Safety Data Sheet

SAFETY DATA SHEET - LC LABORATORIES REVISION DATE: JULY 1, 2019

SECTION 1. IDENTIFICATION:

Trade name: Carfilzomib, Free Base

Product Number: <u>C-3022</u> Manufacturer/Supplier:

LC Laboratories

165 New Boston Street Woburn, MA 01801 USA

1-781-937-0777 Fax: 1-781-938-5420

SECTION 2. HAZARD(S) IDENTIFICATION:

Hazard Description: Toxic; pharmaceutically active substance that has not been fully tested

Harmful if swallowed, inhaled, or absorbed through the skin Ingestion may result in sepsis, pneumonia, respiratory tract bacterial infection, multi-organ failure, hepatic failure, renal failure, congestive heart failure, cardiac arrest, intracranial hemorrhage, dyspnea (shortness of breath), pyrexia (fever), elevated serum creatinine level, fatique, anemia, nausea, thrombocytopenia (reduced blood platelets), diarrhea, headache, cough, lymphopenia (reduced blood lymphocytes), peripheral edema (swelling), vomiting, constipation, lymphopenia/leukopenia/neutropenia (different types of reduced white blood cell counts), insomnia, chills, arthralgia (joint pain), muscle spasms, hypertension (elevated blood pressure), asthenia (lack of muscle strength), hypokalemia (reduced serum potassium level), hypomagnesemia (reduced serum magnesium level), elevated transaminases, dizziness, hypoesthesia, anorexia (loss of appetite), hyperglycemia (elevated serum glucose level), hypercalcemia (elevated serum calcium level), hypophosphatemia (reduced serum phosphate level), hyponatremia (reduced serum sodium level) and pain in the back, chest wall, and extremities Exposure may impair fertility and may be harmful to a developing fetus Exposure may cause irritation of the skin, eyes, mucous membranes, and upper respiratory tract

Signal Word: Danger

GHS Hazard Statements:

H302+312+332 - Harmful if swallowed, in contact with skin or if inhaled

GHS Precautionary Statements:

P2562 - Do not get in eyes, on skin or on clothing WARNING: For Laboratory Research Use Only



SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Chemical Name: $(\alpha S)-\alpha$ -[[2-(4-morpholinyl)acetyl]amino]benzenebutanoyl-L-

[(1S)-3-methyl-1-[(2R)-2-methyl-2-oxiranyl]carbonyl]butyl]-L-

phenylalaninamide

Synonyms: PR-171, Kyprolis

Hazardous Ingredient: Carfilzomib, Free Base

CAS Registry Number: 868540-17-4

Molecular Weight: 719.91

Molecular Formula: C₄₀H₅₇N₅O₇

SECTION 4. FIRST-AID MEASURES:

After Inhalation: If inhaled, remove to fresh air; if breathing is difficult, give

oxygen; if breathing stops, give artificial respiration

After skin contact: flush with copious amounts of water; remove contaminated

clothing and shoes; call a physician

After eye contact: check for and remove contact lenses; flush with copious amounts of water; assure adequate flushing by separating the eyelids with

fingers; call a physician

After swallowing: if swallowed, wash out mouth with copious amounts of water;

call a physician

SECTION 5. FIRE-FIGHTING MEASURES:

Suitable extinguishing agents: water spray, carbon dioxide, dry chemical powder or foam

Protective equipment: wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Unusual fire hazard: may emit toxic fumes under fire conditions such as carbon monoxide. etc.

SECTION 6. ACCIDENTAL RELEASE MEASURES:

Person-related safety precautions: cordon off area of spill; wear self-contained breathing apparatus, protective clothing and heavy rubber gloves Measures for cleaning/collecting: absorb solutions with finely- powdered liquid-binding material (diatomite, universal binders); decontaminate surfaces and equipment by scrubbing with alcohol; dispose of contaminated material according to Section 13

SECTION 7. HANDLING AND STORAGE:

Information for safe handling: avoid contact with skin, eyes and clothing;

material may be an irritant

Storage: store solid and solutions at -20 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Personal protective equipment as follows:

Breathing equipment: NIOSH/MSHA-approved respirator

Protection of hands: handle with Nitrile rubber gloves with minimum thickness of 0.11 mm (4.3 mil). This recommendation should not be interpreted as offering an approval for any specific use conditions. Please review this recommendation with a safety officer to evaluate if it is appropriate for the

anticipated use.

Eye protection: chemical safety goggles

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:

Form: crystalline solid; granular or powder

Color: white Odor: none

Melting point/Melting range: 205-215 °C

Danger of explosion: none

Solubility in / Miscibility with water: very poorly soluble in water; maximum solubility in plain water is estimated to be about 1-5 μ M; buffers, serum, or

other additives may increase or decrease the aqueous solubility

Solvent content:

Organic solvents: soluble in DMSO at 80 mg/mL; soluble in ethanol at 25 mg/mL

with warming

SECTION 10. STABILITY AND REACTIVITY:

Stability: avoid acids and bases

Thermal decomposition / conditions to be avoided: protect from light and heat Dangerous products of decomposition: thermal decomposition may produce toxic gases such as carbon monoxide and carbon dioxide, and nitrogen oxides

SECTION 11. TOXICOLOGICAL INFORMATION:

RTECS #: SO5270200

Acute toxicity: oral toxicity (TDLo): 30 mg/kg (mouse)

Primary irritant effect:

On the skin: not known; may be an irritant; may be harmful if absorbed through

the skin

On the eye: not known; may be an irritant

Inhalation: not known; may cause respiratory tract irritation; harmful if inhaled

Ingestion: not known; harmful if swallowed

SECTION 12. ECOLOGICAL INFORMATION:

General notes: no data available

Treat as potentially toxic if released into the environment

SECTION 13. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with prevailing country, federal, state and local regulations

SECTION 14. TRANSPORT INFORMATION:

DOT:

Proper shipping name: none

Non-Hazardous for transport: this substance is considered to be non-hazardous

for transport IATA class:

Proper shipping name: none

Non-Hazardous for transport: this substance is considered to be non-hazardous

for transport

SECTION 15. REGULATORY INFORMATION:

Code letter and hazard designation of product:

Hazard-determining components of labeling:

EU Risk And Safety phrases:

S22: Do not breathe dust

S24/25: Avoid contact with skin and eyes

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S28: After contact with skin, wash immediately with plenty of water

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection R48/23/25 Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed

R61: May cause harm to the unborn child

R62: Possible risk of impaired fertility

SECTION 16. OTHER INFORMATION:

The above information is believed to be correct based on our present knowledge but does not purport to be complete. For research use only by trained personnel. The burden of safe use of this material rests entirely with the user. LC Laboratories disclaims all liability

Reviewed: July 1, 2019