

ResistancePlus® MG FleXible Cartridge

Issuing Date: 03/07/2019

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1. Product Identifier**

Product Name: **ResistancePlus® MG FleXible Cartridge**
Catalogue Number: S2A-2000410
Part Number: 2000410-CART

1.2. Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Use(s) Laboratory use

1.3. Details of the Supplier of the Safety Data Sheet

Manufacturer SpeedX Pty. Ltd
Suite G16
National Innovation Centre
Australian Technology Park
4 Cornwallis Street
Eveleigh, NSW, 2015
Australia

Telephone (General) +61 (0)2 9209 4170

1.4. Emergency Telephone Number

Manufacturer International: +61 (0)2 9209 4169

SECTION 2. HAZARDS IDENTIFICATION**EU/EEC**

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

2.1 Classification of the Substance or Mixture

CLP The following SDS is for the final finished mixture product only as used in the laboratory. The product contains beads and reagents in the cartridge or in off-board containers. Exemptions for disclosing some component information are pursuant to CLP Article 1(5)(d) and 29 CFR 1910.1200(g)(2)(i)(C)(1)&(2).
Not classified

2.2 Label Elements¹²⁵**CLP****WARNING****Hazard Statements**

H302 – Harmful if swallowed.
EUH031 – Contact with acids liberates toxic gas.
H412 – Harmful to aquatic life with long lasting effects.

**Precautionary Statements
Prevention**

P264 – Wash thoroughly after handling.

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Response	P270 – Do not eat, drink or smoke when using this product. P301+312 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell.
Storage/Disposal	P330 – Rinse mouth. P501 – Dispose of contents/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards**CLP** According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.**UN GHS Revision 3 (Labeling Content Used on Products)****According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Third Revised Edition****2.1 Classification of the Substance or Mixture****UN GHS** Acute Toxicity Oral 5
Skin Mild Irritation 5
Eye Mild Irritation 2B**2.2 Label Elements****UN GHS****WARNING****Hazard Statements** May be harmful if swallowed
Causes mild skin irritation
Causes eye irritation**Precautionary Statements****Prevention** Wash thoroughly after handling.**Response** If skin irritation occurs: Get medical advice/attention.

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

If eye irritation persists: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

2.3 Other Hazards**UN GHS**

According to the Globally Harmonized System for Classification and Labeling (GHS) this product is considered hazardous.

United States (US)

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According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the Substance or Mixture

OSHA HCS 2012 Eye Mild Irritation 2B

2.2 Label Elements

OSHA HCS 2012

WARNING**Hazard Statements
Precautionary Statements**

Causes eye irritation

**Prevention
Response**

Wash thoroughly after handling.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

2.3 Other Hazards

OSHA HCS 2012

Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the Substance or Mixture

WHMIS Not classified

2.2 Label Elements

WHMIS No label element(s) required.

2.3 Other Hazards

WHMIS In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other Information

All other reagents, beads, and other constituents are at concentrations less than 1% in the mixture or not considered hazardous under US hazard communication regulations (29 CFR 1910.1200), EU directives for classification and labeling of substances or mixtures or the Global Harmonization System for classification and labeling of substances or mixtures.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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3.1 Substances

Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Guanidine thiocyanate	CAS:593-84-0 EINECS:209-812-1	15% TO 20%	NDA	EU CLP: Acute Tox. 5, H302; H313, H320 UN GHS Revision 3: Acute Tox. 5 (orl); Skin Irrit. 3; Eye Irrit. 2B; OSHA HCS 2012: Acute Tox. 5 (orl); Eye Irrit. 2B	NDA

SECTION 4. FIRST AID MEASURES**4.1 Description of First Aid Measures**

Inhalation First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Move victim to fresh air. Administer oxygen if breathing is difficult. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Give artificial respiration if victim is not breathing.

Skin First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. For minor skin contact, avoid spreading material on unaffected skin. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing.

Eye First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Obtain medical attention immediately if ingested.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Refer to Section 11 - Toxicological Information.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to Physician All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5. FIRST AID MEASURES**5.1 Extinguishing Media**

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Suitable Extinguishing Media	LARGE FIRES: Dry chemical, CO ₂ , alcohol-resistant foam or water spray. SMALL FIRES: Dry chemical, CO ₂ or water spray.
Unsuitable Extinguishing Media	No data available

5.2 Special Hazards Arising from the Substance or Mixture

Unusual Fire and Explosion Hazards	May emit toxic vapors of carbon oxides, sulfur oxides, nitrogen oxides.
Hazardous Combustion Products	No data available

5.3 Advice for Firefighters

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Wear positive pressure self-contained breathing apparatus (SCBA).

SMALL FIRES: Move containers from fire area if you can do it without risk.

SECTION 6. ACCIDENTAL RELEASE MEASURES**6.1 Personal Precautions, Protective Equipment and Emergency Procedures****Personal Precautions**

In the event a cartridge is broken these personal precautions are applicable. Wear appropriate protective clothing. Do not walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate enclosed areas.

Emergency Procedures

No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended.

6.2 Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and Material for Containment and Cleaning Up**Containment/
Clean-up Measures**

For small spills, wear gloves and absorb spill with paper towel. Do not dispose spilled materials down drain.

6.4 Reference to Other Sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

SECTION 7. HANDLING and STORAGE**7.1 Precautions for Safe handling
Handling**

No special handling necessary. If cartridge is broken avoid contact with spilled reagents.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

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Storage

Store according to product labeling. Keep away from incompatible materials. Store locked up. Keep container/package tightly closed in a cool, well-ventilated place.

7.3 Specific End Use(s)

Refer to Section 1.2 - Relevant identified uses.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control Parameters**

Exposure Limits/Guidelines		
	Result	OSHA
Guanidine thiocyanate	TWAs	5 mg/m ³ TWA (as CN) <i>as Cyanide compounds</i>

8.2 Exposure Controls**Engineering Measures/Controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal Protective Equipment
Respiratory**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

Wear chemical splash safety goggles.

Skin/Body

Wear protective clothing

Environmental Exposure Controls

Follow best practice for site management and disposal of waste.

Key to abbreviations

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

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SECTION 9. PHYSICAL and CHEMICAL PROPERTIES**9.1 Information on Physical and Chemical Properties**

Material Description			
Physical Form	Liquid	Appearance/Description	Reagents are clear, colorless liquids with no odor which are primarily buffered in aqueous solutions.
Color	Clear	Odor	Odorless
Odor Threshold	Data lacking		
General Properties			
Boiling Point	100 °C(212 °F)	Melting Point/Freezing Point	0 °C(32 °F)
Decomposition Temperature	Data lacking	pH	3.5 to 8.8
Specific Gravity/Relative Density	Data lacking	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
	360 to 560 °F (182.2222 to 293.3333 °C) (Binding reagent)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition Coefficient	Data lacking		

9.2 Other Information

No additional physical and chemical parameters noted.

SECTION 10. STABILITY and REACTIVITY**10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability

Stable

10.3 Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

10.4 Conditions to Avoid

Incompatible materials. Heat contact with acids or bleach may liberate very toxic gas.

10.5 Incompatible Materials

Acids, oxidizing agents.

10.6 Hazardous Decomposition Products

Carbon oxides, sodium oxides, hydrogen cyanide.

SECTION 11. TOXICOLOGICAL INFORMATION
11.1 Information on Toxicological Effects

Components		
Guanidine thiocyanate (15% TO 20%)	593-84-0	Acute Toxicity: Intraperitoneal-Mouse LD50 • 300 mg/kg

GHS Properties	Classification
Acute Toxicity	EU/CLP•Data lacking UN GHS 3•Acute Toxicity - Oral 5 - ATEmix (oral) = 2965 mg/kg OSHA HCS 2012•Data lacking
Skin Corrosion/Irritation	EU/CLP•Data lacking UN GHS 3•Skin Mild Irritation 3 OSHA HCS 2012•Data lacking
Serious Eye Damage/Irritation	EU/CLP•Data lacking UN GHS 3•Eye Mild Irritation 2B OSHA HCS 2012•Eye Mild Irritation 2B
Skin Sensitization	EU/CLP•Data lacking UN GHS 3•Data lacking OSHA HCS 2012•Data lacking
Respiratory Sensitization	EU/CLP•Data lacking UN GHS 3•Data lacking OSHA HCS 2012•Data lacking
Aspiration Hazard	EU/CLP•Data lacking UN GHS 3•Data lacking OSHA HCS 2012•Data lacking
Carcinogenicity	EU/CLP•Data lacking UN GHS 3•Data lacking OSHA HCS 2012•Data lacking
Germ Cell Mutagenicity	EU/CLP•Data lacking UN GHS 3•Data lacking OSHA HCS 2012•Data lacking
Toxicity for Reproduction	EU/CLP•Data lacking UN GHS 3•Data lacking OSHA HCS 2012•Data lacking
STOT-SE	EU/CLP•Data lacking UN GHS 3•Data lacking OSHA HCS 2012•Data lacking
STOT-RE	EU/CLP•Data lacking UN GHS 3•Data lacking OSHA HCS 2012•Data lacking

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Potential Health Effects**Inhalation****Acute (Immediate)**

May cause irritation.

Chronic (Delayed)

No data available

Skin**Acute (Immediate)**

Causes skin irritation.

Chronic (Delayed)

No data available

Eye**Acute (Immediate)**

Causes eye irritation.

Chronic (Delayed)

No data available

Ingestion**Acute (Immediate)**

Harmful if swallowed.

Chronic (Delayed)

No data available

Key to abbreviations

LD = Lethal Dose

SECTION 12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Material data lacking.

12.2 Persistence and Degradability

Material data lacking.

12.3 Bioaccumulative Potential

Material data lacking.

12.4 Mobility in Soil

Material data lacking.

12.5 Results of PBT and vPvB Assessment

No PBT and vPvB assessment has been conducted.

12.6 Other Adverse Effects

No studies have been found.

SECTION 13. DISPOSAL CONSIDERATIONS**13.1 Waste Treatment Methods**

Product Waste Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging Waste Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

13.2 Other Information

Biological specimens, including used cartridges, should be treated as capable of transmitting infectious agents. Consult your institution's environmental waste personnel on proper disposal of used cartridges and unused reagents. This material may exhibit characteristics of federal EPA Resource Conservation and Recovery Act (RCRA) hazardous waste requiring specific disposal requirements. Check state and local regulations as they may differ from federal disposal regulations. Institutions outside the USA should check their country hazardous waste disposal requirements. Australia regulation of waste disposal will be in accordance to Hazardous Waste (Regulation of Exports and Imports) Act 1989.

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SECTION 14. TRANSPORT INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(es)	14.4 Packing Group	14.5 Environmental Hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special Precautions for User

None specified.

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Data lacking.

SECTION 15. REGULATORY INFORMATION
15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture
SARA Hazard Classifications Acute

Component	CAS	Inventory				
		Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Guanidine thiocyanate	593-84-0	Yes	No	Yes	No	Yes

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Canada
Labor
Canada - WHMIS - Classifications of Substances

•Guanidine thiocyanate 593-84-0 Not Listed

Canada - WHMIS - Ingredient Disclosure List

•Guanidine thiocyanate 593-84-0 Not Listed

Environment
Canada - CEPA - Priority Substances List

•Guanidine thiocyanate 593-84-0 Not Listed

United States
Labor
U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

•Guanidine thiocyanate 593-84-0 Not Listed

Environment
U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

•Guanidine thiocyanate 593-84-0 Not Listed

United States - California
Environment
U.S. - California - Proposition 65 - Carcinogens List

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

•Guanidine thiocyanate 593-84-0 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

•Guanidine thiocyanate 593-84-0 Not Listed

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

SECTION 16. OTHER INFORMATION**Relevant Phrases
(code & full text)****Disclaimer/****Statement of Liability**

The above information is based on data available to us and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it must make their own determination of the effects, properties, protections, and disposal which pertain to their particular conditions. No representation, warranty, or guarantee, express or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the materials, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material. The above information is offered in good faith and with the belief that it is accurate. As of the date of issuance, we are providing all information relevant to the foreseeable handling of the material. However, in the event of an adverse incident associated with this product, this Safety Data Sheet is not, and is not intended to be, a substitute for consultation with appropriately trained personnel.

Key to abbreviations

NDA = No data available

END DOCUMENT