Version: 2.0 Date: 04th May 2021

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



# 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) <u>info@goldstandardphantoms.com</u>

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 According to Regulation (EC) No. 1272/2008 (CLP)

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	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



4.2

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.

**Most important symptoms and effects, both acute** May cause an allergic skin reaction. May cause cancer by inhalation. and delayed

4.3 Indication of any immediate medical attention and Treat sym

special treatment needed

Treat symptomatically.

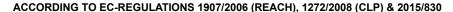
# 5. SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable Extinguishing media As appropriate for surrounding fire.

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Unsuitable extinguishing media

Special hazards arising from the substance or

mixture

5.2

5.3 Advice for fire-fighters 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).

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.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES** 6.

6.1 Personal precautions, protective equipment and

emergency procedures

6.2 **Environmental precautions** 

6.3 Methods and material for containment and cleaning

6.4 Reference to other sections 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.

Avoid release to the environment.

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.

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

7.3 Specific end use(s) 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.

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

Not established

Users are advised to consider national Occupational Exposure Limits or other equivalent values.

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 Not flammable Flammability (solid, gas) Upper/lower flammability or explosive limits Not established Not established Vapour pressure Vapour density Not established Relative density Not established Insoluble in water. Solubility(ies) Not established Partition coefficient: n-octanol/water Not established Auto-ignition temperature Not established **Decomposition Temperature** Not applicable Viscosity Explosive properties Not explosive Not oxidising Oxidising properties

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

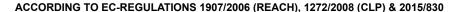
occur.

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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IATA/ICAO

10.6 Nitrogen oxides, Sulphur oxides, Hydrogen chloride Hazardous decomposition product(s)

Combustion may cause toxic fumes. (Carbon monoxide, Carbon dioxide).

#### 11. **SECTION 11: TOXICOLOGICAL INFORMATION**

11.1 Information on toxicological effects

> **Acute toxicity - Ingestion** Based on available data, the classification criteria are not met.

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

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Acute Tox. 3; H301 Harmonised Classification

Methyl-2H -isothiazol-3-one (3:1) No data

**Acute toxicity - Inhalation** Based on available data, the classification criteria are not met.

Acute Toxicity Estimate Mixture Calculation: LC50 >20 mg/l air Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Acute Tox. 3; H331 Harmonised Classification

Methyl-2H -isothiazol-3-one (3:1)

Acute toxicity - Skin Contact 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

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-

Methyl-2H -isothiazol-3-one (3:1)

Skin corrosion/irritation Based upon the available data, the classification criteria are not met.

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-

Methyl-2H -isothiazol-3-one (3:1)

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

Skin Corr. 1B; H314 Harmonised Classification

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

No data

11.2 Other information None.

#### 12. **SECTION 12: ECOLOGICAL INFORMATION**

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

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

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Aquatic Acute 1; H400

Methyl-2H -isothiazol-3-one (3:1) No data Aquatic Chronic 1; H410

No data

12.2 Persistence and degradability No data for the mixture as a whole.

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-CMIT is classified as being readily biodegradable, failing the 10 -day window and Methyl-2H -isothiazol-3-one (3:1) MIT is classified as being not readily biodegradable according to the criteria of the

test, although significant biodegradation occurred. 12.3 Bioaccumulative potential No data for the mixture as a whole.

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-The substance has low potential for bioaccumulation.

Bioconcentration factor (BCF) : ≤ 54 (OECD 305E) Methyl-2H -isothiazol-3-one (3:1)

12.4 Mobility in soil No data for the mixture as a whole.

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-The substance has high mobility in soil. Very soluble (Water)

Methyl-2H -isothiazol-3-one (3:1) Results of PBT and vPvB assessment 12.5 Not classified as PBT or vPvB.

12.6 Other adverse effects None known.

#### SECTION 13: DISPOSAL CONSIDERATIONS 13.

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'. VDB/BID IMDC

		ADN/NID	IIVIDG	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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14.4Packing groupNot applicableNot applicableNot applicable14.5Environmental hazardsNot applicableNot applicableNot classified as a<br/>Marine Pollutant.

14.6 Special precautions for user See Section: 2

14.7 Transport in bulk according to Annex II of MARPOL Not applicable Not applicable Not applicable

73/78 and the IBC Code

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 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:

15.1.2

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 PvB PBT: 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.

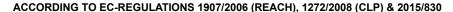
H334: May cause allergy or asthma symptoms or breathing difficulties if

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**

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