SAFETY DATA SHEET

1. Identification of Product

Product Identifier
Product Name: **1-(3,4-Dihydro-2H-1,4-thiazin-5-yl)ethanone**
Product Code: XS03902
CAS Number: 164524-93-0
MFCD Number: MFCD18829394

Relevant Identified Uses of Substance or Mixture and Uses Advised Against
Research and Development use

Supplier Details of the Safety Data Sheet
Atlantic Research Chemicals Ltd, Unit A, Stratton View Business Park, Holsworthy Road, Bude, Cornwall EX23 9NR
Telephone: +44 (0)1288 355370: E-mail: info@atlantic-chemicals.com

2. Hazards Identification

Classification of the Substance or Mixture
Acute toxicity, oral (category 4)
Skin irritation (category 2)
Eye irritation (category 2)
STOT single exposure (category 3)

Label Elements



Signal Word: Warning

Hazard Statements
H302 – Harmful if swallowed.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.
Precautionary Statements
P260 – Do not breathe dust/fumes/gas/mist/vapours/spray.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312 – IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352 – IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 – IF INHALED: Remove victim 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.
Other Hazards
No information available.

3. Composition/Information on Ingredients

Substances
1-(3,4-Dihydro-2H-1,4-thiazin-5-yl)ethanone
CAS number: 164524-93-0
Mixtures

Concentration	Product Name	CAS number:	EC/EINECS:

4. First Aid Measures

Description of First Aid Measures

Skin Contact	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye Contact	If eye irritation persists: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
Ingestion	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Most Important Symptoms and Effects

No data.

Indication of any Immediate Medical Attention

No additional measures required.

5. Fire Fighting Measures

Extinguishing Media

Suitable Carbon dioxide.
Dry chemical powder or foam.
Sand.

Unsuitable Water.

Special Hazards Arising from the Substance or mixture

In combustion emits carbon oxides and nitrogen oxides.

Advice for Fire Fighters

Wear self contained breathing apparatus.
Wear protective clothing to prevent contact with skin and eyes.

6. Accidental Released Measures

Personal Precautions

Do not attempt to take action without suitable protective clothing – see section 8 of SDS.
Do not create dust.
Evacuate the area immediately.

Environmental Precautions

Do not discharge into drains or rivers.
Contain spillage with bunds.

Methods & Materials

Mix with sand or vermiculite.
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

7. Handling and Storage

Personal Precautions

Safe Handling Ensure there is sufficient ventilation of the area.
Avoid breathing vapors, mist or gas.
Protection against explosions and fires Do not eat, drink or smoke when using this product.
Remove/take off immediately all contaminated clothing.
Take off contaminated clothing and wash before reuse.
Wash hands thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities

Managing storage risks Store in a cool, well ventilated area.
Keep container tightly closed.
Storage controls Do not store in conditions of high (or highly fluctuating) temperature.
Maintaining integrity Keep container tightly closed.
Other advice Store in a well ventilated place.

Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

8. Exposure Controls/Personal Protection

Control Parameters

No data available.

Exposure Controls

General protective and hygiene measures Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands during breaks and at the end of handling the material.
Immediately remove any contaminated clothing.
Engineering measures Use only outdoors or in a well ventilated area.
Eye/face protection Safety glasses with side shields.
Hand protection Protective gloves.
Respiratory protection Do not breathe dust/fumes/gas/vapours/spray.
Use breathing protection with high concentration.
Skin protection Handle with gloves.
Dispose of contaminated gloves after use in accordance with applicable laws and

good laboratory practice.
Wash and dry hands.
Protective clothing.

Other personal protection advice No data.

9. Physical and Chemical Properties

Physical and Chemical Properties

Molecular formula: C6 H9 N O S
Molecular weight: 143.209

Information on basic physical and chemical properties

a) Appearance:	Solid
b) Odour:	No data
c) Odour threshold:	No data.
d) pH:	No data.
e) Melting point/freezing point:	49-53°C
f) Initial boiling point and boiling range:	No data
g) Flash point:	No data.
h) Evaporation rate:	No data.
i) Flammability (solid, gas):	No data.
j) Upper/lower flammability or explosive limits:	No data.
k) Vapour pressure:	No data.
l) Vapour density:	No data.
m) Relative density:	No data.
n) Solubility(ies):	No data.
o) Partition coefficient: n-octanol/ water:	No data.
p) Auto-ignition temperature:	No data.
q) Decomposition temperature:	No data.
r) Viscosity:	No data.
s) Explosive properties:	No data.
t) Oxidizing properties:	No data.

Other Information

No additional information.

10. Stability and Reactivity

Reactivity

No unusual reactivity.

Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

No hazardous reactions known.

Conditions to avoid

Do not expose material to any source of ignition.
Avoid moist atmosphere.

Incompatible Materials

Strong oxidising agents.

Hazardous Decomposition Products

In combustion emits toxic fumes.
In combustion emits toxic fumes of carbon dioxide / carbon monoxide.
In combustion emits toxic fumes of nitrogen oxides.

11. Toxicology Information

Information

Acute toxicity:	No data
Skin corrosion/irritation:	Irritant for skin and mucous membranes
Serious eye damage:	Irritant effect
Respiratory or skin sensitisation:	No data.
Germ cell mutagenicity:	Not known.
Carcinogenicity:	Not known.
Reproductive toxicity:	Not known.
Aspiration hazard:	Not known.

Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12. Ecological Information

Toxicity
Not known.
Persistence and Degradability
Not known.
Bio-Accumulative Potential
Not known.
Mobility in Soil
Not known.
Results of PBT & PvB Assessment
Not known.
Other Adverse Effects
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

13. Exposure Controls/Personal Protection

Waste Treatment Methods

Disposal operations	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.
Disposal of packaging	Disposal must be made according to official regulations.

14. Transport Information

Air (ICAO)

1. UN Number: Not applicable.
2. UN Proper shipping name: Not applicable.
3. Transport hazard class(es): Not applicable.
4. Packing group: Not applicable.
5. Environmental hazards: No.
6. Special precautions for user: Not applicable.
7. Transport in bulk: Not applicable.

Road (ADR)

1. UN Number: Not applicable.
2. UN Proper shipping name: Not applicable.
3. Transport hazard class(es): Not applicable.
4. Packing group: Not applicable.
5. Environmental hazards: No.
6. Special precautions for user: Not applicable.
7. Transport in bulk: Not applicable.

Sea (IMDG)

1. UN Number: Not applicable.
2. UN Proper shipping name: Not applicable.
3. Transport hazard class(es): Not applicable.
4. Packing group: Not applicable.
5. Environmental hazards: No.
6. Special precautions for user: Not applicable.
7. Transport in bulk: Not applicable.

15. Safety, Health and Environmental Regulations

Safety, Health and Environmental Regulations:
Product is not subject to any additional regulations.
Safety Assessment
No chemical Safety Assessment

16. Other Information

ADR: Accord Europeen sur le transport des merchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Reglement International concernant le transport des merchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the ICAO
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service

Associated Risk Phrases According to European Directives 67/548/EEC

R36 Irritating to eyes.
R36/37 Irritating to eyes and respiratory system.
R36/37/38 Irritating to eyes, respiratory system and skin.
R36/38 Irritating to eyes and skin.
R37 Irritating to respiratory system.
R37/38 Irritating to respiratory system and skin.
R38 Irritating to skin.

Disclaimer

The product is listed for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this safety data sheet, or in combination with any other product or process is the responsibility of the user.