SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
Product Number: Z0015
Product name: Zoxamide
CAS Registry Nr: 156052-68-5

1.2 Relevant identified uses of the substance or mixture and uses advised against
Laboratory chemicals, Manufacture of substances.

1.3 Details of the supplier of the safety data sheet
Company: Chemodex AG
CH - 9000 St. Gallen
Switzerland, Europe
Tel: +41 71 244 48 25
Fax: +41 71 244 48 26
Email: info@chemodex.com
Website: www.chemodex.com

1.4 Emergency telephone number
Tox Info Suisse: +41 44 251 51 51

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification in accordance with (EC) No. 1272/2008 [EU-GHS/CLP]
Skin sensitisation (Category 1), H317
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.
Classification according to EU Directives 67/548/EEC or 1999/45/EC

N  Dangerous for the environment  R43  R50/53

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

2.2 Label elements

Labelling according Regulation (EC) No. 1272/2008

<table>
<thead>
<tr>
<th>Pictogram</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
<td>Warning</td>
</tr>
</tbody>
</table>

Hazard statement(s)

| H317 | May cause an allergic skin reaction. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Precautionary statement(s)

| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves. |
| P501 | Dispose of contents/container to an approved waste disposal plant. |

Supplemental Hazard Statements none

2.3 Other hazards none

SECTION 3: Composition/information on ingredients

3.1 Substances

| Synonyms: | (RS)-3,5-dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-p-toluamide |
| Mol. Formula: | C14H16Cl3NO2 |
| Mol. Weight: | 336.64 g/mol |
| CAS Registry No.: | 156052-68-5 |

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>(RS)-3,5-dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-p-toluamide</td>
<td>Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; H317, H410</td>
<td>-</td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
</table>

CDX-Z0015-SDS-V1.1
www.chemodex.com
(RS)-3,5-dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-p-toluamide  Xi, N, R43 - R50/53  -

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16.

SECTION 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. 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

SECTION 5: Firefighting measures

5.1 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), 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
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. 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 material 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.

SECTION 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.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
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.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| a) Appearance: | Form: powder |
| b) Odour: | characteristic |
| c) Odour Threshold: | No data available |
| d) pH: | No data available |
| e) Melting point/freezing point: | 159 - 162 °C - lit. |
| f) Initial boiling point and boiling range: | No data available |
| g) Flash point: | Not applicable |
| h) Evaporation 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: | 1,38 g/cm³ at 20 °C |
| n) Water solubility: | practically insoluble |
| o) Partition coefficient (n-octanol/water): | log Pow: 3,76 |
| p) Auto-ignition temperature: | No data available |
| q) Decomposition temperature: | No data available |
| r) Viscosity: | No data available |
9.2 Other safety information
No data available

SECTION 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
Acids, Incompatible with strong acids and bases., Reducing agents.

10.6 Hazardous decomposition products
Other decomposition products - no data available. In the event of fire: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
No data available
LD50 Oral - rat - > 5.000 mg/kg
LD50 Dermal - rat - > 2.000 mg/kg

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available
No data available

Respiratory or skin sensitisation
- guinea pig
Result: May cause sensitisation by skin contact.

Germ cell mutagenicity
No data available
No data available
**Carcinogenicity**
Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

| IARC: | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |

**Reproductive toxicity**
No data available

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

---

**SECTION 12: Ecological information**

12.1 **Toxicity**

| Toxicity to fish | LC50 - Oncorhynchus mykiss (rainbow trout) - 0,16 mg/l - 96,0 h |
|                 | LC50 - Lepomis macrochirus (Bluegill sunfish) - > 0,79 mg/l - 96,0 h |
|                 | LC50 - Danio rerio (zebra fish) - > 0,73 mg/l - 96,0 h |

| Toxicity to algae | EC50 - Algae - 0,019 mg/l - 120 h |
|                  | EC50 - Scenedesmus capricornutum (fresh water algae) - 0,019 mg/l - 120 h |
|                  | EC50 - Scenedesmus abundans - 0,011 mg/l - 120 h |
|                  | EC50 - Anabaena flosaquae - > 0,86 mg/l - 120 h |

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**
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 **Other adverse effects**
Very toxic to aquatic life.
SECTION 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.

SECTION 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. ((RS)-3,5-dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-p-toluamide)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((RS)-3,5-dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-p-toluamide)
IATA: Environmentally hazardous substance, solid, n.o.s. ((RS)-3,5-dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-p-toluamide)

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.

SECTION 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.
SECTION 16: Other information

Full text of H-statements referred to under sections 2 and 3.
Aquatic Acute  Acute aquatic toxicity
Aquatic Chronic  Chronic aquatic toxicity
H317  May cause an allergic skin reaction
H400  Very toxic to aquatic life
H410  Very toxic to aquatic life with long lasting effects
Skin Sens.  Skin sensitisation

Full text of R-phrases referred to under sections 2 and 3
N  Dangerous for the environment
Xi  Irritant
R43  May cause sensitisation by skin contact
R50/53  Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Further information
©2016 Chemodex Ltd. License granted to make unlimited paper copies for internal use only.
The above information is believed to be correct but shall not be taken as being 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. Chemodex Ltd. and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.chemodex.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.