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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 23 Apr 2025

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

1.1. Product name:

Captan

1.1. Catalog No.:

672819

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

1.3. Uses advised against:

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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Carcinogenicity (Category 2), H351
Acute toxicity, Inhalation (Category 3), H331
Serious eye damage (Category 1), H318
Skin sensitisation (Category 1), H317
Acute aquatic toxicity (Category 1), H400 Classification according to EU Directives 67/548/EEC or 1999/45/EC
R40
T Toxic R23
Xi Irritant R41
R43
N Dangerous for the environment
R50

2.2. Label elements

2.2.1. Pictogram

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2.2.2.

Signal word Danger
Hazard statement(s)
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
Precautionary statement(s)
P261 Avoid breathing dust.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311 Call a POISON CENTER or doctor/ physician.
Supplemental Hazard
Statements
none
2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Chemical characterization : Natural product
Formula : C9H8Cl3NO2S
Molecular Weight : 300,59 g/mol
CAS-No. : 133-06-2
EC-No. : 205-087-0
Index-No. : 613-044-00-6
Hazardous ingredients according to Regulation (EC) No 1272/2008
Component Classification Concentration
Captan
CAS-No.
EC-No.
Index-No.
133-06-2
205-087-0
613-044-00-6
Acute Tox. 3; Eye Dam. 1;
Skin Sens. 1; Carc. 2; Aquatic
Acute 1; H317, H318, H331,
H351, H400
<= 100 %
Hazardous ingredients according to Directive 1999/45/EC
Component Classification Concentration
Captan
CAS-No.
EC-No.
Index-No.
133-06-2
205-087-0
613-044-00-6
T, N, Carc.Cat.3, R23 - R40 -
R41 - R43 - R50
<= 100 %

3.1.1. Formula

C9H8Cl3NO2S

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3.1.2. Molecular Weight (g/mol)

300.60

3.1.3. CAS-No.

133-06-2

4. FIRST AID MEASURES

4.1 Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed
no data available

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
Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas
5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
5.4 Further information
no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
7.3 Specific end use(s)
A part from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Personal protective equipment
Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
a) Appearance Form: solid b) Odour no data available
c) Odour Threshold no data available
d) pH no data available
e) Melting point/freezing point
no data available
f) Initial boiling point and boiling range
no data available
g) Flash point no data available
h) Evapouration rate no data available
i) Flammability (solid, gas) no data available
j) Upper/lower flammability or explosive limits
no data available
k) Vapour pressure no data available
l) Vapour density no data available
m) Relative density no data available
n) Water solubility no data available
o) Partition coefficient: noctanol/water
no data available
p) Auto-ignition temperature
no data available
q) Decomposition temperature
no data available
r) Viscosity no data available
s) Explosive properties no data available
t) Oxidizing properties no data available
9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
no data available
10.4 Conditions to avoid
no data available
10.5 Incompatible materials
Strong bases
10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - rat - 9.000 mg/kg
LC50 Inhalation - rat - 2 h - > 5.700 mg/m3
LD50 Dermal - rat - > 5.000 mg/kg

Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitisation
Causes sensitisation.
Germ cell mutagenicity
mouse
S. typhimurium
Host-mediated assay
Hamster
Lungs
Cytogenetic analysis
Hamster
Lungs
Mutation in mammalian somatic cells.
Hamster
ovary
Mutation in mammalian somatic cells.
Hamster Kidney
Morphological transformation.
Hamster
Lungs
Sister chromatid exchange
Hamster
ovary
Sister chromatid exchange
Human
fibroblast
DNA damage
Human
fibroblast
Unscheduled DNA synthesis
Human
HeLa cell
DNA inhibition
Human
lymphocyte
DNA inhibition
Human
lymphocyte
Sister chromatid Exchange rat
Dominant lethal test
rat
Cytogenetic analysis
mouse
Cytogenetic analysis
mouse
Dominant lethal test
mouse
Micronucleus test
mouse
Mutation in mammalian somatic cells.
mouse
Cytogenetic Analysis mouse
sperm
rat
DNA inhibition
Carcinogenicity
Carcinogenicity - mouse - Oral
Tumorigenic:Neoplastic by RTECS criteria. Gastrointestinal:Tumors.
Limited evidence of carcinogenicity in animal studies
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Captan)
Reproductive toxicity
Reproductive toxicity - rabbit - Oral
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Reproductive toxicity - rat - Oral
Maternal Effects: Uterus, cervix, vagina.
Reproductive toxicity - rat - Oral
Effects on Newborn: Live birth index (# fetuses per litter; measured after birth).
Reproductive toxicity - rat - Intraperitoneal
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Specific Developmental Abnormalities: Eye, ear.
Reproductive toxicity - mouse - Oral
Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive). Effects on Newborn: Growth statistics (e.g., reduced weight gain). Developmental Toxicity - rat - Oral
Effects on Embryo or Fetus: Fetal death.
Developmental Toxicity - mouse - Oral
Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord). Developmental Toxicity - mouse -

Subcutaneous
Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord). Specific Developmental Abnormalities: Eye, ear. Specific Developmental Abnormalities: Craniofacial (including nose and tongue).
Specific target organ toxicity - single exposure
no data available
Specific target organ toxicity - repeated exposure
no data available
Aspiration hazard
no data available
Additional Information
RTECS: GW5075000

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish mortality LOEC - Oncorhynchus mykiss (rainbow trout) - 0,32 mg/l - 3,0 d
LC50 - Pimephales promelas (fathead minnow) - 0,065 mg/l - 96,0 h
mortality NOEC - Oncorhynchus mykiss (rainbow trout) - 0,18 mg/l - 3,0 d
Toxicity to daphnia and
other aquatic
invertebrates
EC50 - Daphnia magna (Water flea) - > 7,1 mg/l - 48 h
12.2 Persistence and degradability
12.3 Bioaccumulative potential
Bioaccumulation Cyprinus carpio (Carp) - 1,1 ug/l
Bioconcentration factor (BCF): 160
12.4 Mobility in soil
no data available
12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
12.6 Other adverse effects
Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 3077 IMDG: 3077 IATA: 3077
14.2 UN proper shipping name
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Captan)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Captan)

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IATA: Environmentally hazardous substance, solid, n.o.s. (Captan)
14.3 Transport hazard class(es)
ADR/RID: 9 IMDG: 9 IATA: 9 14.4 Packaging group
ADR/RID: III IMDG: III IATA: III
14.5 Environmental hazards
ADR/RID: yes IMDG Marine pollutant: yes IATA: yes
14.6 Special precautions for user
Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any
guarantee of the properties of the product. For lab use only!