

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

1.1. Product identifier

Product form : Article
 Product name. : GlobalFiler® Express and NGMSElect™ Express cartridges

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

Use of the substance/preparation : Biological Analysis

1.3. Details of the supplier of the safety data sheet

IntegenX, Inc.
 5720 Stoneridge Drive, Suite 300
 Pleasanton, CA 94588
www.integenx.com

1.4. Emergency telephone number

Emergency number : 925-701-3400

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Product is a plastic cartridge which contains liquid. As manufactured, the product is an article and is not classified according to GHS. The following classification is for the liquid in the cartridge:

OSHA Hazards

Flammable liquid, Target Organ Effect

Target Organs

Nerves, Liver, Heart

GHS-US classification

Acute aquatic toxicity (Category 3)
 Acute toxicity, Oral (Category 4)
 Flammable liquid (Category 2)
 Serious eye damage (Category 1)
 Skin corrosion (Category 1C)
 Skin irritation (Category 2)
 Eye irritation (Category 2B)
 Specific target organ toxicity – single exposure (Category 3)

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) : 

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapour
 H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H402 - Harmful to aquatic life

Safety Data Sheet

Precautionary statements (GHS-US)	H412 - Harmful to aquatic life with long lasting effects : P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking P233 - Keep container tightly closed P240 – Ground/bond container and receiving equipment P241 – Use explosion-proof electrical/ventilation/lighting/.../equipment P242 – Use only non-sparking tools P243 – Take precautionary measures against static discharge P260 – Do not breathe dust/fume/gas/mist/vapours/spray P264 - Wash thoroughly after handling P270 – Do not eat, drink or smoke when using this product P273 – Avoid release to the environment P280 - Wear protective gloves/ protective clothing/ eye protection P301+P312 – IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower 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 P308+P313 - IF exposed or concerned: Get medical advice/ attention P310 – Immediately call a POISON Control center or doctor/ physician P330 – Rinse mouth P363 – Wash contaminated clothing before reuse P370+P378 - In case of fire: Use extinguishing media appropriate for surrounding fire for extinction P403+P235 – Store in a well ventilated place. Keep cool P405 – Store locked up
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2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Guanidinium Thiocyanate	(CAS No.) 593-84-0	28-41
Ethanol	(CAS No.) 64-17-5	27

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	: Show this safety data sheet to the doctor in attendance.
First-aid measures after inhalation	: If inhaled, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Remove contaminated clothes immediately. Wash with plenty of soap and water. Consult a physician.
First-aid measures after eye contact	: Rinse thoroughly with water for 15 minutes. Consult a physician.

Safety Data Sheet

First-aid measures after ingestion : Do not induce vomiting. Rinse mouth with water. Consult a physician

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

May cause respiratory tract irritation. May cause eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : None known.

Reactivity : None.

Hazardous decomposition products : Carbon oxides, nitrogen oxides (NO_x), Sulfur oxides

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Wear respiratory protection. Ventillate area. Avoid breathing gas, mist and vapors

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Do not allow product to enter drains.

6.3. Methods and material for containment and cleaning up

For containment : No special measures required.

Methods for cleaning up : Wipe/soak up with an absorbent material and place in a suitable container for proper disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with eyes, skin and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a cool, dry, well-ventillated place. Avoid heat.

7.3. Specific end use(s)

No additional information available

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

Ethanol (CAS 64-17-5)		
USA ACGIH	ACGIH STEL (ppm)	1000 ppm
USA IDLH	US IDLH (ppm)	3300 ppm (10% LEL)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1900 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

8.2. Exposure controls

Appropriate engineering controls	: None required under normal product handling conditions.
Hand protection	: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Eye protection	: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin and body protection	: Wear impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	: None required under normal product handling conditions.

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

Physical state	: Liquid enclosed in a plastic cartridge.
Appearance	: Liquid enclosed in plastic cartridge.
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available

Safety Data Sheet

Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

None.

10.2. Chemical stability

The product is stable at normal handling- and storage conditions.

10.3. Possibility of hazardous reactions

Vapors may form explosive mixture with air.

10.4. Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Strong acids, strong oxidizing agents, cyanides, alkali metals, ammonia, peroxides

10.6. Hazardous decomposition products

Carbon oxides, nitrogen oxides (NO_x), sulfur oxides, hydrogen cyanide, ammonia

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Safety Data Sheet

Ethanol (CAS 64-17-5)	
LD50 oral rat	7060 mg/kg
LC50 inhalation rat (mg/l)	124.7 mg/l (Exposure time: 4 h)
Guanidinium Thiocyanate (CAS 593-84-0)	
LD50 Oral - rat	593 mg/kg
LD50 Intraaperitoneal - mouse	300 mg/kg

Skin corrosion/irritation	: Causes skin irritation. (Skin-rabbit-irritating to skin – 24 h)
Serious eye damage/irritation	: Causes eye irritation. (Eyes-rabbit-mild eye irritation – 24 h – Draize Test)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer. (As ethanol in alcoholic beverages) (Carcinogenicity – mouse – oral)

Ethanol (CAS 64-17-5)	
IARC group	1 (As ethanol in alcoholic beverages)
National Toxicity Program (NTP) Status	1 (As ethanol in alcoholic beverages)

Reproductive toxicity	: Reproductive toxin (As ethanol in alcoholic beverages) Reproductive toxicity - human - female - oral (As ethanol in alcoholic beverages)
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: No data available
Aspiration hazard	: No data available

SECTION 12: Ecological information

12.1. Toxicity

Ethanol (CAS 64-17-5)	
LC50 fish 1	12.0 - 16.0 mL/L (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	9,268 - 14,221 mg/L (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	> 100 mg/L (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	10,800 mg/lL(Exposure time: 24 h - Species: Daphnia magna)
Guanidinium Thiocyanate (CAS 593-84-0)	
EC50 Daphnia	42.4 mg/L - 48 h
LC50 Poecilia reticulata	89.1 mg/L - 96 h

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ethanol (CAS 64-17-5)	
Log Pow	-0.32

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

In accordance with DOT / ADR / RID / ADNR / IMDG / ICAO / IATA

14.1.DOT (US)

Qualifies as an excepted quantity if packaged per 49 CFR 173.4

14.2 IMDG

Qualifies as an excepted quantity if packaged per IMDG 3.5

14.3 IATA

Qualifies as an excepted quantity if packaged per IATA DGR 2.6

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Ethanol (CAS 64-17-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Ethanol (CAS 64-17-5)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class B Division 2 - Flammable Liquid

15.3. US State regulations

Ethanol (CAS 64-17-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	Yes			

Safety Data Sheet

Ethanol (CAS 64-17-5)

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Hawaii - Occupational Exposure Limits - TWAs
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Maine - Chemicals of High Concern
U.S. - Massachusetts - Allowable Ambient Limits (AALs)
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Threshold Effects Exposure Limits (TEELs)
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour
U.S. - Oregon - Permissible Exposure Limits - TWAs
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - City of Austin - Aerosol Paint and Glue Restrictions
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs

Guanidinium Thiocyanate (CAS 593-84-0)

U.S. - Massachusetts - Right To Know List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

No additional information available

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.