

Revision Date 01-Oct-2009

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Description: tert-Butyl 4-(2-chloroethyl)piperazine-1-carboxylate
Cat No. 438240000; 438240010; 438240050

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

Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
 Janssen Pharmaceuticaaan 3a
 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99
 Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300
 CHEMTREC Phone Number, Europe: 001-703-527-3887

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion / irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ systemic toxicity (single exposure)	Category 3

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R phrases mentioned in this Section, see Section 16

Symbol(s) Xn - Harmful

R -phrase(s)

Risk Combination Phrases R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed
 R36/37/38 - Irritating to eyes, respiratory system and skin

tert-Butyl 4-(2-chloroethyl)piperazine-1-carboxylate
Revision Date 01-Oct-2009

2. HAZARDS IDENTIFICATION

Label Elements

Signal Word
Warning
Hazard Statements

H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H335 - May cause respiratory irritation

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P341 - IF INHALED: If breathing is difficult, remove 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
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

Other Hazards

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
tert-Butyl 4-(2-chloroethyl)piperazine-1-carboxylate 208167-83-3		>95	208167-83-3	Xn; R20/21/22 Xi; R36/37/38	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	-

For the full text of the R phrases mentioned in this Section, see Section 16

tert-Butyl 4-(2-chloroethyl)piperazine-1-carboxylate

Revision Date 01-Oct-2009

4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Immediate medical attention is required

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes Remove and wash
contaminated clothing before re-use Immediate medical attention is required

Ingestion

Do not induce vomiting Clean mouth with water and afterwards drink plenty of water Never give
anything by mouth to an unconscious person Call a physician or Poison Control Center
immediately

Inhalation

Move to fresh air If breathing is difficult, give oxygen Do not use mouth-to-mouth resuscitation
if victim ingested or inhaled the substance; induce artificial respiration with a respiratory
medical device Immediate medical attention is required

Notes to Physician

Treat symptomatically

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

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

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective
gear Thermal decomposition can lead to release of irritating gases and vapors

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

Environmental precautions

Should not be released into the environment.

Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

tert-Butyl 4-(2-chloroethyl)piperazine-1-carboxylate

Revision Date 01-Oct-2009

7. HANDLING AND STORAGE

Precautions for Safe Handling

Use only under a chemical fume hood Wear personal protective equipment Do not get in eyes, on skin, or on clothing Avoid ingestion and inhalation

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place Handle under nitrogen and protect from moisture.

Specific End Uses

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Use only under a chemical fume hood Ensure that eyewash stations and safety showers are close to the workstation location

Personal protective equipment

Eye Protection

Safety glasses with side-shields

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Solid

Appearance

Light brown

odor

No information available

Boiling Point/Range

No information available.

Melting Point/Range

62.9 - 64.7°C145 - 148°F

Flash Point

No information available.

Autoignition Temperature

No information available.

Molecular Formula

C11 H21 Cl N2 O2

Molecular Weight

248.76

tert-Butyl 4-(2-chloroethyl)piperazine-1-carboxylate

Revision Date 01-Oct-2009

10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing..

Conditions to Avoid

Incompatible products, Excess heat, Avoid dust formation.

Incompatible Materials

Strong oxidizing agents, Strong bases, Strong acids.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Hydrogen chloride gas.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Product Information

No acute toxicity information is available for this product

Component Information

Chronic Toxicity

Carcinogenicity

There are no known carcinogenic chemicals in this product

Sensitization

No information available.

Mutagenic Effects

No information available

Reproductive Effects

No information available.

Developmental Effects

No information available.

Target Organs

Eyes Skin Respiratory system

Endocrine Disruptor Information

None known

12. ECOLOGICAL INFORMATION

Toxicity

tert-Butyl 4-(2-chloroethyl)piperazine-1-carboxylate

Revision Date 01-Oct-2009

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products

Dispose of in accordance with local regulations

Contaminated Packaging

Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

IMDG/IMO

Not regulated

ADR

Not regulated

IATA

Not regulated

15. REGULATORY INFORMATION

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

International Inventories

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory Lists

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

tert-Butyl 4-(2-chloroethyl)piperazine-1-carboxylate**Revision Date 01-Oct-2009**

ENCS - Japan Existing and New Chemical Substances
CHINA - China Inventory of Existing Chemical Substances
AICS - Inventory of Chemical Substances
KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment**16. OTHER INFORMATION****Text of R phrases mentioned in Section 2-3**

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed
R36/37/38 - Irritating to eyes, respiratory system and skin

Revision Date 01-Oct-2009

Revision Summary Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet