


## Section 1: Identification

<b>Common Name/Trade Name</b>	KETAMINE HCL USP	
<b>Supplier Information</b>	Letco Medical, LLC 1316 Commerce Drive NW Decatur, AL 35601 1 (800) 239-5288 +1 (734) 843-4693	<b>IN CASE OF EMERGENCY:</b> Chemtrec 1 (800) 424-9300 (24 hours)
<b>Product Synonym(s)</b>	2-(2'-chlorophenyl)-2-(methylamino)-cyclohexanone-Hydrochloride	
<b>Relevant Use(s) of Product</b>	Manufacture or Compounding of Substances	

## Section 2: Hazards Identification

<b>Classification of Substance or Mixture</b>	Repr. 2 H361, STOT SE 2 H371, Acute Tox. 4 H302, Acute Tox. 4 H332	
<b>Signal Word</b>	Warning	
<b>Hazard Statement(s)</b>	H302 H332 H361 H371	Harmful if swallowed Harmful if inhaled Suspected of damaging fertility or the unborn child May cause damage to organs
<b>Pictogram(s)</b>		
<b>Precautionary Statement(s)</b>	P201 P202 P260 P264 P270 P271 P280 P301+P312 P304+P340 P308+P313 P330 P405 P501	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. IF SWALLOWED Call a POISON CENTER or doctor/physician if you feel unwell. IF INHALED Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned Get medical advice/attention. Rinse mouth. Store locked up. Dispose of contents/container to an approved waste disposal plant.
<b>Hazards Not Otherwise Classified</b>	No data available	
<b>Ingredient(s) with Unknown Toxicity</b>	No data available	

## Section 3: Composition/Information on Ingredients

<b>Chemical Name</b>	2-(2'-chlorophenyl)-2-(methylamino)-cyclohexanone-Hydrochloride
<b>Common Name</b>	Ketamine HCL
<b>CAS Number</b>	1867-66-9
<b>Impurities and/or Stabilizing Additives</b>	No data available

## Section 4: First Aid Measures

<b>General Advice</b>	Immediately remove any clothing soiled by the product. Remove breathing apparatus only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.
<b>If Inhaled</b>	Take affected persons into fresh air and keep quiet. Call a doctor immediately. Use a respiration bag or breathing device. In case of unconsciousness place patient stably in side position for transportation.
<b>In Case of Skin Contact</b>	Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.
<b>In Case of Eye Contact</b>	Rinse opened eye for several minutes under running water. Seek immediate medical advice.
<b>If Swallowed</b>	Rinse out mouth and then drink plenty of water. Immediately call a doctor.
<b>Most Important Symptoms and Effects</b>	Nausea Vomit Dizziness Cramp Palpitation Breathing difficulty Unconsciousness Danger Danger of impaired breathing. Danger of disturbed cardiac rhythm. Danger of circulatory collapse. ⚠️ Indication of any immediate medical attention and special treatment needed If swallowed, gastric irrigation with added, activated carbon. If necessary oxygen respiration treatment.

## Section 5: Fire Fighting Measures

<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , extinguishing powder or water spray. Fight larger fires with water spray.
<b>Special Hazards Arising From the Substance/Mixture</b>	Carbon monoxide (CO) Carbon dioxide (CO <sub>2</sub> ) Hydrogen chloride (HCl) Nitrogen oxides (NO <sub>x</sub> )
<b>Special PPE and/or Precautions for Firefighters</b>	Protective equipment: Wear fully protective suit. Personal protection equipment Wear self-contained respiratory protective device. Mount respiratory protective device. Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations

## Section 6: Accidental Release Measures

<b>Personal Precautions, Protective Equipment and Emergency Procedures</b>	Avoid formation of dust. Wear protective equipment. Keep unprotected persons away. Wear protective clothing. Mount respiratory protective device.
<b>Methods and Materials Used for Containment</b>	Do not allow to enter sewers/ surface or ground water. Pick up mechanically. Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
<b>Cleanup Procedures</b>	Do not allow to enter sewers/ surface or ground water. Pick up mechanically. Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

## Section 7: Handling and Storage

<b>Precautions for Safe Handling</b>	The product should only be handled by trained personnel. Keep receptacles tightly sealed. Open and handle receptacle with care. Ensure good ventilation/exhaustion at the workplace. Enclosure or extractor facilities are required. Prevent formation of dust. Information about protection against explosions and fires: Dust can combine with air to form an explosive mixture. Protect against electrostatic charges. Keep respiratory protective device available.
<b>Conditions for Safe Storage</b>	Requirements to be met by storerooms and receptacles: Store in a dry, cool and well ventilated location. Store only in the original receptacle. Information about storage in one common storage facility: Store away from foodstuffs. Further information about storage conditions: Store under lock and key and with access restricted to technical experts or their assistants only. Keep receptacle tightly sealed. Store in cool, dry conditions in well sealed receptacles. Protect from heat and direct sunlight. Protect from humidity and water.

## Section 8: Exposure Controls/Personal Protection

<b>Components with Workplace Control Parameters</b>	Components with limit values that require monitoring at the workplace: Not required.
<b>Appropriate Engineering Controls</b>	Keep away from foodstuffs, beverages and feed. Use skin protection cream for skin protection. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.
<b>PPE - Eye/Face Protection</b>	Tightly sealed goggles
<b>PPE - Skin Protection</b>	Protection of hands: Change protective gloves regularly. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves Nitrile rubber, NBR The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Penetration time of glove material Value for the permeation: Level 480 min The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
<b>PPE - Body Protection</b>	Wear chemical protective suit or disposable protecting clothing.
<b>PPE - Respiratory Protection</b>	Short term filter device: Filter P3. In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

## Section 9: Physical and Chemical Properties

<b>Appearance</b>	Form: Crystalline Color: White
<b>Upper/Lower Flammability or Explosive Limits</b>	Not determined.
<b>Odor</b>	Odorless
<b>Vapor Pressure</b>	Not applicable.
<b>Odor Threshold</b>	No data available
<b>Vapor Density</b>	No data available
<b>pH</b>	pH-value (. g/l) : 3.5-4.1
<b>Relative Density</b>	No data available
<b>Melting Point/Freezing Point</b>	Melting point/Melting range: 258-261 °C (496-502 °F)
<b>Solubility</b>	Water at 20 °C (68 °F): 265 g/l
<b>Initial Boiling Point and Boiling Range</b>	Undetermined.
<b>Flash Point</b>	Not applicable.
<b>Evaporation Rate</b>	No data available
<b>Flammability (Solid, Gas)</b>	Product is not flammable.
<b>Partition Coefficient</b>	No data available
<b>Auto-Ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	Not applicable.

## Section 10: Stability and Reactivity

<b>Reactivity</b>	No data available
<b>Chemical Stability</b>	Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
<b>Possibility of Hazardous Reactions</b>	Stable up to the melting point.
<b>Conditions to Avoid</b>	No further relevant information available.
<b>Incompatible Materials</b>	No further relevant information available.
<b>Hazardous Decomposition Products</b>	Nitrogen oxides Hydrogen chloride (HCl) Carbon monoxide and carbon dioxide

## Section 11: Toxicological Information

<b>Acute Toxicity - LD50 Oral</b>	LD/LC50 values that are relevant for classification: Oral LD50 617 mg/kg (mouse) 447 mg/kg (rat) LD50 intraperitoneal 224 mg/kg (rat) LD50 intravenous 58.8 mg/kg (rat)
<b>Acute Toxicity - Inhalation</b>	No data available
<b>Acute Toxicity - Dermal</b>	No data available
<b>Acute Toxicity - Eye</b>	No data available
<b>Skin Corrosion/Irritation</b>	No data available
<b>Serious Eye Damage/Irritation</b>	No data available
<b>Respiratory or Skin Sensitization</b>	No sensitizing effects known.
<b>Germ Cell Mutagenicity</b>	No data available
<b>Carcinogenicity IARC</b>	Substance is not listed.
<b>Carcinogenicity ACGIH</b>	No data available.
<b>Carcinogenicity NTP</b>	Substance is not listed.
<b>Carcinogenicity OSHA</b>	Substance is not listed.
<b>Reproductive Toxicity</b>	No data available
<b>Specific Target Organ Toxicity - Single Exposure</b>	No data available
<b>Specific Target Organ Toxicity - Repeated Exposure</b>	No data available
<b>Aspiration Hazard</b>	No data available

## Section 12: Ecological Information

<b>Toxicity</b>	Aquatic toxicity: EC50/48h 265 mg/l (daphnia)
<b>Persistence and Degradability</b>	No further relevant information available. The product is not readily biodegradable.
<b>Bio-accumulative Potential</b>	No further relevant information available. General notes: Water danger class 3 (Self-assessment): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground.
<b>Mobility in Soil</b>	No further relevant information available.
<b>Other Adverse Effects</b>	No further relevant information available.

## Section 13: Disposal Considerations

<b>Waste Treatment Methods Product</b>	Dispose of as waste requiring special control in accordance with the legal regulation issued by the appropriate local and national authorities. Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
<b>Waste Treatment Methods Packaging</b>	Ä?Ä? Uncleaned packagings: Ä?Ä? Recommendation: Packagings that cannot be cleansed are to be disposed of in the same manner as the product. Ä?Ä? Recommended cleansing agent: Water, if necessary with cleansing agents.
<b>Special Precautions Landfill or Incinerations</b>	No data available
<b>Other Information</b>	No data available

## Section 14: Transport Information

<b>UN Number</b>	Not dangerous goods.
<b>UN Proper Shipping Name</b>	N/A
<b>Transport Hazard Class(es)</b>	N/A
<b>Packaging Group</b>	N/A
<b>Environmental Hazards</b>	Not applicable.

## Section 15: Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture · Controlled Substances Act 1867-66-9 Ketamine Hydrochloride Schedule III · Section 355 (extremely hazardous substances): Substance is not listed. · Section 313 (Specific toxic chemical listings): Substance is not listed. · TSCA (Toxic Substances Control Act): Substance is not listed. · Proposition 65 · Chemicals known to cause cancer: Substance is not listed. · Chemicals known to cause reproductive toxicity for females: Substance is not listed. · Chemicals known to cause reproductive toxicity for males: Substance is not listed. · Chemicals known to cause developmental toxicity: Substance is not listed. · Cancerogenity categories · EPA (Environmental Protection Agency) Substance is not listed. · TLV (Threshold Limit Value established by ACGIH) Substance is not listed. · MAK (German Maximum Workplace Concentration) Substance is not listed. · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed. · GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). National regulations: · Information about limitation of use: Employment restrictions concerning young persons must be observed. Employment restrictions concerning pregnant and lactating women must be observed. Employment restrictions concerning women of child-bearing age must be observed. · Water hazard class: Water danger class 3 (Self-assessment): extremely hazardous for water. · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## Section 16: Other Information

<b>Additional Information</b>	N/A
<b>Prepared By</b>	Scarlotte Smith
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### Disclaimer

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