

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

Issuing Date: 2014-02-21

Revision Date: 2018-04-10

Version: 3

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

### 1.1. Product identifier

**Product No** 4082  
**Product name** Hoechst 33342  
**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

Chemical Name	Index No.	CAS No
acetonitrile (1 - 5)	608-001-00-3	75-05-8
<b>Formula</b>	$C_{27}H_{28}N_6O \cdot 3HCl \cdot xH_2O$	
<b>Molecular Weight</b>	561.93	

### 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. Schuttersveld 2 2316 ZA Leiden The Netherlands TEL: +31 (0)71 7200 200 FAX: +31 (0)71 891 0098	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](http://www.cellsignal.com)  
**E-mail Address** [info@cellsignal.eu](mailto: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

<b>Acute oral toxicity</b>	Category 4 - (H302)
<b>Skin corrosion/irritation</b>	Category 2 - (H315)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)
<b>Specific target organ toxicity - single exposure (STOT SE)</b>	Category 3 - (H335)

**2.2. Label elements****Signal word**

Danger

**Hazard statement(s)**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

**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

P280 - Wear protective gloves and eye/face protection

P271 - Use only outdoors or in a well-ventilated area

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

P310 - Immediately call a POISON CENTER or doctor/physician

P330 - Rinse mouth

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 - Take off contaminated clothing and wash before reuse

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P501 - Dispose of contents/container to an approved waste disposal plant

**2.3. Other hazards**

95% of the mixture consists of ingredient(s) of unknown acute toxicity.

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

**SECTION 3: Composition/information on ingredients****3.1 Substances****Synonyms**HOE 33342; bisBenzimide; 2,5'-Bi-1H-benzimidazole,  
2'-(4-ethoxyphenyl)-5-(4-methyl-1-piperazinyl)- (9Cl)**Formula**C<sub>27</sub>H<sub>28</sub>N<sub>6</sub>O.3HCl .xH<sub>2</sub>O**CAS No**23491-52-3 (2'-(4'-ethoxyphenyl)-5-(4-methylpiperazin-1-yl)-2,5'-bis-1H-benzimidazole  
trihydrochloride trihydrate)**Chemical nature**

Monoconstituent substance.

Chemical Name	CAS No	Weight %	EC No	Classification (1272/2008)	REACH Registration Number
2'-(4'-ethoxyphenyl)-5-(4-methylpiperazin-1-yl)-2,5'-bis-1H-benzimidazole trihydrochloride trihydrate	23491-52-3	60 - 100	245-691-1	-	no data available

acetonitrile	75-05-8	1 - 5	200-835-2	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Eye Irrit. 2 (H319) Flam. Liq. 2 (H225)	no data available
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For the full text of the R-phrases mentioned in this Section, see Section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Move to fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water. Drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Protection of first-aiders</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

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

<b>Notes to physician</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

### 5.2. Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

### 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

<b>For non-emergency personnel</b>	Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

### 6.3. Methods and material for containment and cleaning up

**Methods for containment  
Methods for cleaning up**

Prevent further leakage or spillage if safe to do so.  
Clean contaminated surface thoroughly. Take up mechanically, placing in appropriate containers for disposal. Use personal protective equipment. Avoid dust formation. After cleaning, flush away traces with water.

**6.4. Reference to other sections**

See Sections 8 & 13 for additional information.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Remove and wash contaminated clothing before re-use. When using, do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Recommended storage temperature -20 °C.

**7.3. Specific end use(s)**

Use as a laboratory reagent.

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

<b>Occupational exposure limit values</b>					
<b>Chemical Name</b>	<b>European Union</b>	<b>United Kingdom</b>	<b>France</b>	<b>Spain</b>	<b>Germany</b>
acetonitrile	TWA 40 ppm TWA 70 mg/m <sup>3</sup> S*	STEL 60 ppm STEL 102 mg/m <sup>3</sup> STEL 15 mg/m <sup>3</sup> TWA 40 ppm TWA 68 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> Skin	TWA 40 ppm TWA 70 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> P*	TWA 40 ppm TWA 68 mg/m <sup>3</sup> S*	TWA: 20 ppm TWA: 34 mg/m <sup>3</sup> Skin Ceiling / Peak: 40 ppm Ceiling / Peak: 68 mg/m <sup>3</sup> Ceiling / Peak: 2 mg/m <sup>3</sup>  TWA: 2 mg/m <sup>3</sup> H*
<b>Chemical Name</b>	<b>Italy</b>	<b>Portugal</b>	<b>Netherlands</b>	<b>Finland</b>	<b>Denmark</b>
acetonitrile	TWA 20 ppm TWA 35 mg/m <sup>3</sup> Pelle*	TWA 20 ppm C(A4) P*	Huid* STEL 10 mg/m <sup>3</sup> TWA 34 mg/m <sup>3</sup> TWA 1 mg/m <sup>3</sup>	TWA 20 ppm TWA 34 mg/m <sup>3</sup> TWA 1 mg/m <sup>3</sup> STEL 40 ppm STEL 68 mg/m <sup>3</sup> STEL 5 mg/m <sup>3</sup> iho*	TWA 40 ppm TWA 70 mg/m <sup>3</sup> H*
<b>Chemical Name</b>	<b>Austria</b>	<b>Switzerland</b>	<b>Poland</b>	<b>Norway</b>	<b>Ireland</b>
acetonitrile	H* STEL 160 ppm STEL 280 mg/m <sup>3</sup> TWA 40 ppm TWA 70 mg/m <sup>3</sup>	SS-C** H* TWA 20 ppm TWA 34 mg/m <sup>3</sup> STEL 40 ppm STEL 68 mg/m <sup>3</sup>	TWA 70 mg/m <sup>3</sup> STEL 140 mg/m <sup>3</sup>	TWA 30 ppm TWA 50 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> S* STEL 45 ppm STEL 75 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA 40 ppm TWA 70 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> Skin

**8.2. Exposure controls****Appropriate engineering controls**

Showers, eyewash stations, and ventilation systems.

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

<b>Eye/face protection</b>	Tightly fitting safety goggles Face-shield
<b>Skin protection</b>	
<b>Hand protection</b>	Impervious gloves.
<b>Other</b>	Impervious clothing. Impervious gloves. Boots. Chemical resistant apron.
<b>Respiratory protection</b>	In case of inadequate ventilation wear respiratory protection.
<b>Recommended filter:</b>	Type AP3

**Environmental Exposure Controls**

No information available.

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

<b>Physical state</b>	Solid
<b>Appearance</b>	Powder
<b>Color</b>	Dark yellow
<b>Odor</b>	No information available
<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	1.7	@ 20 °C
<b>Melting point/freezing point</b>		No information available
<b>Initial boiling point and boiling range</b>		No information available
<b>Flash point</b>		No information available.
<b>Evaporation rate</b>		No information available
<b>Flammability (solid, gas)</b>		No information available
<b>Upper flammability limit</b>		No information available
<b>Lower flammability limit</b>		No information available
<b>Vapor pressure</b>		No information available
<b>Vapor density</b>		No information available
<b>Relative density</b>		No information available
<b>Solubility</b>	Soluble in water	25 mg/ml
<b>Partition coefficient: n-octanol/water</b>		No information available
<b>Autoignition temperature</b>		No information available
<b>Decomposition temperature</b>		No information available.
<b>Viscosity</b>		No information available
<b>Explosive properties</b>		No information available
<b>Oxidizing properties</b>		No information available

**9.2. Other information**

<b>Softening point</b>	No information available
<b>Molecular Weight</b>	561.93
<b>Solubility in other solvents</b>	No information available
<b>VOC content</b>	No information available
<b>Density</b>	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**

Exposure to air or moisture over prolonged periods.

**10.5. Incompatible materials**

Incompatible with oxidizing agents.

**10.6. Hazardous decomposition products**

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

## 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.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
acetonitrile	1327 mg/kg ( Rat )	1250 mg/kg ( Rabbit )	7500 ppm ( Rat ) 4 h

**Unknown Acute Toxicity** 95% of the mixture consists of ingredient(s) of unknown acute toxicity.

**Information on likely routes of exposure**

**Inhalation** Inhalation of dust in high concentration may cause irritation of respiratory system.  
**Eye contact** May cause irreversible damage to eyes.  
**Skin contact** Irritating to skin.  
**Ingestion** Harmful if swallowed.

**Symptoms** No information available.  
**Skin corrosion/irritation** Irritating to skin.  
**Serious eye damage/eye irritation** Risk of serious damage to eyes.  
**Sensitization** May cause sensitization of susceptible persons.  
**Mutagenic effects** No information available.  
**Carcinogenic effects** No information available.  
**Reproductive toxicity** No information available.  
**STOT - single exposure** Respiratory system.  
**STOT - repeated exposure** No information available.  
**Target Organ Effects** Central Vascular System (CVS), Central nervous system (CNS), Respiratory system, Kidney, Liver.  
**Aspiration Hazard** No information available.  
**Other information** No information available.

## SECTION 12: Ecological information

**12.1. Toxicity**

No information available.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
acetonitrile	-	LC50 1640 mg/L (Pimephales promelas) 96 h	EC50 5838 mg/L (Daphnia pulex) 18 h

**Unknown Aquatic Toxicity** 95 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

#### 12.2. Persistence and degradability

No information available.

#### 12.3. Bioaccumulative potential

**Bioaccumulation** Not likely to bioaccumulate.  
**Bioconcentration factor (BCF)** No information available.

Chemical Name	Octanol-Water Partition Coefficient
acetonitrile	-0.34

#### 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** Do not re-use empty containers.  
**Other information** According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. 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 Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards None  
 14.6 Special precautions for user None  
 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 Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated

14.5 Environmental hazards	None
14.6 Special precautions for user	None

**IATA**

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	None
14.6 Special precautions for user	None

**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	Complies
ENCS	-
IECSC	Complies
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**

H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H335 - May cause respiratory irritation

<b>Classification procedure:</b>	Expert judgment and weight of evidence determination.
<b>Issuing Date:</b>	2014-02-21
<b>Revision Date:</b>	2018-04-10

**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.