



Safety Data Sheet (SDS) According to the REACH Regulation (EC) No. 1907/2006
Issuing Date: 2014-02-19 Revision Date: 2015-06-10

Version: 1

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

1.1. Product identifier

Product number 13550
Product name CCCP
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
dimethyl sulfoxide (60-100)	Not Listed	67-68-5

Other means of identification 13550M, 13550S

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

Identified uses This product is intended for research purposes only.
Uses advised against This product is not intended for use in diagnostic procedures or therapeutics.
This product is not intended for use in humans or animals.

1.3. Details of the supplier of the safety data sheet

Importer	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
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

Skin corrosion/irritation	Category 2 (H315)
Serious eye damage/eye irritation	Category 2 (H319)

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

Directives 67/548/EEC and 1999/45/EC

Symbol(s) Xi - Irritant
R-phrases R36/38

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

2.2. Label elements



Signal word
Warning

Hazard statement(s)

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary statement(s)

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P362 - Take off contaminated clothing and wash before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

None required for material as supplied

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature

Liquid solution containing an inorganic compound

Chemical Name	EC No	CAS No	Weight %	Classification (67/548)	Classification (1272/2008)	REACH Registration Number
[(3-chlorophenyl)hydrazono]malononitrile	209-103-7	555-60-2	0.5-1.5	T; R23/24/25 Xi; R36/37/38	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	no data available
dimethyl sulfoxide	200-664-3	67-68-5	60-100	Xi; R36/38	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	no data available

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

General advice	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance. Do not breathe dust/fume/gas/mist/vapors/spray.
Inhalation	Move to fresh air. Consult a physician. If not breathing, give artificial respiration. Move to fresh air in case of accidental inhalation of vapors. Immediate medical attention is not required. If symptoms persist, call a physician. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Immediate medical attention is not required. If symptoms persist, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
Ingestion	Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. Clean mouth with water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician. If swallowed, do not induce vomiting - seek medical advice.
Protection of first-aiders	Use personal protective equipment.

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

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

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 Cool containers / tanks with water spray. Use: Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol-resistant foam.

Unsuitable Extinguishing Media No information available.

5.2. Special hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

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 Remove all sources of ignition. Use personal protective equipment. Take precautionary measures against static discharges. Heat, flames and sparks. Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Prevention of fire and explosion. A vapor suppressing foam may be used to reduce vapors. Try to prevent the material from entering drains or water courses. Do not allow material to contaminate ground water system. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low 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

Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. Dam up. Take precautionary measures against static discharges.

6.4. Reference to other sections

See Section 8 and 13 for further information.

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

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Prevent the formation of vapors, mists and aerosols. Do not eat, drink or smoke when using this product. There is a hazard associated with rags, paper or any other material used to remove spills which become soaked with product. Avoid accumulation of these: they are to be disposed off safely after use. Avoid static electricity build up with connection to earth. Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from open flames, hot surfaces and sources of ignition. When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from direct sunlight.

7.3. Specific end use(s)

Use as laboratory reagent (PROC15).

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

Occupational exposure limit values					
Chemical Name	European Union	United Kingdom	France	Spain	Germany
[(3-chlorophenyl)hydrazono] malononitrile		STEL 15 mg/m ³ TWA 5 mg/m ³ Skin	TWA 5 mg/m ³ P*		Skin Ceiling / Peak: 2 mg/m ³ TWA: 2 mg/m ³
dimethyl sulfoxide					Skin Ceiling / Peak: 100 ppm Ceiling / Peak: 320 mg/m ³ TWA: 50 ppm TWA: 160 mg/m ³
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
[(3-chlorophenyl)hydrazono] malononitrile			Huid* STEL 10 mg/m ³ TWA 1 mg/m ³	TWA 1 mg/m ³ STEL 5 mg/m ³ iho*	
dimethyl sulfoxide				TWA 50 ppm iho*	TWA 50 ppm TWA 160 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
[(3-chlorophenyl)hydrazono] malononitrile		H*		TWA 5 mg/m ³ S* STEL 10 mg/m ³	TWA 5 mg/m ³ Skin
dimethyl sulfoxide	H* TWA 50 ppm TWA 160 mg/m ³	H* TWA 50 ppm TWA 160 mg/m ³ STEL 100 ppm STEL 320 mg/m ³			

8.2. Exposure controls**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.

Eye/face protection	Tightly fitting safety goggles.
Skin protection	
Hand protection	Impervious gloves.
Other	Long sleeved clothing. Chemical resistant apron. Antistatic boots. Impervious gloves. Wear suitable protective clothing.
Respiratory protection	When using a mask or half mask :. (vapor). Respirator with a vapor filter (EN 141). Type A. (aerosol). Respirator with combination filter for vapor/particulate. Type A/P2. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.
Recommended filter	Type A

Environmental Exposure Controls

Do not allow material to contaminate ground water system.

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

Physical state	Liquid
Appearance	No information available
Color	Yellow
Odor	Sulphurous
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No information available
Melting point/freezing point	16 - 19 °C / 60.8 - 66.2 °F	
Initial boiling point and boiling range	189 °C / 372.2 °F	
Flash point	87 °C / 188.6 °F	Closed cup
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Upper flammability limit	42%	No information available
Lower flammability limit	3.5%	No information available
Vapor pressure	0.55 hPa	@ 20 °C
Vapor density	2.7	
Relative density	1.1 g/ml	
Solubility	Completely soluble	No information available
Partition coefficient: n-octanol/water	log Pow: -2.03	
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	No information available
Solubility in other solvents	No information available
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 ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization does not occur.
Hazardous reactions None under normal processing. Vapors may form explosive mixtures with air. 10.5. Incompatible materials.

10.4. Conditions to avoid

Heating in air.

10.5. Incompatible materials

Strong oxidizing agents. Acyl, aryl, and nonmetal halides. Boron compounds. Metal salts of oxoacids.

10.6. Hazardous decomposition products

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

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
[(3-chlorophenyl)hydrazone]malononitrile	= 100 mg/kg (Rat)	= 300 mg/kg (Rat)	= 0.5 mg/l (Rat) Dust/mist
dimethyl sulfoxide	14500 mg/kg (Rat)	40000 mg/kg (Rat)	-

ATEmix (oral) 5942 mg/kg
ATEmix (dermal) 17216 mg/kg
ATEmix (inhalation-dust/mist) 50 mg/l

Information on likely routes of exposure

Inhalation There is no data available for this product.
Eye contact Irritating to eyes.
Skin contact Irritating to skin. Components of this product may be absorbed into the body through the skin.
Ingestion There is no data available for this product.

Symptoms No information available.
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

No information available.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
dimethyl sulfoxide	EC50 12350 - 25500 mg/L (Skeletonema costatum) 96 h	LC50 40 g/L (Lepomis macrochirus) 96 h LC50 33 - 37 g/L (Oncorhynchus mykiss) 96 h LC50 34000 mg/L (Pimephales promelas) 96 h LC50 41.7 g/L (Cyprinus carpio) 96 h	EC50 7000 mg/L (Daphnia species) 24 h

Unknown Aquatic Toxicity 1% 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 No information available.
Bioconcentration factor (BCF) No information available.

Chemical Name	Octanol-Water Partition Coefficient
dimethyl sulfoxide	-2.03

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
[(3-chlorophenyl)hydrazono]malononitrile	Group III Chemical	-	-

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 may contain flammable or explosive vapours. Do not burn, or use a cutting torch on, the empty drum. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 Authorisation 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)	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
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

A chemical safety assessment has not been completed for this substance/mixture.

SECTION 16: Other information**Full text of R-Phrases referred to under Sections 2 and 3**

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed

R36/38 - Irritating to eyes and skin

R36/37/38 - Irritating to eyes, respiratory system and skin

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

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H335 - May cause respiratory irritation

Classification procedure: Expert judgment and weight of evidence determination.

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Reason for revision: not applicable.

Disclaimer

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