



Giant Mine Remediation Project
PO Box 1500
Yellowknife, NT X1A 2R3

MV2012L8-0010

May 9, 2018

Tim Morton
Resource Management Officer
Indigenous and Northern Affairs Canada
4923 52nd Street
Yellowknife, NT X1A 2R3

Re: GENERAL NOTIFICATION OF ALTERNATE DUST SUPPRESSANT FOR C5-09 STOPE BACKFILLING AT GIANT MINE

Dear Mr. Morton:

The Giant Mine Remediation Project is providing notification for the use of an alternate dust suppressant, Gorilla-Snot. This product is a synthetic vinyl co-polymer that is similar to the currently approved dust suppressant used on site on the tailings containment areas. This product will be used in areas where dust suppression is required in relation to the C5-09 stope backfilling work. This work is being completed under the Mackenzie Valley Land and Water Board Water Licence MV2012L8-0010 and Land Use Permit MV2016S0016. The Material Safety Data Sheets for this alternate product is attached.

Should you have any questions or require any clarification regarding the information in this application, please contact the undersigned by telephone at (867) 669-2775 or by email at Katherine.Harris2@canada.ca.

Sincerely,

Katherine Harris
Regulatory Manager
Indigenous and Northern Affairs Canada
Giant Mine Remediation Project

CC: Devin Penney, Resource Management Officer, INAC, Northwest Territories
Tyree Mullaney, Regulatory Specialist, MVLWB, Northwest Territories

GORILLA-SNOT[®] SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION

PRODUCT NAME	GORILLA-SNOT[®] Soil Stabilizer & Dust Control Agent
CHEMICAL FAMILY	Synthetic Copolymer Dispersion
MANUFACTURER	Soilworks[®], LLC – Soil Stabilization & Dust Control 7580 N Dobson Rd, Ste 320 Scottsdale, Arizona 85256 USA (800) 545-5420 USA +1 (480) 545-5454 International info@soilworks.com www.soilworks.com
EMERGENCY PHONE NUMBERS	(800) 545-5420 USA +1 (480) 545-5454 International
U.S. DATA UNIVERSAL NUMBERING SYSTEM (DUNS NUMBER)	Soilworks, LLC 131946159
U.S. DEPARTMENT OF DEFENSE COMMERCIAL AND GOVERNMENT ENTITY CODE (CAGE CODE)	Soilworks, LLC 3FTH5
U.S. DEPARTMENT OF DEFENSE NATIONAL STOCK NUMBERS (NSN)	275-gallon (1,041 Liter) Intermediate Bulk Container (IBC) Tote 6850-01-542-5389 55-gallon (208 Liter) Drum 6850-01-542-3712
U.S. GENERAL SERVICES ADMINISTRATION (GSA) CONTRACT	Soilworks, LLC GS-07F-5364P October 31, 2018

SYNONYMS/OTHER MEANS OF IDENTIFICATION

Gorilla-Snot is a formulated, high molecular weight, engineered, prime synthetic copolymer dispersion.

INTENDED USES

For industrial use only. Major industries include construction, mining, military, municipal, oil & gas, energy & renewable energy and transportation.

Abate dust, air quality control, control dust, controlling dust, desertification prevention, dune stabilization, dust abatement, dust control, dust control agent, dust control material, dust control product, dust elimination, dust inhibitor, dust mitigation, dust palliative, dust pollution control, dust pollution prevention, dust prevention, dust reduction, dust retardant, dust stabilization, dust stabilizer, dust suppressant, dust suppression, eliminate dust, erosion control, erosion control material, erosion control product, erosion prevention, fines preservation, fugitive dust control, hydromulch tackifier, hydroseed tackifier, inhibit dust, mitigate dust, pm10 control, pm2.5 control, prevent dust, reduce dust, retard dust, road stabilization, road stabilizer, sand stabilization, soil additive, soil amendment, soil binder, soil crusting agent, soil solidifier, soil stabilization, soil stabilizer, stabilize dust, stabilize soil, stockpile capping, stop dust, suppress dust, surface wear course, wind erosion control.

SECTION 2 – HAZARDS IDENTIFICATION

Emergency Overview

Appearance:	Milky white liquid (transparent once cured)
Odor:	Sweet and mild (no odor once cured)
Health Hazards:	Under normal conditions of industrial use, this material is NOT expected to be a primary route of exposure
Safety Hazards:	Nonflammable
Environmental Hazards:	NOT classified as dangerous for the environment

HEALTH HAZARDS

INHALATION	Under normal conditions of industrial use, this material is NOT expected to be a primary route of exposure
SKIN CONTACT	Under normal conditions of industrial use, this material is NOT expected to be a primary route of exposure
EYE CONTACT	Under normal conditions of industrial use, this material is NOT expected to be a primary route of exposure
INGESTION	Under normal conditions of industrial use, this material is NOT expected to be a primary route of exposure

GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)

Not a hazardous substance or mixture

U.S. HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) RATING

Health	0	No significant risk to health
Flammability	0	Material will not burn
Physical Hazard	0	Stable, non-reactive and non-explosive
Personal Protection	-	No special hazard under normal use

SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

This material does NOT contain hazardous ingredients and is NOT considered hazardous according to OSHA criteria.

#	COMPONENT	%	CAS Number
1.	Synthetic Vinyl Copolymer Dispersion	60-20%	Non-Hazardous
2.	Water	40-80%	7732-18-5

SECTION 4 – FIRST-AID MEASURES

Provide medical care provider with this Safety Data Sheet.

EYE CONTACT

If irritation or redness develops from exposure, flush eyes with clean water. If irritation persists, seek medical attention.

SKIN CONTACT

No treatment necessary under normal conditions of use. Remove contaminated clothing. Wash affected area with mild soap and water. If irritation or redness develops and persists, seek medical attention.

INHALATION

No treatment necessary under normal conditions of use. If breathing difficulties develop move victim away from source of exposure and into fresh air in a position comfortable for breathing. If symptoms persist, seek medical attention.

INGESTION

If swallowed do not induce vomiting. If symptoms persist, seek medical attention.

SECTION 5 – FIRE-FIGHTING MEASURES

FLAMMABILITY

Nonflammable and NOT combustible
This material is an aqueous mixture that will not burn
Dried material will burn in a fire

FLASH POINT

Nonflammable

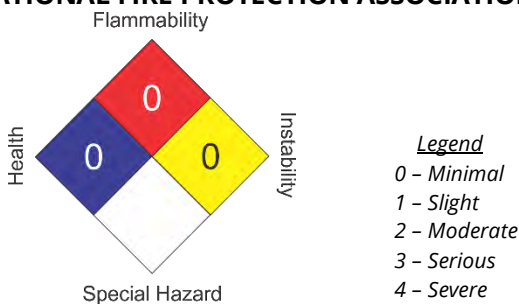
EXTINGUISHING MEDIA

Use water spray, foam, dry chemical or carbon dioxide

SPECIAL FIRE FIGHTING PROCEDURES & PROTECTIVE EQUIPMENT

Cool closed containers exposed to fire with water spray. Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

U.S. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 704 HAZARD CLASS



SECTION 6 – ACCIDENTAL RELEASE MEASURES

For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

PROTECTIVE MEASURES

Stop the leak, if possible. Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches, sewers, rivers or open bodies of water by using sand, earth or other appropriate barriers.

CLEAN-UP METHODS

Avoid accidents, clean up immediately. Slippery when spilled. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

ADDITIONAL ADVICE

Local authorities should be advised if significant spillages cannot be contained.

SECTION 7 - HANDLING AND STORAGE

GENERAL PRECAUTIONS

Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

STORAGE

Keep container tightly closed in a cool, well-ventilated place. Use properly labelled and closeable containers. Maintain storage temperature ≥ 40 °F (4 °C) to avoid freezing and destabilization. Ideal storage temperature is 72 °F (22 °C).

HANDLING

Avoid breathing vapors or mist. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. When handling material in drums, safety footwear should be worn and proper handling equipment should be used.

RECOMMENDED MATERIALS

For containers or container linings, use mild steel or high density polyethylene.

ADDITIONAL INFORMATION

Do not freeze.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

Contains no substances with occupational exposure limit values.

EXPOSURE CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

RESPIRATORY PROTECTION

Respiratory protection is NOT required under normal conditions of use in a well-ventilated workplace. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapors.

HAND PROTECTION

Where hand contact with the material may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed with soap and water and dried thoroughly.

EYE PROTECTION

Eye protection is NOT required under normal conditions of use. If material is handled such that it could be splashed into eyes, wear splash-proof safety goggles or full face shield.

PROTECTIVE CLOTHING

Skin protection is NOT required under normal conditions of use or for single, short duration exposures. For prolonged or repeated exposures, use impervious chemical resistant boots, gloves and/or aprons over parts of the body subject to exposure.

MONITORING METHODS

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT	>212 °F (>100 °C)
COLOR	Milky white (transparent once cured)
EVAPORATION RATE	<1 (BuAc = 1)
FLASH POINT	Nonflammable
FREEZING POINT	<32 °F (<0 °C)
ODOR	Sweet and mild (no odor once cured)
PH	4-9
PHYSICAL FORM	Liquid
SPECIFIC GRAVITY	1.02-1.10
VAPOR DENSITY	>1 (Air = 1)
WATER SOLUBILITY	100% dispersible, completely (until cured)

SECTION 10- STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable. Coagulation may occur following freezing, thawing or boiling.

CONDITIONS TO AVOID

Freezing (until cured)

HAZARDOUS REACTIONS

Hazardous polymerization does not occur

HAZARDOUS DECOMPOSITION

Hazardous decomposition products are NOT expected to form during normal storage

CORROSIVITY

Non-corrosive

SECTION 11 - TOXICOLOGICAL INFORMATION

CARCINOGENICITY

Components ≥0.1% are NOT known to be associated with carcinogenic effects.

ACGIH American Conference of Governmental Industrial Hygienists

Not listed as carcinogenic



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IARC	World Health Organization International Agency for Research on Cancer	Not listed as carcinogenic
NTP	U.S. National Toxicology Program	Not listed as carcinogenic
OSHA	U.S. Occupational Safety and Health Administration	Not listed as carcinogenic
Prop 65	California Office of Environmental Health Hazard Assessment Proposition 65	Not listed as carcinogenic

800.545.5420 USA
001.480.545.5454 international
www.soilworks.com

7580 N Dobson Rd, Suite 320
Scottsdale, AZ 85256 USA
info@soilworks.com

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY

NOT expected to be a hazard

SECTION 12 - ECOLOGICAL INFORMATION

Based on EPA guidelines, this material is classified as practically non-toxic to all species. When used and applied properly, this material is not known to pose any ecological problems.

OTHER ADVERSE EFFECTS

The material contains non-volatile components, which are NOT expected to be released to air in any significant quantities. The material is NOT expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

SECTION 13 - DISPOSAL CONSIDERATIONS

MATERIAL DISPOSAL

Recover or recycle if possible. Do NOT dispose into the environment, in drains or in water courses. To the best of our knowledge, this material does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.

CONTAINER DISPOSAL

Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

LOCAL LEGISLATION

Dispose in accordance with applicable regional, national and local laws and regulations.

SECTION 14 - TRANSPORT INFORMATION

NOT dangerous goods.

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

NOT regulated. This material is NOT subject to DOT regulations under 49 CFR Parts 171-180.

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

NOT regulated. This material is NOT classified as dangerous under IMDG regulations.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

NOT regulated. This material is either NOT classified as dangerous under IATA regulations or needs to follow country specific requirements.

SECTION 15 - REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

U.S. FEDERAL REGULATIONS

EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)

This material does NOT contain any chemicals with U.S. EPA CERCLA reportable quantities.

EPA SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA)

This material does NOT contain any chemicals with SARA reportable quantities.

EPA TOXIC SUBSTANCES CONTROL ACT (TSCA)

All components listed or in compliance with the inventory.

EPA CERCLA/SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES AND TPQS

This material does NOT contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

EPA CERCLA/SARA SECTION 311/312 (TITLE III HAZARD CATEGORIES)

Acute Health: No
Chronic Health: No
Fire Hazard: No
Pressure Hazard: No
Reactive Hazard: No

EPA CERCLA/SARA SECTION 313 AND 40 CFR 372

This material does NOT contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

CLEAN AIR ACT (CAA)

This material does NOT contain any hazardous air pollutants (HAP, as defined by the CAA Section 12 (40 CFR 61).

U.S. STATE REGULATIONS

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65)

This material does NOT contain any chemicals known to the State of California to cause cancer, birth defects or reproductive harm.

CANADIAN REGULATIONS

This material has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the regulations.

CANADIAN DOMESTIC SUBSTANCES LIST (DSL)

All components listed or in compliance with the inventory.

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHIMIS)

None. This material is NOT a controlled material under the Canadian WHIMIS.

INVENTORY REGULATIONS

Australia	AICS	All components listed or in compliance with the inventory.
Canada	DSL/NDSL	All components listed or in compliance with the inventory.
China	IECSC	All components listed or in compliance with the inventory.
Japan	ENCS	All components listed or in compliance with the inventory.



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Korea	KECI	All components listed or in compliance with the inventory.
Philippines	PICCS	All components listed or in compliance with the inventory.
United States	TSCA	All components listed or in compliance with the inventory.

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 001.480.545.5454 international
 www.soilworks.com

7580 N Dobson Rd, Suite 320
 Scottsdale, AZ 85256 USA
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INVENTORIES LEGEND

AICS	Australian Inventory of Chemical Substances
DSL	Canadian Domestic Substances List
ENCS	Japanese Existing and New Chemical Substances
IECSC	China Existing Chemical Inventory
KECI	Korea Existing Chemicals Inventory
NDSL	Canadian Non-Domestic Substances List
PICCS	Philippine Inventory of Chemicals and Chemical Substances
TSCA	Toxic Substances Control Act

SECTION 16 – OTHER INFORMATION

SDS VERSION NUMBER 1.3

SDS EFFECTIVE DATE 7/15/2015

SDS REGULATIONS

The content and format of this SDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SDS DISTRIBUTION

The information in this document should be made available to all who may handle the material.

DISCLAIMER

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE MATERIAL, THE SAFETY OF THIS MATERIAL, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the material, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the material for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

SOILWORKS®

Soil Stabilization & Dust Control



••• Global Leader in Mining Dust Control

Soilworks is the world's most trusted dust control solution partner for large-scale open pit and underground mining operations around the globe. From vast open wind-blown tailings impoundments and dam wall erosion, to dusty underground drifts, ribs and haul roads, Soilworks is known for its consistent and dependable top-performing solutions. Our extensive experience and patented, cutting-edge technologies provide the unique ability to solve the most difficult dust control challenges that impact each mine's profitability and safety. That's why Soilworks is globally responsible for supporting mines with the necessary confidence to improve operational safety, lower operating costs and most importantly, protect each miner's health.



Industry-leading underground haul road and mine tailings products

GORILLA-SNOT®



Gorilla-Snot is a synthetic copolymer dispersion engineered to control dust and erosion on mine tailings impoundments. The solution is typically applied to the tailings where it penetrates to create a light and durable surface crust. The surface crust remains water permeable for air and water, yet perfect for suppressing PM₁₀ and PM_{2.5} particulate matter to maintain air quality. Increased applications of Gorilla-Snot are highly effective for water erosion control to maintain the dam slope and bench stability and integrity. Gorilla-Snot's unique surface crust remains light and flexible yet strong and durable resulting in long-term performance capable of withstanding intense environmental conditions.

- Customized rates to last from months to years
- Controls erosion on dam slopes
- Customizable with pigments for color options
- Does not affect flotation process
- Does not rinse away with rain



DURASOIL®



The world's only patented, state-of-the-art synthetic dust suppression fluid; engineered to "wet out" any soil or aggregate for intense-use mining operations. Durasoil's unique water-insoluble properties create a long-term, re-workable and self-healing solution that coats and agglomerates particulates, weighing them down without evaporating or freezing. Its revolutionary, ultra-pure formulation is distinctively crystal clear, odorless and formulated to meet the highest standards of environmental efficacy.

- Non-Chloride / Non-Petroleum
- Non-Slippery once penetrated
- Applied "as-is", no water needed
- Non-corrosive to equipment
- Continuously re-workable / re-gradable

