

Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name: 4-(tert-Butoxycarbonyl)thiomorpholine-3-carboxylic acid
Synonyms:
Company Identification: PI Chemicals Ltd.
Room 512, Building 1
88 Cailun Road, Zhangjiang Hi-Tech park,
Pudong New Area, Shanghai 201203, China
Telephone Number: 86-21-58953700
Fax Number: 86-21-58953701

Section 2 - Product Information

Catalog Number: PI-17512
CAS Number: 128453-98-5
MDL Number: Not available
Purity: 97.6%

Section 3 - Physical and Chemical Properties

Physical state: Solid
Color: White
Odor: Not available
Molecular Formula: C₁₀H₁₇NO₄S
Molecular Weight: 247.31
Freezing/Melting Point: Not available
Melting Point: Not available
Flash Point: Not available
Autoignition Temperature: Not available
Refractive Index (nD20): Not available
Density: Not available
Decomposition Temperature: Not available
Solubility: Not available

Section 4 - Hazards Identification

Eye: Causes eye irritation.
Skin: Causes skin irritation. Harmful if absorbed through the skin.
Ingestion: May be harmful if swallowed.

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Section 5 - First Aid Measures

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.

Ingestion: Get medical aid immediately. Wash mouth out with water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Section 6 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Materials to avoid: Strong oxidizing agents. Strong Acids.

Conditions to avoid: Heat.

Hazardous Decomposition Products: Carbon oxides, sulfur oxides

Section 7 - Handling and Storage

Handling: Avoid breathing dust, vapor, mist, or gas. Avoid all direct contact with material. Wash thoroughly after handling. Have safety shower and eye wash available. Do not get in eyes, on skin, on clothing.

Storage: Store in cool place, Keep container tightly closed in a dry and well-ventilated place. Avoid sources of ignition, strong sunlight.

Section 8 - Personal Protection

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Self-contained breathing apparatus must be available in case of emergency. Respiratory protective device with particle filter.

Section 9 - Fire and Explosion Hazard Data

General Information: As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and protective clothing to prevent contact with skin and eyes.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 10 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 11 - Toxicological Information

MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.

Section 12 - Environmental information

Not available.

Section 13 - Disposal Consideration

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

Section 14 - Transport Information

ADR/RID: This substance is considered to be non-hazardous for transport.

IMDG: This substance is considered to be non-hazardous for transport.

IATA: This substance is considered to be non-hazardous for transport.

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xn

Indication of Danger: Harmful

Risk Phrases:

R22: Harmful if swallowed.

Safety Phrases:

S36: Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)

CAS#128453-98-5: 3

Canada

CAS#128453-98-5: Not available

US Federal

TSCA

CAS#128453-98-5 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Additional Information

MSDS Creation Date: May 15, 2009

Update: Original

The above information is believed to be accurate and represents the best knowledge available to us currently. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall PI Chemicals, be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, even if PI Chemicals has been advised of the possibility of such damages.

Note: For R&D use only.