
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME: Elitek (lyophilized powder)

SYNONYMS: Rasburicase, Urate-Oxidase, Urate: O2-oxidoreductase, Uratoxidase, Uric acid oxidase, Uricase, SR 29142

Pharmaceutical product: ELITEK (rasburicase) is indicated for the initial management of plasma uric acid levels in pediatric patients with leukemia, lymphoma, and solid tumor malignancies who are receiving anti-cancer therapy expected to result in tumor lysis and subsequent elevation of plasma uric acid.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: glass vial containing lyophilized powder.

POTENTIAL HEALTH EFFECTS

The active ingredient, Rasburicase (Urate-Oxidase) is a protein. Proteins have been associated with acute allergic reactions including anaphylaxis. Uricozyme, a nonrecombinant urate-oxidase, has produced allergic reactions requiring medical intervention (e.g. urticaria, bronchospasm) in treated patients. Those with a history of allergies and/or asthma are at most risk.

This product is not considered hazardous according to OSHA 29 CFR 1910.1200.

Elitek does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS#</u>
Rasburicase	134774-45-1
Alanine	56-41-4
Dibasic sodium phosphate	7558-79-4
Mannitol	9001-65-4

4. FIRST AID MEASURES

SIGNS AND SYMPTOMS OF EXPOSURE

Not determined.

EYES

In case of eye contact, flush eyes with water for at least 15 minutes. Seek medical attention if irritation occurs.

SKIN

If powder comes in contact with skin and clothing, remove contaminated clothing and wash skin thoroughly with running water for at least 15 minutes. Use soap if available. Seek medical attention if irritation develops.

INGESTION

Consume large amounts of water. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

INHALATION

Remove to fresh air. If person is not breathing, give artificial respiration. If breathing is difficult, administer oxygen. Seek medical attention immediately.

NOTE TO PHYSICIAN

The active ingredient, Rasburicase (Urate-Oxidase) is a protein. It may produce allergic reactions [see section 3].

5. FIRE FIGHTING MEASURES

When reconstituted for infusion, as indicated, drug product does not pose a dust explosion risk.

Prevention of Fire and Explosion

Minimize dust generation and accumulation. Keep away from heat, sparks and open flame.

Fire and Explosion Hazards

Not determined.

Means of Extinguishing

Water spray, carbon dioxide, or dry chemical.

Fire Fighting Procedures

As in any fire, use pressure demand self-contained breathing apparatus (SCBA) and protective clothing to prevent contact with skin and eyes. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

Minimize dust generation and accumulation. Do not breathe powder.

Personal protective equipment should be worn when cleaning up a spill [See Section 8].

Wet-down all powder and soak up contents with an absorbent material. Carefully collect materials and place in a properly labeled waste container for disposal. Wash area of spill to remove from surfaces. Wash thoroughly after handling.

7. HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS

Keep this and all drugs out of the reach of children.

WORK/HYGIENIC PRACTICES

Avoid breathing powder and contact with skin, eyes and clothing. Use local exhaust ventilation or respiratory protection for operations which generate dust. Wash thoroughly after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If drug handling produces dust, a risk assessment of the procedure should be performed.

EXPOSURE CONTROL LIMITS

The sanofi-aventis Occupational Exposure Band for rasburicase is OEB 3 (10 – 100 mcg/m³).

ENGINEERING CONTROLS

If dust is generated, local exhaust ventilation may be required.

EYE/FACE PROTECTION

Avoid eye contact. Wear safety glasses with side shields or glasses where risk of eye exposure exists.

SKIN PROTECTION

Avoid skin contact with powder. Impervious gloves should be worn.

RESPIRATORY PROTECTION

None normally required. However, if concentrations exceed exposure limits, respirators should be worn. Respiratory protection must be in compliance with the OSHA Respiratory Protection Program, 29 CFR 1910.134 and ANSI Z88.2 or applicable regulations in the country of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Lyophilized powder.

BASIC PHYSICAL PROPERTIES (Rasburicase)

Note: Rasburicase is a tetramer of four identical monomers

MOLECULAR FORMULA: C₁₅₂₃H₂₃₈₃N₄₁₇O₄₆₂S₇ (monomer)

MOLECULAR WEIGHT: 34,151.65 (monomer)

SOLUBILITY: soluble in water, >12.5 mg in 50 mM sodium phosphate buffer, pH=8.0

10. STABILITY AND REACTIVITY

STABILITY

Stable

CONDITIONS TO AVOID

As a precautionary measure, keep away from oxidizing materials, organic compounds containing reducible functional groups, strong acids or strong bases.

INCOMPATIBLE MATERIALS

Incompatibility of this material has not been thoroughly investigated. As a precautionary measure, keep away from strong oxidizing agents.

HAZARDOUS COMBUSTION/DECOMPOSITION PRODUCTS

Toxic fumes of carbon monoxide, carbon dioxide and sulfur oxides.

HAZARDOUS POLYMERIZATION

Will not occur.

11. TOXICOLOGICAL INFORMATION

HUMAN CLINICAL DATA

EFFECTS OF ACUTE EXPOSURE: Although there have been no reported problems following human administration, this compound may be associated with allergic reactions [see Section 3].

EFFECTS OF REPEATED EXPOSURE: This compound was generally well tolerated in clinical trials. No risk of particular frequency, intensity or seriousness was noted.

ANIMAL STUDIES

ACUTE TOXICITY:

A single dose IV study in rats and mice showed no adverse clinical signs of toxicity or changes in body weight at a 15 mg/kg dose.

EFFECTS OF REPEATED EXPOSURE:

No treatment-related toxic effects were reported in 4 week IV studies in baboons and rats with doses as high as 1.5 mg/kg/day in rats and 3 mg/kg/day in baboons.

DEVELOPMENTAL TOXICITY:

Rasburicase did not affect early embryonic development in the rats given doses up to 10 mg/kg/day.

REPRODUCTIVE TOXICITY:

Rasburicase did not affect the reproductive performance or the fertility of rats (male or female) given doses up to 10 mg/kg/day.

GENOTOXICITY:

Negative in the following studies: the Ames *Salmonella typhimurium* bacterial gene mutation assay, *in vitro* gene mutation (TK locus) with mouse lymphoma cells, *in vitro* unscheduled DNA synthesis in rat hepatocytes, *in vitro* chromosomal aberration assay with human lymphocytes, and *in vivo* clastogenicity in a rat micronucleus study.

CARCINOGENICITY: Not determined

IRRITANCY:

Non-irritating to skin and eyes of rabbits in primary cutaneous and ocular irritation tests. Rasburicase was well tolerated when injected by intra-arterial and peri-venous routes in the rabbit.

HEMOLYTIC POTENTIAL:

Rasburicase produced no hemolytic effects when tested *in vitro* with rabbit and human blood.

12. ECOLOGICAL INFORMATION

Rasburicase (Urate-Oxidase) is a naturally occurring protein which is expected to readily degrade in the environment and have no significant environmental effects.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations.

Wastes should be contained to prevent exposure to dusts and labeled indicating contents to ensure safe handling and disposal.

14. TRANSPORT INFORMATION

Not regulated by USDOT as a hazardous material.

Not regulated by IATA as a dangerous good.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATORY INFORMATION

This product does NOT contain any ingredients which are regulated on the U.S. EPA List of Toxic Chemicals (40 CFR 372), and is therefore not subject to release reporting under Section 313 of EPCRA (SARA Title III)/

LABELING ACCORDING EUROPEAN COMMUNITY STANDARDS

R42/43: May cause sensitization by inhalation and skin contact

S22: Do not breathe dust

S24: Avoid contact with the skin

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

LABELING ACCORDING EUROPEAN COMMUNITY STANDARDS (Cont.)

Symbols	Xn	HARMFUL
	Xi	IRRITANT

16. OTHER INFORMATION

N/A = Not Applicable N/D = Not Determined ~ = Approximately Equal To

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