

**Safety Data Sheet (SDS)** According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

**Issuing Date:** 2015-12-31

**Revision Date:** 2017-08-10

**Version:** 2

## SECTION 1. Identification

### Product identifier

**Product No** 14704  
**Product name** Tyrophostin AG-490  
**UN number** UN2811  
**Other means of identification** 14704L, 14704M, 14704S

### Recommended use of the chemical and restrictions on use

**Identified uses** This product is intended for research purposes only.

### Manufacturer, importer, supplier

**Manufacturer address** Cell Signaling Technology, Inc.  
 3 Trask Lane  
 Danvers, MA 01923  
 United States  
 TEL: +1 978 867 2300  
 FAX: +1 978 867 2400  
**Website** www.cellsignal.com  
**Email address** support@cellsignal.com  
**Emergency telephone number** In case of emergency call CHEMTREC 1-800-424-9300

## SECTION 2. Hazard(s) identification

### Classification

This substance/mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<b>Acute oral toxicity</b>	Category 3
<b>Specific target organ toxicity - single exposure (STOT SE)</b>	Category 3

### GHS Label elements, including precautionary statements



**Signal Word**  
 Danger

**Hazard statement(s)**  
 Toxic if swallowed. May cause respiratory irritation.

**Precautionary Statement(s)**

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container to an approved waste disposal plant.

**Supplementary Hazard Information**

May be harmful by inhalation. May be harmful in contact with skin. May be irritating to eyes, respiratory system and skin.

**Hazards not otherwise classified (HNOc)**

Not applicable.

**SECTION 3. Composition/information on ingredients**

<b>Formula</b>	C <sub>17</sub> H <sub>14</sub> N <sub>2</sub> O <sub>3</sub>
<b>Molecular Weight</b>	294.30 g/mol
<b>Chemical nature</b>	Monoconstituent substance
<b>Synonyms</b>	Tyrophostin AG 490; N-Benzyl-3,4-dihydroxybenzylidenecyanoacetamide; 2-Cyano-3-(3,4-dihydroxyphenyl)-N-(phenylmethyl)-2-propenamide

Chemical Name	CAS No	Weight %
(Z)-N-benzyl-2-cyano-3-(3,4-dihydroxyphenyl)prop-2-enamide	134036-52-5	100

**SECTION 4. First-aid measures**

<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. Get medical attention if irritation persists.
<b>Skin contact</b>	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.
<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

**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.

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**Advice for emergency responders**

<b>General advice</b>	For further assistance, contact your local Poison Control Center.
<b>Protection of first-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**SECTION 5. Fire-fighting measures****Extinguishing media**

- Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable Extinguishing Media** CAUTION: Use of water spray when fighting fire may be inefficient.

#### Specific hazards arising from the chemical

No information available.

#### Explosion Data

- Sensitivity to Mechanical Impact** None.
- Sensitivity to Static Discharge** None.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### SECTION 6. Accidental release measures

#### 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.
- Other information** No information available.

#### 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.

#### 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.

### SECTION 7. Handling and storage

#### 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.

#### Conditions for safe storage, including any incompatibilities

- Technical measures/Storage conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.
- Packaging material** No information available.
- Incompatible products** Strong acids. Strong bases.

### SECTION 8. Exposure controls/personal protection

#### Control parameters

#### Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

#### **Individual protection measures, such as personal protective equipment**

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

<b>Eye/face protection</b>	Tightly fitting safety goggles.
<b>Skin and body protection</b>	Wear protective gloves/clothing.
<b>Respiratory protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice.

### **SECTION 9. Physical and chemical properties**

#### **Information on basic physical and chemical properties**

<b>Physical state</b>	Solid	<b>Color</b>	Yellow to green or tan
<b>Appearance</b>	Crystalline powder	<b>Odor Threshold</b>	No information available
<b>Odor</b>	No information available		
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks</u></b>	<b><u>Method</u></b>
pH	No information available		
Melting point/freezing point	213-225 °C		
Initial boiling point and boiling range			
Flash point	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		
Solubility in other solvents	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		
Viscosity, dynamic	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
<b><u>Other information</u></b>			
Softening point	No information available		
Molecular Weight	294.30 g/mol		
VOC content	No information available		
Density	No information available.		
Bulk Density VALUE	No information available.		

### **SECTION 10. Stability and reactivity**

#### **Reactivity**

No information available.

#### **Chemical stability**

Stable under recommended storage conditions.

#### **Possibility of hazardous reactions**

<b>Hazardous reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	None under normal processing.

#### **Conditions to Avoid**

Protect from light and heat.

#### **Incompatible Materials**

Strong acids. Strong bases.

#### **Hazardous Decomposition Products**

None known based on information supplied.

### **SECTION 11. Toxicological information**

#### **Information on likely routes of exposure**

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

#### **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.

<b>ATEmix (oral)</b>	100 mg/kg
<b>ATEmix (dermal)</b>	2500 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	6.2 mg/l

#### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Symptoms</b>	Irritation to eyes, skin, and respiratory system. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	No information available.
<b>Carcinogenicity</b>	No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Neurological effects</b>	No information available.
<b>Aspiration Hazard</b>	No information available.

### **SECTION 12. Ecological information**

#### **Ecotoxicity**

<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulation</b>	No information available.
<b>Mobility</b>	No information available.

**Other adverse effects**

No information available.

**SECTION 13. Disposal considerations****Waste Disposal Methods**

Dispose of in accordance with all applicable national environmental laws and regulations.

**Disposal considerations**

Do not empty into drains; dispose of this material and its container in a safe way.

**SECTION 14. Transport information****DOT**

<b>UN number</b>	UN2811
<b>UN proper shipping name</b>	Toxic solid, organic, n.o.s. (Z)-N-benzyl-2-cyano-3-(3,4-dihydroxyphenyl)prop-2-enamide
<b>Transport hazard class(es)</b>	6.1
<b>Packing group</b>	III
<b>Special provisions</b>	IB8, IP3, T1, TP33
<b>Emergency response guide number</b>	154

**IATA**

<b>UN number</b>	UN2811
<b>UN proper shipping name</b>	Toxic solid, organic, n.o.s. (Z)-N-benzyl-2-cyano-3-(3,4-dihydroxyphenyl)prop-2-enamide
<b>Transport hazard class(es)</b>	6.1
<b>Packing group</b>	III
<b>Special provisions</b>	A3,A5

**SECTION 15. Regulatory information****North American Inventory Listing**

Chemical Name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
(Z)-N-benzyl-2-cyano-3-(3,4-dihydroxyphenyl)prop-2-enamide	Not Listed	Not Listed	Not Listed	Not Listed

**Canadian Workplace Hazardous Materials Information System (WHMIS) Classification**

(Bad file name)	Class D1B - Toxic Material at >= 1%
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**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No

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**Sudden Release of Pressure Hazard**  
**Reactive Hazard**

No  
No

#### **Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

#### **U.S. FIFRA Label Information**

This product does not contain any substances regulated as pesticides.

#### **US Commerce Department - Export Administration Regulations Information**

This product does not contain any substances regulated under the Chemical Weapons Convention (CWC).

#### **U.S. Drug Enforcement Administration Information**

This product does not contain any substances regulated under the DEA.

### **SECTION 16. Other information**

**Issuing Date:** 2015-12-31

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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.

**End of Safety Data Sheet**