



Senatel Magnafrac, Senatel Magnafrac RL

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

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SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Senatel Magnafrac, Senatel Magnafrac RL

Product Code: 3017

Synonyms: Magnafrac, Magnafrac HW, Senatel Magnafrac HW, Senatel Powerpac, Senatel Trimex, and Senatel Magnafrac BDH

Intended Use of the Product

A detonator sensitive emulsion explosive. For professional use only.

Name, Address, and Telephone of the Responsible Party

Canada:

Orica Canada Inc.
301 Rue Hotel-de-Ville
Brownsburg-Chatham, QC
J8G 3B5
For SDS Requests:
1-855-26-ORICA (1-855-266-7422)

sds.na@orica.com

www.oricaminingservices.com

USA:

Orica USA Inc.
33101 E. Quincy Avenue
Watkins, CO 80137-9406
For SDS Requests: 1-855-26-ORICA (1-855-266-7422)

sds.na@orica.com

Mexico:

Orica Mexico Inc.
Boulevard Harold R. Pape No. 350
Colonia Telefonistas
Monclova, Coahuila.
C.P. 25758
For SDS Requests: 1-855-26-ORICA (1-855-266-7422)

sds.na@orica.com

Emergency Telephone Number

Emergency Number : **Canada:** 1-877-561-3636 (Orica Transportation Emergency Response)

USA: 1-800-424-9300 (CHEMTREC)

Mexico: 01-800- 002-1400

FOR CHEMICAL EMERGENCIES (24 HOUR) INVOLVING TRANSPORTATION, SPILL, LEAK, RELEASE, FIRE OR ACCIDENTS: **IN CANADA CALL:** THE ORICA TRANSPORTATION EMERGENCY RESPONSE SYSTEM AT **1-877-561-3636. IN THE U.S. CALL: CHEMTREC 1-800-424-9300. IN MEXICO CALL:** 01-800- 002-1400. **IN THE U.S.:** FOR LOST, STOLEN, OR MISPLACED EXPLOSIVES CALL: BATF **1-800-800-3855**. FORM ATF F 5400.5 MUST BE COMPLETED AND LOCAL AUTHORITIES (STATE/MUNICIPAL POLICE, ETC.) MUST BE ADVISED.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS-US/CA Classification

The explosive classification below only applies to US 29 CFR 1910.1200 (HCS/HazCom 2012). The explosive classification is excluded from Canada Hazardous Products Regulations (HPR, SOR/2015-17), it is regulated under the Canada Explosives Act (R.S.C., 1985, c. E-17)

Expl. 1.1	H201
Flam. Liq. 1	H224
Ox. Liq. 3	H272
Eye Irrit. 2A	H319
Carc. 1	H350
STOT RE 2	H373
Aquatic Acute 3	H402

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Aquatic Chronic 3 H412

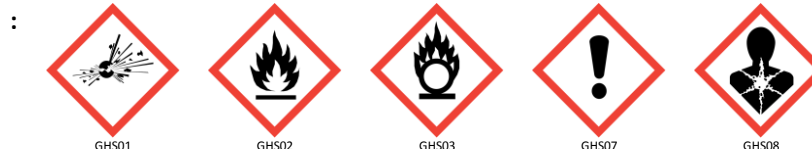
Full text of hazard classes and H-statements : see section 16

Label Elements

GHS-US/CA Labeling

Any labeling elements (pictograms, signal word, hazard, and precautionary statements) related to explosive classifications apply to the OSHA Hazard Communication Standard (HCS, 29 CFR 1910.1200) only and are excluded from Canada's Hazardous Products Regulations (HPR, SOR/2015-17)

Hazard Pictograms (GHS-US/CA)



Signal Word (GHS-US/CA)

Hazard Statements (GHS-US/CA)

- : Danger
- H201 - Explosive; mass explosion hazard.
 - H224 - Extremely flammable liquid and vapor.
 - H272 - May intensify fire; oxidizer.
 - H319 - Causes serious eye irritation.
 - H350 - May cause cancer.
 - H373 - May cause damage to organs (blood, liver, spleen, thymus) through prolonged or repeated exposure.
 - H402 - Harmful to aquatic life.
 - H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US/CA)

- : P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P220 - Keep away from clothing and other combustible materials.
- P230 - Keep wetted with appropriate material.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
- P242 - Use only non-sparking tools.
- P243 - Take action to prevent static discharges.
- P250 - Do not subject to grinding/shock/friction.
- P260 - Do not breathe vapors, mist, or spray.
- P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves, protective clothing, and eye protection.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- 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.
- P314 - Get medical advice/attention if you feel unwell.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
- P370+P380 - In case of fire: Evacuate area.
- P372 - Explosion risk in case of fire.
- P373 - DO NOT fight fire when fire reaches explosives.
- P401 - Store in accordance with as defined in the Explosives Act of Canada and the provisions of the Bureau of Alcohol, Tobacco and Firearms regulations contained in 27 CFR part 555.
- P403+P235 - Store in a well-ventilated place. Keep cool.
- P405 - Store locked up.

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P501 - Dispose of contents/container in accordance with as defined in the Explosives Act of Canada and the provisions of the Bureau of Alcohol, Tobacco and Firearms regulations contained in 27 CFR part 555.

Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Ingestion may cause methemoglobinemia. Initial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and, possibly shock. Energetic effects (blast effects, heat, noise, and shrapnel) from functioning of the product can cause serious physical injuries.

Unknown Acute Toxicity (GHS-US/CA)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% *
Ammonium nitrate	(CAS-No.) 6484-52-2	70 - 80
Sodium nitrate	(CAS-No.) 7631-99-4	7 - 13
Water	(CAS-No.) 7732-18-5	7 - 13
Petroleum	(CAS-No.) 8002-05-9	3 - 7
Glass, oxide, chemicals	(CAS-No.) 65997-17-3	0.97 - 5
Polyisobutylene	(CAS-No.) 9003-27-4	0.5 - 2
Sorbitan, (Z)-9-octadecenoate (2:3)	(CAS-No.) 8007-43-0	0.5 - 2
Paraffin waxes and Hydrocarbon waxes	(CAS-No.) 8002-74-2	0.5 - 2
Paraffin waxes and Hydrocarbon waxes, microcrystalline	(CAS-No.) 63231-60-7	0.5 - 2
Silica, amorphous, precipitated and gel	(CAS-No.) 112926-00-8	< 0.15

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye irritation. May cause cancer. May cause damage to organs (blood, liver, spleen, thymus) through prolonged or repeated exposure.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: Ingestion may cause adverse effects. Ingestion may cause methemoglobinemia. Initial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and, possibly shock.

Chronic Symptoms: May cause cancer. May cause damage to organs (blood, liver, spleen, thymus) through prolonged or repeated exposure.

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Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand. Causes methemoglobinemia – emergency response should treat appropriately, such as by intravenous administration of methylene blue.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: DO NOT FIGHT FIRES INVOLVING EXPLOSIVES. Water may be applied through fixed extinguishing system (sprinklers) as long as people need not be present for the system to operate.

Unsuitable Extinguishing Media: DO NOT FIGHT FIRES INVOLVING EXPLOSIVES. Attempts to smother a fire involving this product will be ineffective as it is its own oxygen source. Smothering this product could lead to decomposition and explosion. This product is more sensitive to detonation if contaminated with organic or oxidizable material or if heated while confined. Unless the mass of product on fire is flooded with water, re-ignition is possible.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Explosive, could cause fire and secondary explosions. Extremely flammable liquid and vapor. May intensify fire; oxidizer.

Explosion Hazard: Explosives, Division 1.1 - Chemicals and items which have a mass explosion hazard (a mass explosion is one which affects almost the entire quantity present virtually instantaneously). Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May form flammable or explosive vapor-air mixture.

Reactivity: Extreme risk of explosion by shock, friction, fire or other sources of ignition. Oxidizer: increases the burning rate of combustible materials. Hazardous reactions may occur on contact with certain chemicals. Refer to incompatible materials.

Advice for Firefighters

Precautionary Measures Fire: This product is an explosive with a mass explosion hazard. DO NOT FIGHT FIRES INVOLVING EXPLOSIVE MATERIALS. Exercise caution when fighting any chemical fire.

Firefighting Instructions: DO NOT ATTEMPT TO FIGHT FIRE. Immediately evacuate all personnel from the area to a safe distance. Guard against re-entry. Thermal decomposition can lead to release of irritating gases and vapors.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. When controlling fire before involvement of explosives, fire-fighters should wear positive pressure self-containing breathing apparatus (SCBA) and full turnout gear.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Ammonium nitrate fumes. Ammonia. Hydrocarbons. Sulfur compounds. Sulfur oxides. Sodium oxides. Silicon oxides. Hydrogen cyanide. Acrid smoke and irritating fumes.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Evacuate danger area. Avoid all contact with skin, eyes, or clothing. Do not breathe vapor, mist or spray. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Keep away from combustible material.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Evacuate danger area. Stop leak if safe to do so.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Eliminate ignition sources. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Absorb and contain with inert material. Place contents in suitable container for disposal. As an immediate precautionary measure, isolate spill or leak area in all directions. Use only non-sparking tools.

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Methods for Cleaning Up: Use only non-sparking tools. Be careful to avoid shock, friction, and contact with grit. Collect product for recovery or disposal. For release to land, contain discharge by constructing dykes or applying inert absorbent; for release to water, utilize damming and/or water diversion to minimize the spread of contamination. Collect contaminated soil and water, and absorbent for proper disposal. Notify applicable government authority if release is reportable or could adversely affect the environment. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. May cause or intensify fire; oxidizer. Under specific conditions of acidity and in the presence of amines, this product has the potential to form carcinogenic nitrosamine compounds.

Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. No smoking. Do not breathe mist, spray, vapors, fume. Avoid contact with skin, eyes and clothing. Use appropriate personal protective equipment (PPE).

Hygiene Measures: This product is an explosive and should only be used under the supervision of trained and licensed personnel. Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Store as defined in the Explosives Act of Canada and the provisions of the Bureau of Alcohol, Tobacco and Firearms regulations contained in 27 CFR Part 555. Proper grounding procedures to avoid static electricity should be followed. Use approved electrical, ventilating, and lighting equipment.

Storage Conditions: Store under moderate temperatures recommended by competent authority. Store under dry conditions in a well ventilated magazine that has been approved for explosive storage. Do NOT store explosives in a detonator magazine or detonators in an explosive magazine. Keep containers closed. Explosives should be kept well away from initiating explosives; protected from physical damage; separated from oxidizing materials, combustibles, and sources of heat. Isolate from incompatibles. . Keep/Store away from extremely high or low temperatures, ignition sources, heat, combustible materials, incompatible materials. Keep in fire resistant place. Store locked up/in a secure area.

Incompatible Materials: Reducing agents, strong acids and bases, metal powders, combustible materials, chromates, zinc, copper and copper alloys, chlorates, oils, lubricants, halogens, halogenated compounds, ammonia, sulfides, solvents, nitrates.

Storage Temperature: 10 - 27 °C (50 - 80.6 °F)

Special Rules on Packaging: Keep only in the original container.

Specific End Use(s)

A detonator sensitive emulsion explosive. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Petroleum (8002-05-9)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	2000 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	500 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	350 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	1800 mg/m ³ (15 min)
USA IDLH	US IDLH (ppm)	1100 ppm (10% LEL)
Glass, oxide, chemicals (65997-17-3)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ total dust, 5 mg/m ³ , respirable fraction 8 hr
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	3 fibers/cm ³ (fibers ≤3.5 µm in diameter & ≥10µm in length), TWA 5mg/m ³ (total)

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Yukon	OEL TWA (mg/m ³)	30 mppcf (dust or fibrous) 10 mg/m ³ (dust or fibrous)
Silica, amorphous, precipitated and gel (112926-00-8)		
Mexico	OEL TWA (mg/m ³)	10 mg/m ³
British Columbia	OEL TWA (mg/m ³)	4 mg/m ³ (total dust) 1.5 mg/m ³ (respirable dust)
New Brunswick	OEL TWA (mg/m ³)	10 mg/m ³
Nunavut	OEL STEL (mg/m ³)	20 mg/m ³
Nunavut	OEL TWA (mg/m ³)	10 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	20 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	10 mg/m ³
Québec	VEMP (mg/m ³)	6 mg/m ³ (containing no Asbestos and <1% Crystalline silica-respirable dust)
Saskatchewan	OEL STEL (mg/m ³)	20 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	10 mg/m ³
Paraffin waxes and Hydrocarbon waxes (8002-74-2)		
Mexico	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
Mexico	OEL STEL (mg/m ³)	6 mg/m ³ (fume)
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (fume)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	2 mg/m ³ (fume)
Alberta	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
British Columbia	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
Manitoba	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
New Brunswick	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
Newfoundland & Labrador	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
Nova Scotia	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
Nunavut	OEL STEL (mg/m ³)	4 mg/m ³
Nunavut	OEL TWA (mg/m ³)	2 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	4 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	2 mg/m ³
Ontario	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
Prince Edward Island	OEL TWA (mg/m ³)	2 mg/m ³ (fume)
Québec	VEMP (mg/m ³)	2 mg/m ³ (fume)
Saskatchewan	OEL STEL (mg/m ³)	4 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	2 mg/m ³
Yukon	OEL STEL (mg/m ³)	6 mg/m ³ (fume)
Yukon	OEL TWA (mg/m ³)	2 mg/m ³ (fume)

Exposure Controls

Appropriate Engineering Controls: Product to be handled in a closed system and under strictly controlled conditions. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Proper grounding procedures to avoid static electricity should be followed. Use approved equipment. Gas detectors should be used when flammable gases or vapors may be released. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Eye protection. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles or safety glasses with side shield.

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Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Environmental Exposure Controls: Avoid release to the environment.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Orange, viscous liquid, Putty-like
Odor	: Odorless
Odor Threshold	: Not available
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available
Auto-ignition Temperature	: 210 - 265 °C (410 - 509 °F)
Decomposition Temperature	: 210 °C (410 °F)
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: 0 mm Hg (at 20 °C)
Relative Vapor Density at 20°C	: Not available
Relative Density	: 1.09 - 1.33
Density	: 1.09 - 1.33 g/cc
Specific Gravity	: 1.09 - 1.33
Solubility	: Slightly soluble in standard organic solvents. Water: Slightly soluble in water
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Oxidizing Properties	: Oxidizing liquid 3 - May intensify fire; oxidizer.
Explosive Properties	: Explosives, Division 1.1 - Chemicals and items which have a mass explosion hazard (a mass explosion is one which affects almost the entire quantity present virtually instantaneously)

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Extreme risk of explosion by shock, friction, fire or other sources of ignition. Oxidizer: increases the burning rate of combustible materials. Hazardous reactions may occur on contact with certain chemicals. Refer to incompatible materials.

Chemical Stability: Stable under recommended handling and storage conditions. Extremely flammable liquid and vapor. May form flammable or explosive vapor-air mixture. May intensify fire; oxidizer. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Keep away from open flames, hot surfaces and sources of ignition. Direct sunlight, extremely high or low temperatures, ignition sources, combustible materials, incompatible materials.

Incompatible Materials: Reducing agents, strong acids and bases, metal powders, combustible materials, chromates, zinc, copper and copper alloys, chlorates, oils, lubricants, halogens, halogenated compounds, ammonia, sulfides, solvents, nitrates.

Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition may be explosive, especially if confined.

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SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: May cause cancer.

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs (blood, liver, spleen, thymus) through prolonged or repeated exposure.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects. Ingestion may cause methemoglobinemia. Initial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and, possibly shock.

Chronic Symptoms: May cause cancer. May cause damage to organs (blood, liver, spleen, thymus) through prolonged or repeated exposure.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Ammonium nitrate (6484-52-2)	
LD50 Oral Rat	2217 mg/kg
LC50 Inhalation Rat	> 88.8 mg/l/4h
Petroleum (8002-05-9)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
Sorbitan, (Z)-9-octadecenoate (2:3) (8007-43-0)	
LD50 Oral Rat	5000 mg/kg
LC50 Inhalation Rat	> 5.27 mg/l/4h
Sodium nitrate (7631-99-4)	
LD50 Oral Rat	> 2000 mg/kg
Paraffin waxes and Hydrocarbon waxes (8002-74-2)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 3600 mg/kg
Paraffin waxes and Hydrocarbon waxes, microcrystalline (63231-60-7)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 3600 mg/kg
Petroleum (8002-05-9)	
IARC Group	3
Glass, oxide, chemicals (65997-17-3)	
IARC Group	2B
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.

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Silica, amorphous, precipitated and gel (112926-00-8)	
IARC Group	3

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Harmful to aquatic life with long lasting effects.

Ammonium nitrate (6484-52-2)	
LC50 Fish 1	542 mg/l
EC50 Daphnia 1	555 mg/l
Petroleum (8002-05-9)	
LC50 Fish 1	7.1 mg/l (Species: Pimephales promelas, Exposure time 96 h)
LC50 Other Aquatic Organisms 1	2.7 mg/l LL50 96 hr (Kelp forest mysid shrimp)
EC50 Daphnia 1	6.9 mg/l (Exposure time: 48 h)
Silica, amorphous, precipitated and gel (112926-00-8)	
LC50 Fish 1	10000 mg/l
Sodium nitrate (7631-99-4)	
LC50 Fish 1	2000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 Fish 2	994.4 - 1107 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

Persistence and Degradability

Senatel Magnafrac, Senatel Magnafrac RL	
Persistence and Degradability	May cause long-term adverse effects in the environment.
Sodium nitrate (7631-99-4)	
Persistence and Degradability	Readily biodegradable in water.

Bioaccumulative Potential

Senatel Magnafrac, Senatel Magnafrac RL	
Bioaccumulative Potential	Not established.
Ammonium nitrate (6484-52-2)	
BCF Fish 1	(no bioaccumulation expected)
Log Pow	-3.1 (at 25 °C)
Sodium nitrate (7631-99-4)	
Log Pow	-3.8 (at 25 °C)
Bioaccumulative Potential	Not expected to bioaccumulate.
Paraffin waxes and Hydrocarbon waxes, microcrystalline (63231-60-7)	
Log Pow	> 6

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Destroy and dispose of in accordance with applicable local, state, provincial, territorial, federal and international regulations. Consult with an Orica technical representative.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issue

In Accordance with DOT

Proper Shipping Name : EXPLOSIVE, BLASTING, TYPE E
Hazard Class : 1.1D
Identification Number : UN0241
Label Codes : 1.1D



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ERG Number : 112

In Accordance with IMDG

Proper Shipping Name : EXPLOSIVE, BLASTING, TYPE E

Hazard Class : 1.1D

Identification Number : UN0241

Label Codes : 1.1D

EmS-No. (Fire) : F-B

EmS-No. (Spillage) : S-X

In Accordance with IATA

Proper Shipping Name : EXPLOSIVE, BLASTING, TYPE E

Identification Number : 1.1D

Hazard Class : UN0241

Label Codes : 1.1D

ERG Code (IATA) : 1L

In Accordance with TDG

Proper Shipping Name : EXPLOSIVE, BLASTING, TYPE E

Hazard Class : 1.1D

Identification Number : UN0241

Label Codes : 1.1D

Packing Group : II



SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Senatel Magnafrac, Senatel Magnafrac RL	
SARA Section 311/312 Hazard Classes	Physical hazard - Explosive Physical hazard - Oxidizer (liquid, solid or gas) Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Carcinogenicity Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Serious eye damage or eye irritation
Ammonium nitrate (6484-52-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Polyisobutylene (9003-27-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e, Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).
Petroleum (8002-05-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Glass, oxide, chemicals (65997-17-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sorbitan, (Z)-9-octadecenoate (2:3) (8007-43-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sodium nitrate (7631-99-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Paraffin waxes and Hydrocarbon waxes (8002-74-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Paraffin waxes and Hydrocarbon waxes, microcrystalline (63231-60-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Water (7732-18-5)	

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Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Ammonium nitrate (6484-52-2)

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

Petroleum (8002-05-9)

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

Silica, amorphous, precipitated and gel (112926-00-8)

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

Sodium nitrate (7631-99-4)

U.S. - Massachusetts - Right To Know List
U.S. - Pennsylvania - RTK (Right to Know) List

Paraffin waxes and Hydrocarbon waxes (8002-74-2)

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

Canadian Regulations

Ammonium nitrate (6484-52-2)

Listed on the Canadian DSL (Domestic Substances List)

Polyisobutylene (9003-27-4)

Listed on the Canadian DSL (Domestic Substances List)

Petroleum (8002-05-9)

Listed on the Canadian DSL (Domestic Substances List)

Glass, oxide, chemicals (65997-17-3)

Listed on the Canadian DSL (Domestic Substances List)

Silica, amorphous, precipitated and gel (112926-00-8)

Listed on the Canadian DSL (Domestic Substances List)

Sorbitan, (Z)-9-octadecenoate (2:3) (8007-43-0)

Listed on the Canadian DSL (Domestic Substances List)

Sodium nitrate (7631-99-4)

Listed on the Canadian DSL (Domestic Substances List)

Paraffin waxes and Hydrocarbon waxes (8002-74-2)

Listed on the Canadian DSL (Domestic Substances List)

Paraffin waxes and Hydrocarbon waxes, microcrystalline (63231-60-7)

Listed on the Canadian DSL (Domestic Substances List)

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 05/31/2018

Revision

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

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GHS Full Text Phrases:

Expl. 1.1	Explosive Category 1.1
H201	Explosive; mass explosion hazard
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Carc. 1	Carcinogenicity, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 1	Flammable liquids Category 1
Ox. Liq. 3	Oxidizing liquids Category 3
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H224	Extremely flammable liquid and vapor
H272	May intensify fire; oxidizer
H319	Causes serious eye irritation
H350	May cause cancer
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

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NA GHS SDS 2015 (Can, US, Mex)