

Safety Data Sheet (SDS) According to the REACH Regulation (EC) No. 1907/2006

Issuing Date: 2015-12-31

Revision Date: 2017-09-12

Version: 2

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

1.1. Product identifier

Product No 14704
Product name Tyrophostin AG-490
Reach registration number This substance/mixture contains only ingredients which have been registered, or are exempt from registration, according to Regulation (EC) No. 1907/2006.

Contains

Formula $C_{17}H_{14}N_2O_3$
Molecular Weight 294.30 g/mol
Other means of identification 14704L, 14704M, 14704S

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

Identified uses For research use only

1.3. Details of the supplier of the safety data sheet

| | |
|---|---------------------------------|
| Importer (Applicable in EU only) | Manufacturer |
| Cell Signaling Technology Europe B.V. | Cell Signaling Technology, Inc. |
| Schuttersveld 2 | 3 Trask Lane |
| 2316 ZA Leiden | Danvers, MA 01923 |
| The Netherlands | United States |
| TEL: +31 (0)71 7200 200 | TEL: +1 978 867 2300 |
| FAX: +31 (0)71 891 0098 | FAX: +1 978 867 2400 |

Website www.cellsignal.com
E-mail Address info@cellsignal.eu

1.4. Emergency telephone number

CHEMTREC 24 hours a day, 7 days a week, 365 days a year
 +1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

| | |
|---|---------------------|
| Acute oral toxicity | Category 3 - (H301) |
| Specific target organ toxicity - single exposure (STOT SE) | Category 3 - (H335) |
| Acute aquatic toxicity | Category 1 - (H400) |

2.2. Label elements



Signal word
Danger

Hazard statement(s)

H301 - Toxic if swallowed
H335 - May cause respiratory irritation
H400 - Very toxic to aquatic life

Precautionary statement(s)

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell

2.3. Other hazards

May be harmful in contact with skin. May be harmful if inhaled. May be irritating to eyes, respiratory system and skin.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms

Tyrphostin AG 490;
N-Benzyl-3,4-dihydroxybenzylidenecyanoacetamide;
2-Cyano-3-(3,4-dihydroxyphenyl)-N-(phenylmethyl)-2-propenamide

Formula

C₁₇H₁₄N₂O₃

Chemical nature

Monoconstituent substance.

| Chemical Name | CAS No | Weight % | EC No | Classification (1272/2008) | REACH Registration Number |
|--|-------------|----------|-------|---|---------------------------|
| (Z)-N-benzyl-2-cyano-3-(3,4-dihydroxyphenyl)prop-2-enamide | 134036-52-5 | 100 | - | Acute Tox. 3 (H301) STOT SE 3 (H335) Acute Aquatic 1 (H400) | no data available |

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Use first aid treatment according to the nature of the injury. When symptoms persist or in all cases of doubt seek medical advice.

Inhalation

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.

Skin contact

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while

Ingestion rinsing. Get medical attention if irritation persists.
Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Irritation to eyes, skin, and respiratory system, Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep people away from and upwind of spill/leak. Avoid dust formation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. For personal protection see section 8. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up Avoid dust formation. Pick up and transfer to properly labeled containers. For dust cleanup use protective equipment.

6.4. Reference to other sections

See Sections 8 & 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment. Refer to Section 8. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Use as a laboratory reagent.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.2. Exposure controls****Appropriate engineering controls**

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

| | |
|-------------------------------|--|
| Eye/face protection | Tightly fitting safety goggles. |
| Skin protection | |
| Hand protection | Impervious gloves. |
| Other | Wear suitable protective clothing. |
| Respiratory protection | In case of inadequate ventilation wear respiratory protection. |

Environmental Exposure Controls

No information available.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | |
|-----------------------|--------------------------|
| Physical state | Solid |
| Appearance | Crystalline powder |
| Color | Yellow to green or tan |
| Odor | No information available |
| Odor Threshold | No information available |

| Property | Values | Remarks • Method |
|--|--------------------------|---------------------------|
| pH | | No information available |
| Melting point/freezing point | 213-225 °C | |
| Initial boiling point and boiling range | | No information available |
| Flash point | No information available | No information available. |
| Evaporation rate | | No information available |
| Flammability (solid, gas) | | No information available |
| Upper flammability limit | | No information available |
| Lower flammability limit | | No information available |
| Vapor pressure | | No information available |
| Vapor density | | No information available |
| Relative density | | No information available |
| Solubility | Practically insoluble | No information available |
| Partition coefficient: n-octanol/water | | No information available |
| Autoignition temperature | | No information available |
| Decomposition temperature | | No information available. |
| Viscosity | | No information available |
| Explosive properties | | No information available |
| Oxidizing properties | | No information available |

9.2. Other information

| | |
|-------------------------------------|--|
| Softening point | No information available |
| Molecular Weight | 294.30 g/mol |
| Solubility in other solvents | Soluble in dimethyl sulfoxide (DMSO) @ 200 mg/mL |
| VOC content | No information available |
| Density | No information available. |

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

| | |
|---------------------------------|--|
| Hazardous polymerization | Hazardous polymerization does not occur. |
| Hazardous reactions | None under normal processing. |

10.4. Conditions to avoid

Protect from light and heat.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

None under normal use conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

| | |
|--------------------------------------|----------------|
| ATEmix (oral) | 100.00 mg/kg |
| ATEmix (dermal) | 2,500.00 mg/kg |
| ATEmix (inhalation-dust/mist) | 6.25 mg/l |

Information on likely routes of exposure

| | |
|---------------------|--|
| Inhalation | May cause irritation of respiratory tract. May be harmful if inhaled. |
| Eye contact | There is no data available for this product. Avoid contact with eyes. Contact with eyes may cause irritation. Contact with eyes may cause mechanical irritation. |
| Skin contact | There is no data available for this product. Avoid contact with skin. May cause skin irritation and/or dermatitis. |
| Ingestion | Toxic if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

| | |
|--|---|
| Symptoms | Irritation to eyes, skin, and respiratory system. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. |
| Skin corrosion/irritation | No information available. |
| Serious eye damage/eye irritation | No information available. |
| Sensitization | No information available. |
| Mutagenic effects | No information available. |

| | |
|---------------------------------|---------------------------|
| Carcinogenic effects | No information available. |
| Reproductive toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |
| Aspiration Hazard | No information available. |
| Other information | No information available. |

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

| | |
|--------------------------------------|---------------------------|
| Bioaccumulation | No information available. |
| Bioconcentration factor (BCF) | No information available. |

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|---|
| Waste from residues / unused products | Dispose of in accordance with local regulations. |
| Contaminated packaging | Empty containers should be taken to an approved waste handling site for recycling or disposal. |
| Other information | Waste codes should be assigned by the user based on the application for which the product was used. |

SECTION 14: Transport information

IMDG/IMO

| | |
|--|---|
| 14.1 UN number | UN2811 |
| 14.2 UN proper shipping name | Toxic solid, organic, n.o.s. (Z)-N-benzyl-2-cyano-3-(3,4-dihydroxyphenyl)prop-2-enamide |
| 14.3 Transport hazard class(es) | 6.1 |
| 14.4 Packing group | III |
| 14.5 Environmental hazards | Yes |
| 14.6 Special precautions for user | None |
| EmS No. | F-A, S-A |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not regulated |

ADR/RID

| | |
|-----------------------------------|---|
| 14.1 UN number | UN2811 |
| 14.2 UN proper shipping name | Toxic solid, organic, n.o.s. (Z)-N-benzyl-2-cyano-3-(3,4-dihydroxyphenyl)prop-2-enamide |
| 14.3 Transport hazard class(es) | 6.1 |
| 14.4 Packing group | III |
| 14.5 Environmental hazards | Yes |
| 14.6 Special precautions for user | None |
| Classification Code | T2 |
| Tunnel Restriction Code | (E) |

IATA

| | |
|-----------------------------------|---|
| 14.1 UN number | UN2811 |
| 14.2 UN proper shipping name | Toxic solid, organic, n.o.s. (Z)-N-benzyl-2-cyano-3-(3,4-dihydroxyphenyl)prop-2-enamide |
| 14.3 Transport hazard class(es) | 6.1 |
| 14.4 Packing group | III |
| 14.5 Environmental hazards | Yes |
| 14.6 Special precautions for user | None |
| Special provisions | A3,A5 |

SECTION 15: Regulatory information

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

Candidate List of Substances of Very High Concern for Authorization Information

This product does not contain Substances of Very High Concern (SVHC).

SEVESO Directive Information

This product does not contain substances identified in the SEVESO Directive.

International inventories

| | |
|---------------|---|
| TSCA 8(b) | - |
| DSL/NDSL | - |
| EINECS/ELINCS | - |
| ENCS | - |
| IECSC | - |
| KECL | - |
| PICCS | - |
| AICS | - |

International inventories legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out

SECTION 16: Other information

Full text of H-Statements referred to under Sections 2 and 3

H301 - Toxic if swallowed
H335 - May cause respiratory irritation
H400 - Very toxic to aquatic life

Classification procedure: Expert judgment and weight of evidence determination.

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Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.