

# MATERIAL SAFETY DATA SHEET (MSDS)

## Pre-Surgical Rotor

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### I. Product and Company Identification

Product Name: Pre-Surgical Rotor

#### **Details of the supplier of the safety data sheet**

Supplier: For Heska Corporation  
Address: Hi-tech Zone, 611731 Chengdu, Sichuan, China  
Telephone No: +86 28 69760308  
Telefax No: +86 28 69760307

### II. Hazard Identification

OSHA Hazards: No known OSHA hazards

GHS Hazards: Not a dangerous or hazardous substance or preparation according to the Global Harmonized System (GHS).

P308 + P313 If exposed or concerned: Get medical advice/attention

HMIS Ranking:

<i>Health hazard</i>	1
<i>Flammability</i>	0
<i>Physical hazards</i>	0

NFPA Rating:

<i>Health hazard</i>	1
<i>Fire</i>	0
<i>Reactivity hazard</i>	0

Potential Health Effects:

<i>Inhalation</i>	May cause respiratory tract irritation
<i>Skin</i>	May cause skin irritation
<i>Eyes</i>	May cause eye irritation

### III. Composition/Information on Ingredients

This product consists of reagent beads comprised of a mixture of low hazard lyophilized chemical beads enclosed in a plastic rotor. These beads are in concentrations not associated with human or environmental toxicity, which contain among the listed items, enzymes, preservatives and stabilizers in concentrations under 1%. Each rotor contains a cup of diluent containing less than 0.5 ml of water and preservatives in concentrations of less than 1%. Table 1 below lists the chemicals present in the panel.

**TABLE 1**

Ingredient	CAS#	Contents(mg)
Horseradish Peroxidase (HRP)	9003-99-0	0.002
Creatinase/Creatin aminohydrolase	37340-58-2	0.02
Sarcosine oxidase (SOX)	9029-22-5	0.1
4-aminoantipyrine	83-07-8	0.05
Creatininase/Creatinin aminohydrolase	9025-13-2	0.05
Disodium 2-oxoglutarate dihydrate	305-72-6	2
Adenosine 5'-diphosphate potassium salt dihydrate (ADP)	72696-48-1	0.2
beta-Nicotinamide adenine dinucleotide, disodium salt (NAD)	606-68-8	0.7
Urease	9002-13-5	0.02
lactic dehydrogenase (LDH)	9028-36-8	0.002
Nicotinamide adenine dinucleotide oxidized (NAD)	53-84-9	0.4
Adenosine triphosphate, Na-salt (ATP)	987-65-5	0.1
hexokinase	9001-51-8	0.03
Glucose-6-phospate dehydrogenase	9001-40-5	0.01
Malate dehydrogenase (MDH)	9001-64-3	0.005
4-(2-ethoxy)-1-Piperazine sulfonic acid (HEPES)	7365-45-9	0.7
Tris(hydroxymethyl)amino methane (Tris)	77-86-1	3
L-Aspartic acid	56-84-8	2
Imidazole	288-32-4	0.08
adenosine-5'-Two sodium monophosphate (AMP)	16178-48-6	0.08
Creatine phosphocreatine. sodium salt hydrate	71519-72-7	0.4
Magnesium sulfate septahydrate	10034-99-8	0.02
4-p-nitrophenyl phosphate (4-NPP)	4264-83-9	0.1
Piperazine-1,4-Two sulfonic acid (PIPES)	5625-37-6	1

L-Alanine	56-41-7	2
Lithium lactate	867-55-0	1
2-(N-Morpholine)Sulfonic acid monohydrate (MES)	145224-94-8	1
Copper sulfate pentahydrate	7758-99-8	1.2
Potassium iodide	7681-11-0	0.2
Potassium sodium tartrate hydrate	6381-59-5	0.8

#### IV. First Aid Measures

In case of eye contact: Flush eyes with copious amounts of water for a minimum of 15 minutes

In case of inhalation: Allow the victim to rest in a well-ventilated area. Seek immediate medical attention

In case of skin contact: Flush exposed skin with copious amounts of water for a minimum of 15 minutes

In case of ingestion: Contact a physician in case of ingestion

#### V. Fire-Fighting Measures

No flammable properties are associated with this product.

Extinguishing media: Use water spray, dry chemical or carbon dioxide

Hazardous combustion products: May result in the formation of nitrogen and carbon oxides

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary

Additional information: Combustion of the plastic rotor containing this preparation may result in toxic particulates and gases

#### VI. Accidental Release Measures

Personal precautions:

*Eye Protection* Wear safety goggles or a face shield when cleaning up spills

*Skin Protection* Wear protective attire that prevents contamination of skin and personal clothing

*Hand Protection* Wear nitrile or vinyl gloves that cover exposed skin

*Other Protections* Avoid breathing mists, dusts, and aerosols

Environmental Controls: Prevent spilled product from entering drains

Spill Clean-up Measures: Contain the material to prevent it from becoming airborne Place

absorbent material on top of, and around the perimeter of the spill

Sweep up the spilled material and decontaminate the area with soap and water or an equivalent cleaner

## VII. Handling and Storage

This product is to be stored inside its packaging at 2-8°C in a cool, dry location. Wear gloves when handling the product and wash hands after removing gloves.

## VIII. Exposure Controls/Personal Protection

None of the chemicals in this preparation are assigned occupational exposure limits. This product can be safely handled under normal conditions with no controls.

Engineering Controls: Provide ventilation in work areas where this product is handled

Personal Protective Equipment: Safety glasses and chemical-resistant gloves recommended

## IX. Physical and Chemical Properties

Physical state: Solid. Spherical lyophilized beads are enclosed in a sealed plastic package

Color: Multi-colored beads

Odor: Odorless

Odor threshold: None established

Chemical Properties: None available for

- pH, Melting point
- Boiling point
- Flash point
- Lower Explosive Limit
- Upper Explosive Limit
- Vapor pressure
- Vapor density (air=1)
- Density (g/cm<sup>3</sup>)
- Water solubility (20°C in g/l)
- Auto ignition temperature

## X. Stability and Reactivity

Reactivity: This preparation is not known to be reactive violently

Chemical Stability: This preparation is known to be chemically stable

Thermal Decomposition: Will decompose when burned

Conditions to Avoid: Sunlight, heat (temperatures above 32°C)

Incompatible Materials: No data available

Hazardous Decomposition

Products:

No harmful decomposition products known

Storage Conditions:

Store under dry, in a cool (2-8°C), dry location

**XI. Information on basis physical and chemical properties**

<b>Property</b>	<b>Value</b>
Physical state	solid
Odour	None
Odour threshold:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability( solid, gas):	Not applicable
Upper/lower flammability or explosive limits:	Non explosive
Vapor density:	Not applicable
solubility in water	Insoluble.
Solubility in organic solvents:	insoluble in organic solvents
Partition coefficient n-octanol/water:	Not applicable
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Not applicable
Viscosity:	Not applicable
Explosive propeties:	Non explosive
Oxidizing properties:	No oxidizing properties

**XII. Other information**

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