

## Safety Data Sheet

SDS Print Date: 07/28/2016

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### 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### 1.1 Product identifiers

Product Name: Ketamine hydrochloride  
Catalog Number: NB-48-0519  
CAS Number: [1867-66-9]  
EC Number: [265-667-4]  
IUPAC Name: (±)-cis-1-Acetyl-4-(p-((2-(2,4-dichlorophenyl)-2-(imidazol-1-ylmethyl)-1,3-dioxolan-4-yl)methoxy)phenyl)piperazine

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses: For laboratory research purposes only. Not for drug or household use.

#### 1.3 Details of the supplier of the safety data sheet

Company: Neo Biotech  
74, rue des Suisses  
92000 Nanterre - France  
E-Mail: [info@neo-biotech.com](mailto:info@neo-biotech.com)  
Internet: [www.neo-biotech.com](http://www.neo-biotech.com)

#### 1.4 Emergency Telephone number

+33 9 77 40 09 09 (office hours)

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

#### 2.2 Label elements



Pictogram

Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust / fume / gas / mist / vapours / spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER or doctor / physician if you feel unwell.

P321 Specific treatment (see supplemental first aid instructions on this label).

P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice / attention.

P337 + P313 If eye irritation persists: Get medical advice / attention.

P362 Take off contaminated clothing and wash before reuse.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents / container to an approved waste disposal plant.

2.3 Other hazards none

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.1 Substances

Product Name: Ketamine hydrochloride  
Synonyms: (±)-cis-1-Acetyl-4-(p-((2-(2,4-dichlorophenyl)-2-(imidazol-1-ylmethyl)-1,3-dioxolan-4-yl)methoxy)phenyl)piperazine  
Formula: C<sub>13</sub>H<sub>16</sub>ClNO.HCl  
Molecular Weight: 274.19 g/mol  
CAS Number: [1867-66-9]  
EC Number: [265-667-4]

(for batch specific information, please see CoA)

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

##### General advice

Consult a doctor and show this safety data sheet.

##### If inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

##### In case of skin contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

##### In case of eye contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

##### If swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

#### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

#### 4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

#### 5.3 Precautions for fire-fighters

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

#### 6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

#### 7.2 Conditions for safe storage, including any incompatibilities.

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

Recommended storage temperature: Store at RT.

#### 7.3 Specific end uses

Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1 Control parameters

##### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

##### Appropriate engineering controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place.

Ensure laboratory is equipped with a safety shower and eye wash station.

##### Personal protective equipment

##### Eye / face protection

Use appropriate safety glasses.

##### Skin protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

##### Body protection

Wear appropriate protective clothing.

## Respiratory protection

If risk assessment indicates necessary, use a suitable respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	White solid
Vapor pressure	No data available
Odor	No data available
Vapor density	No data available
Odor threshold	No data available
Relative density	No data available
pH	No data available
Solubility(ies)	Soluble in water
Melting / freezing point	265°C
Partition coefficient	No data available
Boiling point / range	No data available
Auto-ignition temperature	No data available
Flash point	No data available
Decomposition temperature	No data available
Evaporation rate	No data available
Viscosity	No data available
Flammability (solid, gas)	No data available
Explosive properties	No data available
Upper / lower flammability	No data available
Oxidising properties or explosive limits	No data available

### 9.2 Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable under recommended transport or storage conditions.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

### 10.4 Conditions to avoid

Heat, moisture.

### 10.5 Incompatible materials

Strong acids / alkalis, strong oxidizing / reducing agents.

### 10.6 Hazardous decomposition products

In combustion may emit toxic fumes. No known decomposition information.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute Toxicity

LD<sub>50</sub> Oral (rat) 447 mg/kg

#### Skin corrosion / irritation

Classification criteria are not met based on available data

#### Serious eye damage / irritation

Classification criteria are not met based on available data

#### Respiratory or skin sensitization

Classification criteria are not met based on available data

#### Germ cell mutagenicity

Result: Equivocal evidence.

Histidine reversion (Ames)

Hamster (Ovary) Sister chromatid exchange

#### Carcinogenicity

Classification criteria are not met based on available data

#### Reproductive toxicity

Reproductive toxicity – Intraperitoneal (rat)

Effects on Fertility: Post-implantation mortality (e.g. dead and / or resorbed implants per total number of implants).

Developmental Toxicity – Intraperitoneal (rat)

Effects on Embryo or Fetus: Fetotoxicity (except death e.g., stunted fetus).

Specific Developmental Abnormalities:

Cardiovascular (circulatory) system.  
Hepatobiliary system. Urogenital system.

#### Specific target organ toxicity

##### - single exposure

Inhalation - May cause respiratory irritation.

##### Specific target organ toxicity

##### - repeated exposure

Classification criteria are not met based on available data

#### Aspiration hazard

Classification criteria are not met based on available data

#### Symptoms / Routes of exposure

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Ingestion: There may be irritation of the throat.

Skin: There may be mild irritation at the site of contact.

Eyes: There may be irritation and redness.

Delayed / Immediate Effects: No known symptoms.

## Additional Information

RTECS No: GW1400000

Exposure may cause irritation of eyes, mucous membranes, upper respiratory tract and skin, hallucinations, central nervous system depression, stomach-irregularities - based on human evidence. To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

No data available

### 12.6 Other adverse effects

May be harmful to the aquatic environment.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with National legislation.

#### Contaminated packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with National legislation.

## 14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID and IATA.

### 14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

### 14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

### 14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

### 14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

### 14.5 Environmental hazards

This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.

### 14.6 Special precautions for users

No data available

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

No information required.

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

## 16. OTHER INFORMATION

### Further Information

This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet