SAFETY DATA SHEET
CCCP REAGENT

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

1.1. Product identifier
Product name: CCCP REAGENT

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
Supplier:
Web: www.bio-rad-antibodies.com
Bio-Rad
Endeavour House
Langford Business Park
Kidlington
Oxford
OX5 1GE
antibody_safetydatasheets@bio-rad.com

Contact person: Technical Services Manager

1.4. Emergency telephone number
Emergency telephone: +1 7037415970 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards: Not Classified
Health hazards: Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319
Environmental hazards: Not Classified

Human health: This product is harmful if swallowed.

2.2. Label elements
Pictogram

Signal word: Warning
Hazard statements: H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
CCCP REAGENT

Precautionary statements
P261 Avoid breathing vapour/spray.
P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep 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.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P264 Wash hands/skin thoroughly after handling.

Contains
[(3-CHLOROPHENYL)HYDRAZONO]MALONONITRILE

Supplementary precautionary statements
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337 If eye irritation persists:
P362 Take off contaminated clothing.
P264 Wash hands/skin thoroughly after handling.

2.3. Other hazards
No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
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<th>DIMETHYL SULFOXIDE</th>
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<table>
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<td>Classification</td>
<td>Classification (67/548/EEC or 1999/45/EC)</td>
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<td>T;R23/24/25. Xi;R36/37/38.</td>
<td></td>
</tr>
</tbody>
</table>

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If throat irritation or coughing persists, proceed as follows. Get medical attention. Show this Safety Data Sheet to the medical personnel.
4.2. Most important symptoms and effects, both acute and delayed

Inhalation
Irritation of nose, throat and airway.

Ingestion
This product is harmful if swallowed.

Skin contact
Skin irritation.

Eye contact
May cause severe eye irritation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. Water spray, dry powder or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Specific hazards
No unusual fire or explosion hazards noted.

Hazardous combustion products
Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3. Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting
No specific firefighting precautions known.

Special protective equipment for firefighters
Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid inhalation of spray mist and contact with skin and eyes. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate.

6.2. Environmental precautions

Environmental precautions
Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Absorb spillage with non-combustible, absorbent material. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections
Wear protective clothing as described in Section 8 of this safety data sheet.
SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions: Avoid inhalation of vapours/spray and contact with skin and eyes. Avoid spilling. Avoid contact with skin and eyes. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions: Keep only in the original container. Store at specified temperature. Refer to product label.

7.3. Specific end use(s)
Specific end use(s): The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Protective equipment

Appropriate engineering controls: Provide adequate ventilation.

Eye/face protection: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection: Wear appropriate clothing to prevent any possibility of skin contact. Wear apron or protective clothing in case of contact.

Hygiene measures: Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

Respiratory protection: No specific recommendations.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance: Liquid.

Colour: Yellow.

Odour: No characteristic odour.

Melting point: 170°C

Initial boiling point and range: °C @ 7.2

Flash point: Not applicable.

Evaporation rate: Not determined.

Upper/lower flammability or explosive limits: Not applicable.
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Vapour pressure  Not determined.
Vapour density  Not determined.
Relative density  Not determined.
Solubility(ies)  Soluble in water.
Partition coefficient  Not determined.
Auto-ignition temperature  Not determined.
Decomposition Temperature  Not determined.
Viscosity  Not determined.
Explosive properties  Not determined.
Oxidising properties  Not determined.

9.2. Other information
Other information  None.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity  No data available.

10.2. Chemical stability
Stability  No data available.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions  Will not polymerise.

10.4. Conditions to avoid
Conditions to avoid  Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Other health effects  IARC Not Listed.
Acute toxicity - oral
Acute toxicity oral (LD₅₀ mg/kg)  14,500.0
Species  Rat
ATE oral (mg/kg)  10,000.0
Acute toxicity - dermal
Acute toxicity dermal (LD₅₀ mg/kg)  5,000.0
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Species

Rabbit

ATE dermal (mg/kg) 30,000.0

Acute toxicity - inhalation

ATE Inhalation (gases ppm) 10,000.0
ATE inhalation (vapours mg/l) 50.0
ATE inhalation (dusts/mists mg/l) 5.0

Skin corrosion/irritation

Human skin model test Not determined.

Extreme pH 7.2

Germ cell mutagenicity

Genotoxicity - in vitro Not determined.
Genotoxicity - in vivo Not determined.

Carcinogenicity

Carcinogenicity Not determined.

Reproductive toxicity

Reproductive toxicity - fertility Not determined.

Specific target organ toxicity - single exposure

STOT - single exposure Not determined.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not determined.

Aspiration hazard

Aspiration hazard Not determined.

General information

DMSO. May be absorbed through the skin. Knowledge about health hazard is incomplete.

Inhalation

May cause respiratory system irritation.

Ingestion

Harmful if swallowed.

Skin contact

Irritating to skin.

Eye contact

Vapour or spray in the eyes may cause irritation and smarting.

Route of exposure

Ingestion. Skin and/or eye contact

Toxicological information on ingredients.

DIMETHYL SULFOXIDE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 14,500.0

Species Rat

ATE oral (mg/kg) 14,500.0

Acute toxicity - dermal
CCCP REAGENT

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0
Species Rabbit
ATE dermal (mg/kg) 5,000.0

SECTION 12: Ecological Information

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish
LC₅₀, 96 hours: 34000 mg/l, Pimephales promelas (Fat-head Minnow)
LC₅₀, 96 hours: 35000 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hours: mg/l, Fish

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.
Partition coefficient Not determined.

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment No information available.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Road transport notes Not classified.
Rail transport notes Not classified.
Sea transport notes Not classified.
Air transport notes Not classified.

14.1. UN number

7/9
Not applicable.

14.2. UN proper shipping name
Not applicable.

14.3. Transport hazard class(es)
Not applicable.

14.4. Packing group
Not applicable.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory Information

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

Guidance
Workplace Exposure Limits EH40.
Approved Classification and Labelling Guide (Sixth edition) L131.
Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other information

General information
Only trained personnel should use this material.

Revision date
01/04/2019

Revision
5

Supersedes date
21/09/2018

SDS number
10479

Risk phrases in full
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.
R36/38 Irritating to eyes and skin.
R20 Harmful by inhalation.
R41 Risk of serious damage to eyes.
CCCP REAGENT

Hazard statements in full

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.