	Section 1 - Identification				
(a)	Product Identifier:	Ceftazidime for Injection, USP			
(b)	Product Code:	25021-127 25021-128 25021-129			
	Common/Trade Name:	Ceftazidime			
	Chemical Name: Chemical Family:	Pyridinium, 1-[[7-[[2-amino-4-thiazolyl)[1-carboxy-1- methylethoxy)imino]acetyl]amino-2-carboxy-8-oxo-5-thia-1- azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-hydroxide, inner salt, [6R-6 α , 7 β (Z)]] Antibiotic			
(c)	Product Use:	Pharmaceutical			
	Product Type:	Regulated Prescription Drug			
	Container Information:	Glass vials			
(d)	Distributor:	Sagent Pharmaceuticals, Inc., 1901 N. Roselle Rd, Suite 700, Schaumburg, IL 60195, 847-908-1600			
(e)	Emergency Telephone:	866-625-1618			

Section 2 - Hazards Identification

(a)	Classification:	GHS Classifications Skin irritation (Category 2 Eye Irritation (Category 2 Respiratory Irritation (Ca Skin sensitization (Catego	2A) tegory 1)
		HMIS Rating Health Hazard Flammability Physical Hazard	2 0 0
		NFPA Rating	

Health Hazard	2
Fire Hazard	0
Reactivity Hazard	0



(b) Signal Word, Hazard statement(s), Symbol(s), and/or Precautionary statement(s):	(c) Description of Hazards:		
	- <u>Signal Word:</u> Danger		
Hazard Statements:			
H316	- Causes mild skin irritation		
H317	- May cause an allergic skin reaction		
H319	- Causes serious eye irritation		
H334	 May cause allergy or asthma symptoms or breathing difficulties if inhaled 		
Precautionary Statements:			
P261	 Avoid breathing dust/fumes/gas/mist/vapors/spray 		
P280	- Wear protective gloves		
P305+ P351 + P338	 If in eyes, rinse cautiously with water for 15 minutes. Remove contacts if present and easy to do. Continue rinsing 		
P342 + P311	- If experiencing respiratory symptoms, call a Poison Center or doctor/physician		
P362 + P364	- Take off contaminated clothing and wash it before reuse		
P337 + P313	- If eye irritation persists, get medical advice/attention		
P304 + P341	- IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing		
P342 + P311	- If experiencing respiratory symptoms, call a POISON CENTER or doctor/physician		
P302 + P352	- IF ON SKIN: Wash with plenty of soap and water		
P333 + P313	- If skin irritation or rash occurs, seek medical advice/attention		
P403 + P233	- Store in a well-ventilated place. Keep container tightly closed		

(d) Unknown Acute Toxicity: N/A

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Section 3 – Composition / Information on Ingredients

(a) Chemical Name	(b) Common Name / Synonym	% Composition or other measure	(c) CAS No.	(d) Impurities / Stabilizing Additives
Pyridinium, 1-[[7-[[2-amino-4- thiazolyl)[1-carboxy-1- methylethoxy)imino]acetyl]amino- 2-carboxy-8-oxo-5-thia-1- azabicyclo[4.2.0]oct-2-en-3- yl]methyl]-hydroxide, inner salt, [6R-6 α , 7 β (Z)]]	Ceftazidime Pentahydrate	88-90% (w/w)	78439-06-2	N/A
Sodium carbonate	Sodium Carbonate Monohydrate	10-12% (w/w)	5968-11-6	N/A

Section 4 - First Aid Measures

Eye Exposure:	Flush eyes with large volumes of water for 15 minutes or more. Seek medical attention if irritation or signs of exposure are noted.	
Skin Exposure:	Remove contaminated clothing, wash skin with water and soap for 15 minutes. Seek medical attention if irritation or signs of exposure are noted.	
Ingestion:	If ingestion occurs, flush mouth with water and seek medical attention immediately. Never give anything by mouth to an unconscious person.	
Injection:	In cases of accidental injection, wash and disinfect area, seek medical attention.	
Inhalation:	If difficulty with breathing, remove from exposure, administer oxygen. Seek attention of a physician immediately. When appropriate and trained in CPR, provide artificial respiration.	
Notes to Physician:	See patient package insert in shipping carton for complete information.	



	Section 5 –Fire-fighting Measures				
(a) Extinguishing Media		Media	Use water, carbon dioxide, foam, all purpose dry chemicals to extinguish or Halon.		
(b) Hazardous Combustion Products:			May emit toxic fumes when exposed to heat or fire.		
(c)	(c) Special Protective Equipment / Precautions:		As with all fires, evacuate personnel to a safe area. Fire fighters should wear self-contained breathing apparatus to avoid inhalation of smoke.		
		Se	ection 6 - Accidental Release Measures		
Spill	Spill: Absorb liquid with suitable material and clean affected area with and water. Dispose of materials according to the applicable feder state or local regulations.		ter. Dispose of materials according to the applicable federal,		
Relea	ase to Air:	Air: If aerosolized, reduce exposures by ventilating area. Clean up immediately to prevent evaporation. Wear respiratory protection as necessary.			
Release to Water: Refer to local water authority. Drain disposal is not recommende refer to local, state, and federal disposal guidelines.					
			Section 7 - Handling and Storage		
General Handling: When handling pharmaceutical products, avoid all contact and inhalation of dust, fumes, mist, and/or vapors associated with the product.		ion of dust, fumes, mist, and/or vapors associated with the			
Storage Conditions: No storage requirements necessary for occupational has product information storage instructions to maintain effects.		rage requirements necessary for occupational hazards. Follow t information storage instructions to maintain efficacy.			



Section 8 - Exposure Controls / Personal Protection

(a) Exposure Limits

Compound	Issuer	Туре	Exposure Limit
Ceftazidime	OSHA	PEL	NE
	ACGIH	TLV	NE
		STEL	NE

(b) Engineering Controls

Ventilation: Handle product in a well ventilated area.

(c) Individual Protection Measures

Respiratory Protection:	Use an approved respirator.
Eye Protection:	Chemical goggles and/or face shield. Safety glasses are always required.
Skin Protection:	Work uniform or laboratory coat.
Other Protective Equipment:	Protective latex or nitrile gloves
Additional Exposure Precautions:	Wash hands following use. No eating, drinking or smoking when handling this product.

Section 9 - Physical and Chemical Properties

(a)	Appearance	White to Cream-colored crystalline powder
(b)	Odor	No Odor
(c)	Odor Threshold	None
(d)	pH	5.0 - 7.5
(e)	Melting Point:	Not Applicable
(f)	Initial Boiling Point:	Not Available
(g)	Flash Point	Not Applicable

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(h)	Evaporation Rate:	Not Available
(i)	Flammability	Not Applicable
(j)	Upper Lower Flammability or Explosion Limits	Not Applicable
(k)	Vapor Pressure:	Not Available
(l)	Vapor Density:	Not Available
(m)	Relative Density	Not Available
(n)	Solubility(ies)	Soluble in water
(0)	Partition Coefficient: n-octanol/water	Not Available
(p)	Auto-ignition Temperature	Not Applicable
(q)	Decomposition Temperature	Not Available
(r)	Viscosity	Not Available

Section 10 - Stability and Reactivity

(a)	Reactivity	Not determined
(b)	Chemical Stability	Stable to normal temperatures and pressures.
(c)	Possibility of Hazardous Reactions	None
(d)	Conditions to Avoid	Not applicable.
(e)	Incompatible Materials	May react with strong oxidizing agents (e.g., peroxides, permanganates, nitric acid, etc.) and strong acids.
(f)	Hazardous Decomposition Products	May emit toxic fumes when heated to decomposition.

Section 11 - Toxicological Information

(a)	Likely Routes of Exposure	Skin. Inhalation.
(b)	Symptoms related to the physical, chemical and toxicological characteristics	May cause eye irritation. May cause allergic reaction.
(c)	Delayed and immediate effects and also chronic effects from short and long term exposure	None reported; however based on prior experience with cephalosporin antibiotics, allergic reactions might be expected, including rash, nasal congestion, cough, dry throat, eye

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irritation, or anaphylactic shock. Dilute formulations of sodium carbonate may be
irritating to the eyes.

(d) Acute Toxicity

Component	Туре	Route	Species	Dosage
Ceftazidime	LD ₅₀	Oral	Rat	500 mg/kg
pentahydrate	ED 30			
Ceftazidime	LD ₅₀	Skin	Rabbit	200 mg/kg
pentahydrate	LD 30			
Ceftazidime	LD ₅₀	Inhalation	Rat	690 mg/m3
pentahydrate	LD 30			
Ceftazidime	LD ₅₀	Intravenous	Rat	2581 mg/kg
pentahydrate	LD50			
Ceftazidime	LD ₅₀	Intravenous	Monkey	1500 mg/kg
pentahydrate	LD ₅₀			
Ceftazidime		Skin Contact	Rabbit	Solution contact
pentahydrate				with skin
Ceftazidime		Eye Contact	Rabbit	Solution contact
pentahydrate				with eye
Sodium		Inhalation	Rat	2300 mg/m3
carbonate	LD_{50}			
anhydrous				
Sodium		Eye Contact	Rabbit	Solution contact
carbonate				with eye
anhydrous				

(e) Hazardous Chemical Listings

NTP: No

IARC: No

OSHA: No

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		Section 12 - Ecological Information
	Ecotoxicity	This material contains an active ingredient that has been tested and which may be harmful if released directly to the environment. Consult the MSDS of the active ingredient for specific information about potential environmental effects. Appropriate precautions should be taken to limit release of this material to the environment. Local regulations and procedures should be consulted prior to environmental release.
		Activated Sludge Respiration This material contains an active ingredient that is not toxic to activated sludge microorganisms.
(a)		IC50: > 103 mg/l, 3 Hours, Activated sludge, Nominal NOEC: 103 mg/l
(a)		Microbial Growth Inhibition This material contains an active ingredient that is harmful to these microorganisms.
		Minimum Inhibition Concentration: 2 mg/l, , Pseudomonas, Measured
	Ecotoxicity	Algal This material contains an active ingredient that is very toxic to algae. IC50: 0.025 mg/l, 72 Hours, Measured NOEC: 0.013 mg/l
		Daphnid This material contains an active pharmaceutical ingredient that is not toxic to daphnids. EC50: > 106 mg/l, 48 Hours, Daphnia magna, Measured NOEC: 106 mg/l

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		FishThis material contains an active ingredient that is not toxic to fish.EC50: > 106 mg/l, 96 Hours, Juvenile Oncorhyncus mykiss, rainbow trout, Measured NOEC: 106 mg/lSolubility This material contains an active ingredient that for environmental fate predictions has solubility in water.
(b)	Persistence and degradability	Partitioning This material contains an active pharmaceutical ingredient with octanol/water partition coefficient data that suggests that for environmental fate predictions the active pharmaceutical ingredient will not have the tendency to distribute into fats.
(c)	Bioaccumulative potential	 Hydrolysis This material contains an active pharmaceutical ingredient that has been shown to be chemically unstable in water. Hydrolysis may be a significant depletion mechanism. Half-Life, Acidic: < 100 Hours, Measured Half-Life, Basic: < 1 Hours, Measured Biodegradation This material contains an active ingredient that is not readily biodegradable but is inherently biodegradable (as defined by 1993 OECD Testing Guidelines) and is not expected to persist in the environment. Cephalosporins are generally susceptible to degradation by a number of micro-organisms found in wastewater treatment plants and the general environment. Resulting degradation products are readily mineralised by environmental micro-organisms. Aerobic - Inherent Percent Degradation: 34 %, 14 days, Modified Zahn- Wellens, primary biodegradation, loss of parent., Activated sludge
(d)	Mobility in soil	Adsorption This material contains an active ingredient that is not likely to adsorb to soil or sediment if released directly to the environment. This

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		 material contains an active ingredient that is not likely to adsorb to sludge or biomass if released directly to the environment. Soil Sediment Sorption (log Koc): 0.78, Measured at pH 7
(e)	Other Adverse Effects	No applicable ecological information found.

Refer to local, state, and federal rules.

Waste Disposal: Dispose of any cleanup materials and waste residue according to all applicable laws and regulations.

Section 14 - Transport Information

(a)	UN Number	UN 3077
(b)	UN Proper Shipping Name	Environmentally hazardous substance, solid, nos
(c)	Transport Hazard Class(es)	Class 9
(d)	Packing Group	III
(e)	Environmental Hazards	Per UN Model Regulation 5.2.1.6, may require environmentally hazardous substance mark (fish and tree symbol)
(f)	Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	Not Available
(g)	Special Precautions	Not Available

DOT:

Proper Shipping Name	Consumer Commodity	
Harand Labels/Classification	ORM-D	
Hazard Labels/Classification	Class 9	

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DOT Symbols	G – Identifies PSN requiring a technical name
Packing Group	III – Minor Danger (DOT)
Special Provisions	8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.
	146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.
	335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leakproof when used as bulk packaging.
	B54 - Open-top, sift-proof rail cars are also authorized.
Special Provisions	IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).

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	IP3 - Flexible IBCs must be sift-proof and water- resistant or must be fitted with a sift-proof and water- resistant liner.N20 - A 5M1 multi-wall paper bag is authorized if transported in a closed transport vehicle.
	transported in a closed transport venicle.
	T1 - 1.5 178.274(d)(2) Normal.
Special Provisions	178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this
Packaging Exceptions	subchapter. 49 CFR 173.155
Packaging Non Bulk	49 CFR 173.213
Packaging Bulk	49 CFR 173.240
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ICAO/IATA:

ID Number	ID 8000		
Proper Shipping Name/Description	Consumer Commodity		
Hazard Labels/Class(es)	Sector Se		
Packing Instructions	See Packing Instruction Y963		

IMDG:

Classification and Labeling	As UN Classification and Labeling above.		
Limited quantities	May be able to ship as an Excepted or Limited Quantity.		

Section 15 - Regulatory Information

Below is selected regulatory information chosen primarily for possible Sagent usage. This section is not a complete analysis or reference to all applicable regulatory information. Please consider all applicable laws and regulations for your country/state.

U.S. Regulations:

TSCA - Not on this list CERCLA - Not on this list SARA 302 - Not on this list SARA 313 - Not on this list OSHA – Possible Sensitizer, Target Organ Toxin, Possible Irritant RCRA – Not Listed PROP 65 – Not listed

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Section 16 - Other Information

As of the date of issuance, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered with the good faith belief that it is accurate. THIS SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for substitute for product literature which may accompany the finished product.

For additional information contact: Sagent Pharmaceuticals, Inc. 1901 N. Roselle Rd, Suite 700 Schaumburg, IL 60195 847-908-1600

Glossary: This glossary contains definitions of general terms used in SDSs. Not all of these Glossary Terms will apply to this SDS.

ACCILL	
ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute
CAS Number	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response Compensation and Liability Act (of 1980)
CHAN	Chemical Hazard Alert Notice
CHEMTREC	Chemical Transportation Emergency Center
DOT	Department of Transportation
DSL	Domestic Substances List
ECHA	European Chemicals Agency
EPA	Environmental Protection Agency
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HEPA	High Efficiency Particulate Air (Filter)
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
ICAO/IATA	International Civil Aviation Organization/International Air Transport Association
IMO	International Maritime Organization
KOW	Octanol/Water Partition Coefficient
LEL	Lower Explosive Limit
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
NA	Not Applicable, except in Section 14 where NA = North America
NE	Not Established

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NADA	New Animal Drug Application		
NAIF	No Applicable Information Found		
NCI	National Cancer Institute		
NDSL	Non-Domestic Substances List		
NFPA	National Fire Protection Association		
NIOSH	National Institute for Occupational Safety and Health		
NOS	Not Otherwise Specified		
NTP	National Toxicology Program		
OSHA	Occupational Safety and Health Administration		
OEL	Occupational Exposure Limit		
PEL	Permissible Exposure Limit (OSHA)		
RCRA	Resource Conservation and Recovery Act		
RQ	Reportable Quantity		
RTECS	Registry of Toxic Effects of Chemical Substances		
SARA	Superfund Amendments and Reauthorization Act		
SDS	Safety Data Sheet		
STEL	Short Term Exposure Limit		
TLV	Threshold Limit Value (ACGIH)		
TPQ	Threshold Planning Quantity		
TSCA	Toxic Substances Control Act		
TWA	Time Weighted Average/8 Hours Unless Otherwise Noted		
UEL	Upper Explosive Limit		
UN	United Nations		
USP	United States Pharmacopeia		
WEEL	Workplace Environmental Exposure Level (AIHA)		
WHMIS	Workplace Hazardous Materials Information System		