

SAFETY DATA SHEET

Version: 2.0 Date: 04th May 2021

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830




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1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier**
Product Name Functional Stability Reference Gel
Product Code A-3001-0028
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Identified Use(s) Use as a gel within MRI phantoms.
Uses Advised Against None known
- 1.3 Details of the supplier of the safety data sheet**
Company Identification Gold Standard Phantoms Limited
The Network Building
97 Tottenham Court Road
London
W1T 4TP
United Kingdom

Telephone +44 (0) 7816 453 283
E-Mail (competent person) info@goldstandardphantoms.com
- 1.4 Emergency telephone number**
Emergency Phone No. +44 (0) 7816 453 283
Languages spoken English

2. SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture Regulation (EC) No. 1272/2008 (CLP)**
Skin Sens. 1; H317
Carc. 1A; H350
Aquatic Chronic 3; H412
- 2.2 Label elements**
Product Name Functional Stability Reference Gel
Contains: Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1) and Manganese(II) chloride tetrahydrate
- Hazard Pictogram(s)

- Signal Word(s) DANGER
- Hazard Statement(s) H315: Causes skin irritation
H317: May cause an allergic skin reaction.
H412: Harmful to aquatic life with long lasting effects.
- Precautionary Statement(s) P201: Obtain special instructions before use.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P308+P311: IF exposed or concerned: Call a POISON CENTER/doctor.
- Supplemental information Not applicable

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2.3 Other hazards

None known

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard Statement(s)
Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H - isothiazol-3-one (3:1)	<0.01	55965-84-9	-	Not yet assigned in the supply chain	Acute Tox. 3; H301 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Acute Tox. 3; H331 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 (MFAC = 100) Specific Concentration Limit Eye Irrit. 2; H319: 0,06 % ≤ C < 0,6 % Skin Corr. 1B; H314: C ≥ 0,6 % Skin Irrit. 2; H315: 0,06 % ≤ C < 0,6 % Skin Sens. 1; H317: C ≥ 0,0015 %
Magnanese(II) chloride tetrahydrate	< 0.01	13446-34-9	-	Not yet assigned in the supply chain	Acute Tox 4; H302 Eye Irrit. 2; H319 Aquatic Chronix 2; H411

Note: For full text of H phrases see section 16.

4. SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid all contact. Contaminated clothing should be laundered before reuse.

Inhalation

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Call a POISON CENTER/doctor.

Skin Contact

IF ON SKIN: Wash with plenty of water. If irritation (redness, rash, blistering) develops, get medical attention.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops and persists, get medical attention.

Ingestion

Rinse mouth. Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. May cause cancer by inhalation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media

As appropriate for surrounding fire.

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5.2	Unsuitable extinguishing media Special hazards arising from the substance or mixture	Direct water jet may spread the fire. Product is not classified as flammable, but will burn on contact with flame or exposure to high temperature. Combustion may cause toxic fumes. (Carbon monoxide, Carbon dioxide).
5.3	Advice for fire-fighters	Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures	Caution - spillages may be slippery. Ensure operatives are trained to minimise exposures. Ensure suitable personal protection during removal of spillages. Eliminate sources of ignition. Shut off leaks if without risk. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid all contact. Ensure adequate ventilation.
6.2	Environmental precautions	Avoid release to the environment.
6.3	Methods and material for containment and cleaning up	Provided it is safe to do so, isolate the source of the leak. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Dispose of this material and its container as hazardous waste. Allow small spillages to evaporate provided there is adequate ventilation.
6.4	Reference to other sections	See Section: 8,13

7. SECTION 7: HANDLING AND STORAGE

7.1	Precautions for safe handling	Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. In case of inadequate ventilation wear respiratory protection. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid all contact. Do not ingest. Wear protective gloves/eye protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.
7.2	Conditions for safe storage, including any incompatibilities Storage temperature Incompatible materials	Keep container tightly closed. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Keep cool. Protect from sunlight.
7.3	Specific end use(s)	Keep away from: Strong reducing and oxidising agents. Amines. mercaptans. Use as a gel within MRI phantoms.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	Control parameters	
8.1.1	Occupational Exposure Limits	Users are advised to consider national Occupational Exposure Limits or other equivalent values.
	Not established	
8.1.2	Biological limit value	Not established.
8.1.3	PNECs and DNELs	Not established.
8.2	Exposure controls	
8.2.1	Appropriate engineering controls	Ensure adequate ventilation. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources.
8.2.2	Individual protection measures, such as personal protective equipment (PPE)	Keep good industrial hygiene. Wear appropriate personal protective equipment, avoid direct contact. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke at the work place. Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

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The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection



Wear eye protection with side protection (EN166).

Skin protection



Wear suitable chemical resistant protective gloves for frequent or prolonged operations tested to EN374 with an acceptable permeation test. Contaminated gloves should be carefully rinsed with water before reuse.

Respiratory protection



Respiratory protection is not necessary if room is well ventilated. In case of inadequate ventilation wear respiratory protection.

Thermal hazards

Not applicable

8.2.3 Environmental Exposure Controls

Avoid release to the environment.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Solid Gel, transparent
Odour	Not established
Odour threshold	Not established
pH	~7.8
Melting point/freezing point	Not established
Initial boiling point and boiling range	Not established
Flash point	Not established
Evaporation rate	Not established
Flammability (solid, gas)	Not flammable
Upper/lower flammability or explosive limits	Not established
Vapour pressure	Not established
Vapour density	Not established
Relative density	Not established
Solubility(ies)	Insoluble in water.
Partition coefficient: n-octanol/water	Not established
Auto-ignition temperature	Not established
Decomposition Temperature	Not established
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidising properties	Not oxidising

9.2 Other information

None known

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	None anticipated. Product is not classified as flammable, but will burn on contact with flame or exposure to high temperature. Hazardous polymerisation will not occur.
10.4 Conditions to avoid	Heat and direct sunlight. Keep container closed when not in use.
10.5 Incompatible materials	Keep away from: Strong reducing and oxidising agents. Amines. mercaptans.

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10.6 **Hazardous decomposition product(s)** Nitrogen oxides, Sulphur oxides, Hydrogen chloride
Combustion may cause toxic fumes. (Carbon monoxide, Carbon dioxide).

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

Acute toxicity - Inhalation

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

Acute toxicity - Skin Contact

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

Skin corrosion/irritation

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

Aspiration hazard

11.2 Other information

Based on available data, the classification criteria are not met.

Acute Toxicity Estimate Mixture Calculation: LD50 >2000 mg/kg bw/day

Acute Tox. 3; H301 Harmonised Classification

No data

Based on available data, the classification criteria are not met.

Acute Toxicity Estimate Mixture Calculation: LC50 >20 mg/l air

Acute Tox. 3; H331 Harmonised Classification

No data

Based on available data, the classification criteria are not met.

Acute Toxicity Estimate Mixture Calculation: LD50 >2000 mg/kg bw/day

Acute Tox. 3; H311 Harmonised Classification

No data

Based upon the available data, the classification criteria are not met.

Skin Corr. 1B; H314 Harmonised Classification

No data

SCL: Skin Corr. 1B; H314: C ≥ 0,6 % Skin Irrit. 2; H315: 0,06 % ≤ C < 0,6 %

Based upon the available data, the classification criteria are not met.

None.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

12.2 Persistence and degradability

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

12.3 Bioaccumulative potential

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

12.4 Mobility in soil

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects

Based upon the available data, the classification criteria are not met.

Estimated LC50 (Mixture): >100 mg/l.

Aquatic Acute 1; H400

No data

Aquatic Chronic 1; H410

No data

No data for the mixture as a whole.

CMIT is classified as being readily biodegradable, failing the 10 -day window and MIT is classified as being not readily biodegradable according to the criteria of the test, although significant biodegradation occurred.

No data for the mixture as a whole.

The substance has low potential for bioaccumulation.

Bioconcentration factor (BCF) : ≤ 54 (OECD 305E)

No data for the mixture as a whole.

The substance has high mobility in soil. Very soluble (Water)

Not classified as PBT or vPvB.

None known.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not allow to enter drains, sewers or watercourses. Dispose of this material and its container as hazardous waste. Disposal should be in accordance with local, state or national legislation.

14. SECTION 14: TRANSPORT INFORMATION

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

	ADR/RID	IMDG	IATA/ICAO
14.1 UN number	Not applicable	Not applicable	Not applicable
14.2 UN proper shipping name	Not applicable	Not applicable	Not applicable
14.3 Transport hazard class(es)	Not applicable	Not applicable	Not applicable

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14.4	Packing group	Not applicable	Not applicable	Not applicable
14.5	Environmental hazards	Not applicable	Not classified as a Marine Pollutant.	Not applicable
14.6	Special precautions for user	See Section: 2		
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable	Not applicable	Not applicable
14.8	Additional Information	None.		

15. SECTION 15: REGULATORY INFORMATION

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture			
15.1.1	EU regulations			
	Authorisations and/or Restrictions On Use	Not restricted		
15.1.2	National regulations	None known.		
15.2	Chemical Safety Assessment	A chemical safety assessment is not required under REACH.		

16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Not applicable – V1.0

References:

Harmonised Classification and Existing ECHA registration(s) for Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1) (CAS No. 55965-84-9) and Manganese(II) chloride tetrahydrate (CAS No. 13446-34-9)

Literature References:

1. Goodwin, F.J., R.W.R. Crevel, and A.W. Johnson., 1981, A comparison of three guinea-pig sensitization procedures for the detection of 19 reported human contact sensitizers., Contact Dermatitis. 7:248-258.

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830.

Classification of the substance or mixture according to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Skin Sens. 1; H317	Threshold Calculation
Skin Irrit. 2; H315	Summation Calculation
Aquatic Chronic 3; H412	Summation Calculation

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	PBT: Persistent, Bioaccumulative and Toxic
vPvB	vPvT: very Persistent and very Toxic

Hazard classification / Classification code:

Acute Tox. 3; Acute toxicity, Category 3
Acute Tox. 3; Acute toxicity, Category 3
Skin Corr. 1B; Skin corrosion/irritation, Category 1B
Skin Irrit. 2; Skin corrosion/irritation, Category 2
Eye Dam. 1; Eye damage, category 1
Skin Sens. 1; Skin Sensitisation, Category 1
Skin Sens. 1A; Skin Sensitisation, Category 1A
Eye Irrit. 2; Eye Irritation, Category 2
Acute Tox. 3; Acute toxicity, Category 3
Resp. Sens. 1; Respiratory sensitization, Category 1

Muta. 2; Germ cell mutagenicity, Category 2

Hazard Statement(s)

H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H317: May cause an allergic skin reaction.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341: Suspected of causing genetic defects.

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Carc. 1A; Carcinogenicity, Category 1A

Repr. 1B; Reproductive toxicity, Category 1B

STOT RE 1; Specific target organ toxicity — repeated exposure,
Category 1

Aquatic Acute 1; Hazardous to the aquatic environment, Acute, Category
1

Aquatic Chronic 1; Hazardous to the aquatic environment, Chronic ,
Category 1

Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic ,
Category 3

H350: May cause cancer. (Inhalation)

H360D: May damage the unborn child.

H372: Causes damage to organs through prolonged or repeated
exposure.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Gold Standard Phantoms Limited gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Gold Standard Phantoms Limited accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.