Material Safety Data Sheet

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Rockville, MD 20852 USA

Phone Calls: 301-816-8129
8 a.m. to 5 p.m. EST Mon. - Fri.

ISOCARBOXAZID

Catalog Number: 1348000 **Revision Date:** June 19, 2009

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Common Name: Isocarboxazid

Manufacturer: U. S. Pharmacopeia

Responsible Party: Reference Standards Technical Services

Mailing Address: 12601 Twinbrook Parkway, Rockville, MD 20852 USA

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Product Use: USP Reference Standards and Authentic Substances are used for chemical tests and assays in analytical, clinical, pharmaceutical, and research laboratories.

SECTION 2 - HAZARD INFORMATION

EMERGENCY OVERVIEW: Toxic

Adverse Effects: Adverse effects may include severe dizziness, fainting, diarrhea, swelling of feet and lower legs, fast or pounding heartbeat, unusual excitement or nervousness, mood swings, decreased urine output, blurred vision, muscle twitching during sleep, trouble sleeping, decreased sexual ability, drowsiness, mild headache, change in appetite, weight gain, increased sweating, weakness, trembling, chills, constipation, and dry mouth. Symptoms of hypertensive crisis may include severe chest pain, enlarged pupils, fast or slow heartbeat, severe headache, increased sensitivity of eyes to light, increased sweating (possibly with fever or cold, clammy skin), nausea or vomiting, and stiff or sore neck. Intracranial bleeding may occur. Possible allergic reaction to material if inhaled, ingested, or in contact with skin.

Overdose Effects: Overdose effects may include severe anxiety, confusion, convulsions, cool, clammy skin, severe dizziness, fast and irregular pulse, fever, hallucinations, severe headache, change in blood pressure or reflexes, muscle stiffness, troubled breathing, sweating, severe trouble in sleeping, unusual irritability, and coma. Ingestion of 2 - 3 mg/kg or greater is potentially life threatening.

Acute: Possible eye, skin, gastrointestinal, and/or respiratory tract irritation.

Chronic: Possible hypersensitization.

Medical Conditions Aggravated by Exposure: Hypersensitivity to material, active alcoholism or cocaine use, heart problems or irregularities, severely impaired liver or kidney function, pheochromocytoma, cerebrovascular disease or defect, diabetes mellitus, epilepsy, asthma or bronchitis, hypertension, hyperthyroidism, severe or frequent headaches, Parkinson's disease, and schizophrenia or suicidal tendencies.

Cross Sensitivity: n/f

n/f = not found

Target Organs: Central nervous system

For additional information on toxicity, see Section 11.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Common Name: Isocarboxazid

Formula: C12H13N3O2

Synonym: n/f

Chemical Name: 3-Isoxazolecarboxylic acid, 5-methyl-, 2-(phenylmethyl)hydrazide

CAS: 59-63-2

RTECS Number: NY2625000

Chemical Family: Isoxazole derivative

Therapeutic Category: Antidepressant (MAO inhibitor)

Composition: Pure Material

SECTION 4 - FIRST AID MEASURES

Inhalation: May cause irritation. Remove to fresh air.

Eye: May cause irritation. Flush with copious quantities of water.

Skin: May cause irritation. Flush with copious quantities of water.

Ingestion: May cause irritation and toxicity if ingested. Flush out mouth with water. This material is well absorbed from the gastrointestinal tract.

General First Aid Procedures: Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

Note to Physicians

Overdose Treatment: Note: The effects of massive overdose may persist for several days; recovery from mild overdose may take 3 to 4 days.
Overdose treatment should be symptomatic and supportive and may include the following:
1. Induced vomiting is NOT recommended due to the potential for CNS depression and seizures.
2. Administer activated charcoal as a slurry. For an ingestion of a potentially life-threatening amount of poison, perform gastric lavage, if soon after ingestion (within 1 hour). Protect airway by placement in Trendelenburg and left lateral decubitus position or by endotracheal intubation. Control any seizures first.
3. For severe CNS excitation, treat with small incremental doses of intravenous diazepam.
4. For seizures, administer benzodiazepines (diazepam or lorazepam). Consider phenobarbital if seizures recur.
5. For hypotension, treat with intravenous fluids and positioning. If patient is unresponsive, administer norepinephrine or dopamine cautiously, monitoring for possible exaggerated response.
6. Treat symptoms of hypertension with phentolamine or intravenous nitroprusside.
7. Hyperthermia should be managed with external cooling. DO NOT use phenothiazines. Dantrolene has been used with some initial success. [Meditext 2009]

SECTION 5 - FIREFIGHTING MEASURES

Extinguisher Media: Water spray, dry chemical, carbon dioxide, or foam as appropriate for surrounding fire and materials.

Fire and Explosion Hazards: This material is assumed to be combustible. As with all dry powders, it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.

Firefighting Procedures: As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill Response: Wear approved respiratory protection, chemically compatible gloves, and protective clothing. Wipe up spillage or collect spillage using a high-efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately labeled container for disposal. Wash spill site.

SECTION 7 - HANDLING AND STORAGE

Handling: As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

Storage: Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: Engineering controls such as exhaust ventilation are recommended.

Respiratory Protection: Use a NIOSH-approved respirator, if it is determined to be necessary by an industrial hygiene survey involving air monitoring. In the event that a respirator is not required, an approved dust mask should be used.

Gloves: Chemically compatible

Eye Protection: Safety glasses or goggles

Protective Clothing: Protect exposed skin.

Exposure Limits: n/f

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Properties as indicated on the MSDS are general and not necessarily specific to the USP Reference Standard Lot provided.

Appearance and Odor: White or practically white crystalline powder; slight, characteristic sweet odor.

Odor Threshold: n/f

pH: n/f

Melting Range: 105 - 107° C

Boiling Point: n/f

Flash Point: n/f

Autoignition Temperature: n/f

Evaporation Rate: n/f

Upper Flammability Limit: n/f

Lower Flammability Limit: n/f

Vapor Pressure: n/f

Vapor Density: n/f

Specific Gravity: n/f

Solubility in Water: Very slightly soluble in hot water.

Fat Solubility: n/f

Other Solubility: Very soluble in ethanol, in glycerol, and in propylene glycol.

Partition Coefficient: n-octanol/water: 1.49

Percent Volatile: n/f

Reactivity in Water: n/f

Explosive Properties: n/f

n/f = not found

Oxidizing Properties: n/f

Formula: C12H13N3O2

Molecular Weight: 231.25

n/f = not found

SECTION 10 - STABILITY AND REACTIVITY

Conditions to Avoid: Avoid exposure to heat.

Incompatibilities: Hydrogen chloride and oxidizing agents.

Decomposition Products: When heated to decomposition, material emits toxic fumes of NOx and benzylhydrazine. Emits toxic fumes under fire conditions.

Stable? Yes **Hazardous Polymerization?** No

SECTION 11 - TOXICOLOGICAL PROPERTIES

Oral Rat: LD50: 262 mg/kg

Oral Mouse: LD50: 173 mg/kg

Other Toxicity Data: Oral Monkey LD50: 160 mg/kg; Oral Dog LD50: > 40 mg/kg

Irritancy Data: n/f

Corrosivity: n/f

Sensitization Data: n/f

Listed as a Carcinogen by: **NTP:** No **IARC:** No **OSHA:** No

Other Carcinogenicity Data: No

Mutagenicity Data: Isocarboxazid was negative in the Ames S. typhimurium assay, with and without metabolic activation. It was positive for sister chromatid exchange in vivo in nonhuman mammalian cells.

Reproductive and Developmental Effects: No clear association between MAO inhibitors and teratogenic effects in humans has been found, however, the use of MAOIs is not recommended during pregnancy due to the possibility of hypertensive crisis, which could severely impact the fetus. A limited study in pregnant women showed an increased risk of birth defects when MAOI antidepressants were taken during the first three months of pregnancy.

Animal studies have shown that MAO inhibitors in very high doses cause hyperexcitability, a significant reduction in the number of viable offspring, and a reduced rate of growth in the newborn. Experiments in rats have shown alterations in newborn behavior in the offspring of females given isocarboxazid during pregnancy. The neonatal mortality rate was increased in the offspring of pregnant rats given up to 4 mg/kg/day isocarboxazid. In a study with rats, no effect on mating, offspring viability, or development was observed when both sexes were given 0.5 mg/kg/day or 5 mg/kg/day isocarboxazid in diet for 10 weeks before first mating through weaning of two litters. Studies in mice have not shown isocarboxazid to cause birth defects.

SECTION 12 - ECOLOGICAL INFORMATION

Ecological Information: n/f

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal: Dispose of waste in accordance with all applicable Federal, State, and local laws.

SECTION 14 -TRANSPORT INFORMATION

Shipping Name: Toxic solid, organic, n.o.s. (Isocarboxazid)

Class: 6.1

UN Number: UN2811

n/f = not found

Packing Group: III

Additional Transport Information: n/f

SECTION 15 - REGULATORY INFORMATION

U.S. Regulatory Information: n/f

International Regulatory Information: EINECS # 200-438-4

SECTION 16 - OTHER INFORMATION

Revision: 19-Jun-09

Previous Revision Date: 03-Apr-06

n/f = not found