

1 - Product and Company Information

ProductName	VINCRISTINE SULFATE
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2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Not hazardous according to Directive 67/548/EEC.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I
VINCRISTINE SULFATE	2068-78-2	218-190-0	None

Formula	C46H56N4O10 · H2SO4
Molecular Weight	923.06 AMU
Synonyms	Kyocristine * Neurocristine sulfate (1:1) (salt) * Lilly 37231 * NSC 67574 * Oncovin * Onkovin * VCR sulfate * Vincalculoblastine, 22-oxo-, sulfate (1:1) (salt) * Vincristine sulfate * Vincristinsulfat (German) * Vincrisul

4 - First Aid Measures

AFTER INHALATION
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

AFTER SKIN CONTACT
In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS
Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING
Directions for Safe Handling: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Conditions of Storage: Keep tightly closed.

SPECIAL REQUIREMENTS: Light and moisture sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.
Hand Protection: Protective gloves.
Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid Color: White Form: Powder
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Property	Value	At Temperature or Pressure
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pH	N/A
BP/BP Range	N/A
MP/MP Range	300 °C
Flash Point	N/A
Flammability	N/A
Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	< 5 %
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	Solvent: clear, colorless 20 mg/ml MeOH

10 - Stability and Reactivity

STABILITY
Stable: Stable.
Conditions of Instability: May decompose on exposure to light.
Conditions to Avoid: Moisture.
Materials to Avoid: Strong oxidizing agents, Heavy metal salts.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: OH6340000

ACUTE TOXICITY

LD50 Intraperitoneal Rat 1900 UG/KG
LD50 Intravenous Rat 1010 UG/KG Remarks: Blood:Normocytic anemia. Kidney, Ureter, Bladder:Urine volume increased. Gastrointestinal:Hypermotility, diarrhea.
LD50 Intraperitoneal Mouse 3 MG/KG
LD50 Intravenous Mouse 1700 UG/KG

SIGNS AND SYMPTOMS OF EXPOSURE
Alopecia. Exposure can cause bone marrow depression and kidney and liver abnormalities.

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

TARGET ORGAN INFORMATION
Liver. Kidneys. Autonomic nervous system. Peripheral nervous system. Central nervous system. Bone marrow.

CONDITIONS AGGRAVATED BY EXPOSURE
Reported to have cytotoxic and hemolytic activity

CHRONIC EXPOSURE - CARCINOGEN
Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC CARCINOGEN LIST

Rating: Group 3

CHRONIC EXPOSURE - MUTAGEN

Human 26 NMOL/L Cell Type: lymphocyte Micronucleus test
Human 540 PMOL/L Cell Type: Other cell types Other mutation test systems
Human 1250 UG/L Cell Type: leukocyte Cytogenetic analysis
Human 10 UG/L Cell Type: fibroblast SLN
Rat 75 UG/KG Intraperitoneal sperm
Mouse 100 UG/KG Intraperitoneal Micronucleus test
Mouse 100 UG/KG Intravenous Micronucleus test
Mouse 63 UG/KG Intraperitoneal Micronucleus test
Mouse 1250 UG/KG Oral Micronucleus test
Mouse 300 NG/L Cell Type: Other cell types Micronucleus test
Mouse 4500 NG/KG Cell Type: Ascites tumor Other mutation test systems
Mouse 125 UG/KG Intraperitoneal SLN
Mouse 2 MG/KG Intraperitoneal Dominant lethal test
Hamster 200 UG/KG Intraperitoneal Micronucleus test
Hamster 50 UG/L Cell Type: lung Micronucleus test
Hamster 1 UG/L Cell Type: Embryo Morphological transformation.
Hamster 24 NMOL/L Cell Type: ovary Other mutation test systems
Hamster 50 UG/L Cell Type: ovary Sister chromatid exchange
Hamster 3 UG/L Cell Type: Embryo SLN
Hamster 250 UG/KG Intraperitoneal SLN
Hamster 50 UG/L Cell Type: lung SLN
Hamster 125 UG/L Cell Type: ovary SLN

CHRONIC EXPOSURE - TERATOGEN

Result: Laboratory experiments have shown teratogenic effects.

Species: Rat
Dose: 250 UG/KG
Route of Application: Intramuscular
Exposure Time: (8D PREG)
Result: Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Eye, ear. Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Species: Mouse
Dose: 300 UG/KG
Route of Application: Intraperitoneal
Exposure Time: (7D PREG)
Result: Specific Developmental Abnormalities: Other developmental abnormalities.

Species: Mouse
Dose: 250 UG/KG
Route of Application: Intraperitoneal
Exposure Time: (9D PREG)
Result: Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Eye, ear. Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Species: Mouse
Dose: 250 UG/KG
Route of Application: Intraperitoneal
Exposure Time: (9D PREG)
Result: Specific Developmental Abnormalities: Body wall. Specific Developmental Abnormalities: Musculoskeletal system. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Mouse
Dose: 250 UG/KG
Route of Application: Intraperitoneal
Exposure Time: (9D PREG)
Result: Effects on Embryo or Fetus: Cytological changes (including somatic cell genetic material).

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Species: Rat
Dose: 600 UG/KG
Route of Application: Intraperitoneal
Exposure Time: (15D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.
Paternal Effects: Prostate, seminal vessicle, Cowper's gland, accessory glands. Paternal Effects: Other effects on male.

Species: Rat
Dose: 300 UG/KG
Route of Application: Intraperitoneal
Exposure Time: (15D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.

Species: Rat
Dose: 1250 UG/KG
Route of Application: Intravenous
Exposure Time: (10D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.
Paternal Effects: Prostate, seminal vessicle, Cowper's gland, accessory glands.

Species: Mouse
Dose: 250 UG/KG
Route of Application: Intraperitoneal
Exposure Time: (9D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Hamster
Dose: 750 UG/KG
Route of Application: Intravenous
Exposure Time: (9D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2811
Class: 6.1
PG: II
Proper Shipping Name: Toxic solid, organic, n.o.s.

IMDG

UN#: 2811
Class: 6.1
PG: II
Proper Shipping Name: Toxic solid, organic, n.o.s.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2811
Class: 6.1
PG: II
Proper Shipping Name: Toxic solid, organic, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES
S-PHRASES: 22-24/25
Do not breathe dust. Avoid contact with skin and eyes.

Not hazardous according to Directive 67/548/EEC.

COUNTRY SPECIFIC INFORMATION

Germany
WGK: 3
Self-Classification

16 - Other Information