

0002



Slurran XLS

Material Safety Data Sheet

SEC Investments Corp. LLC.

5700 N. Portland, Suite 301 / Oklahoma City, OK 73112 / Phone: (405) 947-0765 / Fax: (405) 947-0768

<u>SECTION 1 - PRODUCT INFORMATION</u>	
TRADE NAME:	Slurran XLS
SYNONYM:	NA
CHEMICAL FAMILY:	Watergel Slurry Explosive
FORMULA:	Mixture
CAS NUMBER:	None
UN/NA NUMBER:	UN0332
DOT HAZARD CLASS:	Explosive, Blasting, Type E, Class 1.5 D

<u>SECTION 2 - HEALTH ALERT</u>
DANGER - If misused or disposed of improperly, material could explode and cause death or serious injury.
DO NOT HANDLE WHEN IN DOUBT!!
See section VIII - Personal Protection
CHEM-TEL, INC. (800) 255-3924.

SECTION 3 - HEALTH HAZARD INFORMATION

EYE May cause moderate irritation.

SKIN: May cause moderate irritation characterized by redness and/or rash.

INHALATION: Inhalation of decomposed products may irritate the respiratory tract. Prolonged exposure to these fumes may result in respiratory difficulties (shortness of breath, etc.) and possibly more severe toxic effects.

INGESTION: Swallowing large quantities may cause toxicity characterized by dizziness, bluish skin coloration, methemoglobinemia, unconsciousness, abdominal spasms, nausea, and pain.

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with large amounts of water. Seek medical aid.

SKIN CONTACT: Remove contaminated clothing. Wash skin thoroughly with soap and water.

INHALATION: Remove from exposure. If breathing stops or is difficult, administer artificial respiration or oxygen. Seek medical aid.

INGESTION: Give 8-16 oz. of milk or water. Induce vomiting. Seek medical aid.

SECTION 5 - RECOMMENDED OCCUPATIONAL EXPOSURE LIMIT/ HAZARDOUS INGREDIENTS

EXPOSURE LIMIT (PRODUCT): None required for product.

<u>HAZARDOUS INGREDIENTS:</u>	<u>PERCENT</u>	<u>EXPOSURE LIMIT</u>	<u>CAS NO.</u>
Ammonium Nitrate	10 - 20	Not Listed	6484-52-2
Sodium Nitrate	10 - 20	10 mg/m ³ (nuisance dust)	7631-99-4
Ammonium Perchlorate	20 - 30	10 mg/m ³ (nuisance dust)	7790-98-9
Nitric Acid*	5 - 10	2 ppm (ACGIH TWA)	7697-37-2
Hexamine*	10 - 1 5	NONE	100-97-0

*React to form Hexaminedinitrate

NOTE: All ingredients are present in a gelled slurry matrix and individual hazard may not be present in this formulation.

SECTION 6 - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Heat (confinement); Stacking (burning).

INCOMPATIBILITY: Can react violently or explode, with reducing agents and organic materials. Avoid amines, strong alkalis & acids.

HAZARDOUS REACTION / DECOMPOSITION PRODUCTS: At high temperatures, especially >374 F, may emit severe toxic fumes of nitrogen oxides.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Not applicable.

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT & METHOD: NA

AUTO IGNITION TEMPERATURE: Explodes

FLAMMABLE LIMITS (% BY VOLUME/A.R.):

LOWER: NA **UPPER:** NA

EXTINGUISHING MEDIA: Water

FIRE-FIGHTING PROCEDURES: When explosive is burning, EVACUATE AREA. Avoid breathing vapor.

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SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION (cont.)

FIRE & EXPLOSION HAZARDS: Dangerous when exposed to heat or flame. Can support combustion of other materials involved in a fire and is capable of undergoing detonation if heated to high temperatures especially under confinement including being piled on itself in a burning fire. When heated to decomposition, highly toxic fumes may be emitted. Do not return to area of explosion until smoke and fumes have dissipated. Dry alkali or amine salts are explosive.

SECTION 8 - PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Safety goggles approved for the handling of explosives materials.

SKIN PROTECTION: Neoprene, natural rubber, polyethylene or polyvinyl chloride gloves. Use barrier creams, hand protection and protective clothing.

RESPIRATORY PROTECTION: Not normally required. Mechanical filter or supplied air type respirator as required for concentrations exceeding the occupational exposure limit.

VENTILATION: Maintain adequate ventilation. Use local exhaust if needed.

SECTION 9 - PERSONAL HANDLING INSTRUCTIONS

HANDLING: Explosives should not be abandoned at any location for any reason. Do not handle during electrical storms.

STORAGE: Store in a cool, dry, well-ventilated area remote from operations. Storage area should be of non-combustible construction. Organic materials, flammable substances and finely divided metals should be stored separately. Flames, smoking and unauthorized personnel are prohibited where this product is used or stored. Protect against physical damage, static electricity and lightning.

WARNING: Use of this product by persons lacking adequate training, experience and supervision may result in death or serious injury. Obey all Federal, State, and local laws / regulations applicable to transportation, storage, handling, and use of explosives.

DISTANCE: Always stay from area of explosion or disposal sites. Stay behind suitable barriers.

SECTION 10 - SPILL & LEAK PROCEDURES

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED (IN ADDITION, SEE SECTION 8): Isolate area. Eliminate ALL sources of ignition. Avoid skin contact. Scrape up. Remove soiled clothing.

WASTE DISPOSAL - USE APPROPRIATE METHOD(S): Disposal of unexploded or deteriorated explosives material can be hazardous. Expert assistance is positively recommended in destroying explosives. Accidents can be prevented by thorough planning and handling in accordance with approved methods. Consult your supervisor, or the nearest SEC Regional Office for assistance. If improperly disposed of, material could explode and cause death or serious injury.

In all cases, follow facility emergency response procedures. Contact Facility Environmental Manager for assistance. Report any discharge of oil or hazardous substance that may enter surface waters to the National Response Center (800) 424 - 8602.

Observe all applicable local, state, and federal environmental spill and water quality regulations.

SECTION 11 - PHYSICAL DATA

BOILING POINT:	NA	BULK DENSITY:	1.22 g/cc
MELTING POINT:	NA	%VOLATILE BY VOLUME:	NA
VAPOR PRESSURE:	NA	EVAPORATION RATE (ETHER=1):	NA
SOLUBILITY IN WATER:	Negligible with short-term exposure	DECOMPOSITION POINT:	200 C
APPEARANCE/ ODOR:	Odorless, gray/white gel		

SECTION 12 - COMMENTS

This product is classified as a Blasting Agent and need not be stored in a high explosive magazine, except where required by local regulations, as long as it is completely separate from any high explosives. Storage should be in a well constructed, well ventilated, dry structure located to conform to local, state, and federal regulations. The area surrounding an explosive magazine must be kept clear of combustible materials for a distance of 50 feet. Magazine floors and containers must be properly cleaned. Normal operating conditions are assumed unless otherwise stated. If any given information is not clear or does not apply to your situation, STOP, store the material suitably, and seek correct help from your supervisors, or the Institute of Makers of Explosives. Bureau of Alcohol, Tobacco, and Firearms regulations for explosive storage and handling should be consulted and complied with. Disposal sites must be clear of people at the time of disposal.

NOTICE: The data and recommendations presented herein are based upon data which are considered to be accurate. However, SEC makes no guarantee or warranty, either expressed or implied, of the accuracy or completeness of these data and recommendations. For more detailed information on the hazards of this product, contact the Regulatory Compliance Department at the address below

DetaCorp, PO Box 462, Columbus, Kansas 66724, (620) 597-2552

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Slurran XG

Material Safety Data Sheet

SEC Investments Corp. LLC.

5700 N. Portland, Suite 301 / Oklahoma City, OK 73112 / Phone: (405) 947-0765 / Fax: (405) 947-0768

SECTION 1 - PRODUCT INFORMATION		SECTION 2 - HEALTH ALERT	
TRADE NAME:	Slurran XG	DANGER - If misused or disposed of improperly, material could explode and cause death or serious injury. DO NOT HANDLE WHEN IN DOUBT!! **See section VIII - Personal Protection** CHEM-TEL, INC. (800) 255-3924.	
SYNONYM:	NA		
CHEMICAL FAMILY:	Watergel Slurry Explosive		
FORMULA:	Mixture		
CAS NUMBER:	None		
UN/NA NUMBER:	UN0332		
DOT HAZARD CLASS:	Explosive, Blasting, Type E, Class 1.5 D		

SECTION 3 - HEALTH HAZARD INFORMATION

EYE May cause moderate irritation.
SKIN: May cause moderate irritation characterized by redness and/or rash.
INHALATION: Inhalation of decomposed products may irritate the respiratory tract. Prolonged exposure to these fumes may result in respiratory difficulties (shortness of breath, etc.) and possibly more severe toxic effects.
INGESTION: Swallowing large quantities may cause toxicity characterized by dizziness, bluish skin coloration, methemoglobinemia, unconsciousness, abdominal spasms, nausea, and pain. Constituents can cause iodine uptake inhibition in the thyroid - this is not normally significant unless long term exposure at fairly high levels (not likely to occur in gel form) occurs. Avoid ingestion.

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with large amounts of water. Seek medical aid.
SKIN CONTACT: Remove contaminated clothing. Wash skin thoroughly with soap and water.
INHALATION: Remove from exposure. If breathing stops or is difficult, administer artificial respiration or oxygen. Seek medical aid.
INGESTION: Give 8-16 oz. of milk or water. Induce vomiting. Seek medical aid.

SECTION 5 - RECOMMENDED OCCUPATIONAL EXPOSURE LIMIT/ HAZARDOUS INGREDIENTS

EXPOSURE LIMIT (PRODUCT): None required for product.

HAZARDOUS INGREDIENTS:	PERCENT	EXPOSURE LIMIT	CAS NO.
Ammonium Nitrate	10 - 20	Not Listed	6484-52-2
Sodium Nitrate	10 - 20	10 mg/m3 (nuisance dust)	7631-99-4
Ammonium Perchlorate	20 - 30	10 mg/m3 (nuisance dust)	7790-98-9
Nitric Acid*	5 - 10	2 ppm	7697-37-2
Hexamine*	10 - 15	10 mg/m3 (nuisance dust)	100-97-0
Micro-balloons	<5%	TWA as dust - 10mg/m3	65997-17-3

*React to form Hexaminedinitrate

NOTE: All ingredients are present in a gelled slurry matrix and individual hazard may not be present in this formulation.

SECTION 6 - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Heat (confinement); Stacking (burning).
INCOMPATIBILITY: Can react violently or explode, with reducing agents and organic materials. Avoid amines, strong alkalis & acids. **HAZARDOUS REACTION / DECOMPOSITION PRODUCTS:** At high temperatures, especially >374 F, may emit severe toxic fumes of nitrogen oxides.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Not applicable.

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT & METHOD: NA
FLAMMABLE LIMITS (% BY VOLUME/AIR): LOWER: NA UPPER: NA
EXTINGUISHING MEDIA: Water
AUTO IGNITION TEMPERATURE: Explodes

Slurran XG

Material Safety Data Sheet

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION (cont.)

FIRE-FIGHTING PROCEDURES: When explosive is burning, EVACUATE AREA. Avoid breathing vapor.
FIRE & EXPLOSION HAZARDS: Dangerous when exposed to heat or flame. Can support combustion of other materials involved in a fire and is capable of undergoing detonation if heated to high temperatures especially under confinement including being piled on itself in a burning fire. When heated to decomposition, highly toxic fumes may be emitted. Do not return to area of explosion, until smoke and fumes have dissipated. Dry alkali or amine salts are explosive.

SECTION 8 - PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Safety goggles approved for the handling of explosives materials.
SKIN PROTECTION: Neoprene, natural rubber, polyethylene or polyvinyl chloride gloves. Use barrier creams, hand protection and protective clothing.
RESPIRATORY PROTECTION: Not normally required. Mechanical filter or supplied air type respirator as required for concentrations exceeding the occupational exposure limit.
VENTILATION: Maintain adequate ventilation. Use local exhaust if needed.

SECTION 9 - PERSONAL HANDLING INSTRUCTIONS

HANDLING: Explosives should not be abandoned at any location for any reason. Do not handle during electrical storms.
STORAGE: Store in a cool, dry, well-ventilated area remote from operations. Storage area should be of non-combustible construction. Organic materials, flammable substances and finely divided metals should be stored separately. Flames, smoking and unauthorized personnel are prohibited where this product is used or stored. Protect against physical damage, static electricity and lightning.
WARNING: Use of this product by persons lacking adequate training, experience and supervision may result in death or serious injury.
Obey all Federal, State, and local laws / regulations applicable to transportation, storage, handling, and use of explosives.
DISTANCE: Always stay from area of explosion or disposal sites. Stay behind suitable barriers.

SECTION 10 - SPILL & LEAK PROCEDURES

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED (IN ADDITION, SEE SECTION 8): Isolate area. Eliminate ALL sources of ignition. Avoid skin contact. Scrape up. Remove soiled clothing.
WASTE DISPOSAL - USE APPROPRIATE METHOD(S): Disposal of unexploded or deteriorated explosives material can be hazardous. Expert assistance is positively recommended in destroying explosives. Accidents can be prevented by thorough planning and handling in accordance with approved methods. Consult your supervisor for assistance. If improperly disposed of, material could explode and cause death or serious injury.

In all cases, follow facility emergency response procedures. Contact Facility Environmental Manager for assistance. Report any discharge of oil or hazardous substance that may enter surface waters to the National Response Center (800) 424 - 8802.

Observe all applicable local, state, and federal environmental spill and water quality regulations.

SECTION 11 - PHYSICAL DATA

BOILING POINT:	NA	BULK DENSITY:	1.22 g/cc
MELTING POINT:	NA	%VOLATILE BY VOLUME:	NA
VAPOR PRESSURE:	NA	EVAPORATION RATE (ETHER=1):	NA
SOLUBILITY IN WATER:	Negligible with short-term exposure	DECOMPOSITION POINT:	200 C
APPEARANCE/ ODOR:	Odorless, gray/white gel		

SECTION 12 - COMMENTS

This product is classified as a Blasting Agent and need not be stored in a high explosive magazine, except where required by local regulations, as long as it is completely separate from any high explosives. Storage should be in a well-constructed, well-ventilated, dry structure located to conform to local, state, and federal regulations. The area surrounding an explosive magazine must be kept clear of combustible materials for a distance of 50 feet. Magazine floors and containers must be properly cleaned. Normal operating conditions are assumed unless otherwise stated. If any given, information is not clear or does not apply to your situation, STOP, store the material suitably, and seek correct help from your supervisors or the Institute of Makers of Explosives. Bureau of Alcohol, Tobacco, and Firearms regulations for explosive storage and handling should be consulted and complied with. Disposal sites must be clear of people at the time of disposal.

NOTICE: The data and recommendations presented herein are based upon data, which are considered accurate. However, SEC makes no guarantee or warranty, either expressed or implied, of the accuracy or completeness of these data and recommendations. For more detailed information on the hazards of this product, contact the Regulatory Compliance Department at the address below:

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THE LEADER IN TODAY'S WATERGEL TECHNOLOGY

**HIGH STRENGTH BLASTING AGENT
SLURRAM XLS & XG**

SEC brings the first new explosive technology in decades to medium diameter blasting agents.

XLS & XG

Will live up to your expectations for a high strength booster-sensitive explosive.

XLS & XG

Will shoot in colder temperatures.

XLS & XG

Will perform in deeper holes.

XLS & XG

Have higher energy and velocities.

You have come to expect the hottest and most reliable products from **SEC**. Here are two more.

XLS & XG

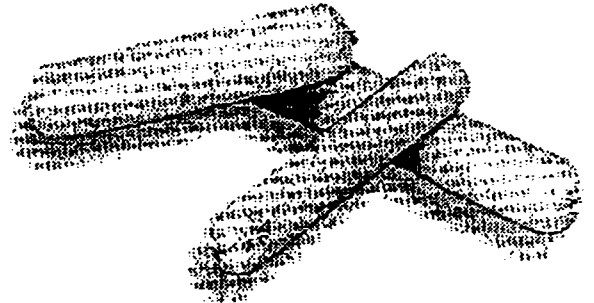
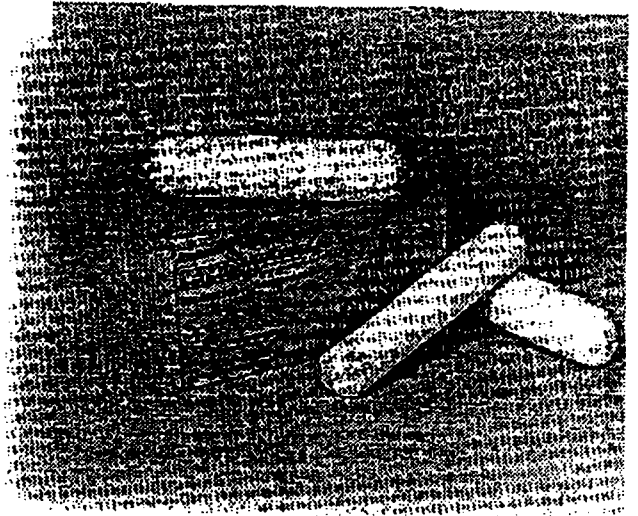
Available in easy handling poly tubing or shotbags.

XLS & XG

Diameters from two and a half inch (2-1/2") and up.

XLS & XG

Outperform the three most popular medium diameter blasting agents.



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ORDER LINE: 800-546-3725





THE LEADER IN TODAY'S WATERGEL TECHNOLOGY

**HIGH STRENGTH BLASTING AGENT
SLURRAN XLS & XG**

DESCRIPTIONS:

SLURRAN XLS & XG are high energy medium diameter blasting agents. They have been specifically formulated to improve upon the performance of competitive packaged products. These products are oxygen balanced, providing optimum energy yield from the energetic ingredients comprising the formulations. The **SLURRAN XG** contains glass microspheres, allowing loading into deeper holes with more water.

PROPERTIES:

SLURRAN XLS

Density: 1.20 grams/cc
Velocity: 17,500 fps
Water Resistance: *Excellent*
Absolute Bulk Strength: 1057 cal/cc
Detonation Pressure: 85 kilobars
Absolute Weight Strength: 881 cal/gram

SLURRAN XG

Density: 1.20 grams/cc
Velocity: 17,500 fps
Water Resistance: *Excellent*
Relative Bulk Strength: 1031 cal/cc
Detonation Pressure: 85 kilobars
Absolute Weight Strength: 859 cal/gram

CLASSIFICATIONS:

SLURRAN XLS & XG

Hazardous Material Description and Proper Shipping Name: *Explosive, Blasting, Type E*
Hazard Division and Compatibility Group: *1.5D*
UN#: *UN 0332*
Packaging Group: *II*
Fume Classification: *Fume Class 1*

**SLURRAN XLS & XG
PACKAGING:**

Diameters		25kg/55lb cases Unit Count Per Case
Inches	MM	
2-1/2" x 16"	64mm x 400mm	XLS & XG 16
2-3/4" x 16"	70mm x 400mm	13
3" x 16"	76mm x 400mm	11
3-1/4" x 16"	83mm x 400mm	10
3-1/2" x 16"	89mm x 400mm	9
3-3/4" x 16"	95mm x 400mm	7
4" x 16"	102mm x 400mm	6

PRIMING:

SLURRAN XLS & XG should be primed with a dense, high velocity primer such as 3" x 8" high velocity dynamite, or 1 pound cast primer.

If the explosive column is *known* to be solid with no voids, only one primer is recommended. If the holes are rough and have projections, separation in the powder column may occur. Therefore, multiple priming is recommended to assure full column detonation.

STORAGE AND SAFETY PRECAUTIONS:

Due to this product's classification, it must be stored in magazines that meet State and Federal regulations regarding explosive products. For further storage and handling information, refer to the National Fire Protection Association's Bulletin No. 495, which can be obtained from either the N.F.P.A., Batterymarch Park, Quincy, Massachusetts 02269, or ATF, or the Institute of Makers of Explosives.

In Case of Spillage: Sweep up the product and dispose of properly. There is no substitute for good housekeeping. Do not attempt to use a contaminated product. It may not only give poor blast results but may also produce toxic fumes.

Information and suggestions herein are based upon SEC's extensive experience and are offered only as a helpful guide for the customer of blasting materials. Because these products are used under varying conditions over which SEC has no control, SEC does not guarantee the results of their usage nor assume any liability connected therewith. For additional information, write or call your nearest SEC Office or Representative.

In Case of Fire: Clear area of all personnel to a safe distance.
NEVER FIGHT EXPLOSIVES FIRES.



Yesterday — Today — Tomorrow...

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