRANSPORT INFORMATION

This product is not subject to current regulations for transportation of hazardous goods.

### 15. REGULATORY INFORMATION

Labeling according to ECC directives.

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Label precautionary statements: harmful by inhalation, in contact with skin and if swallowed. May cause birth defects. Irritating to eyes, respiratory system and skin.

### 16. ADDITIONAL INFORMATION (IF APPLICABLE)

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*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. We make no warranty express or implied, with respect to the information and assume no liability. Product users should determine the suitability of this information for their own uses.*