SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture
Product Name: Centra Control, Centra Intense
Product Code: 2005
Synonyms: Centra Control 100, Centra Control ANE, Centra Control 25, Centra Control 30, Centra Control 40, Centra Control 50, Centra Control 70, Centra Control 80, Centra Intense 100, Centra Intense ANE

Intended Use of the Product

A booster 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. 1.5  H205
Ox. Liq. 3  H272
Eye Irrit. 2A  H319
Carc. 1B  H350
STOT RE 2  H373
Aquatic Acute 3  H402
Centra Control, Centra Intense
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).

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) : Danger

Hazard Statements (GHS-US/CA)

H205 - May mass explode in fire.
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.

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.
P240 - Ground/bond container and receiving equipment.
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.
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+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 the Explosives Act of Canada and the provisions of the Bureau of Alcohol, Tobacco and Firearms regulations contained in 27 CFR part 555.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with 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. Overexposure 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.

Unknown Acute Toxicity (GHS-US/CA)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
**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:** 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. Overexposure to this material may result in methemoglobinemia. Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death. There are potential chronic health effects to consider.

**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.

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

**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.

**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.

**Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Explosive, could cause fire and secondary explosions. May intensify fire; oxidizer.

**Explosion Hazard:** Explosives, Division 1.5 - Very insensitive explosives that have a mass explosion hazard. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

**Reactivity:** Explosive, insensitive but has a mass explosion hazard. Oxidizer: increases the burning rate of combustible materials.
Advice for Firefighters

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

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.


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: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. Evacuate danger area. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Keep away from combustible material.

For Non-Emergency Personnel

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


For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: 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. Ventilate area. Eliminate ignition sources.

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. Use only non-sparking tools.

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. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material.

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: May cause or intensify fire; oxidizer.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking. Do not handle until all safety precautions have been read and understood. Do not breathe vapors, mist, spray. Avoid contact with skin, eyes and clothing.

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: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving 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 away from heat, spark and flames. 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 in fire resistant place.

Incompatible Materials: Oxidizable materials, metal powder, bronze & copper alloys, fuels (e.g. lubricants, machine oils), fluorocarbon lubricants, acids, corrosive liquids, chlorate, sulphur, sodium nitrite, charcoal, coke and other finely divided combustibles. Strong oxidizing and reducing agents.

Storage Temperature: 10 - 27 °C (50 - 80 °F)

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

Specific End Use(s)

A booster 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), or Canadian provincial governments.

<table>
<thead>
<tr>
<th>Petroleum (8002-05-9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA OSHA OSHA PEL (TWA) (mg/m³)</td>
<td>2000 mg/m³</td>
</tr>
<tr>
<td>USA OSHA OSHA PEL (TWA) (ppm)</td>
<td>500 ppm</td>
</tr>
<tr>
<td>USA NIOSH NIOSH REL (TWA) (mg/m³)</td>
<td>350 mg/m³</td>
</tr>
<tr>
<td>USA NIOSH NIOSH REL (ceiling) (mg/m³)</td>
<td>1800 mg/m³ (15 min)</td>
</tr>
<tr>
<td>USA IDLH US IDLH (ppm)</td>
<td>1100 ppm (10% LEL)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silica, amorphous, precipitated and gel (112926-00-8)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>British Columbia OEL TWA (mg/m³)</td>
<td>4 mg/m³ (total dust)</td>
</tr>
<tr>
<td>Québec VEMP (mg/m³)</td>
<td>6 mg/m³ (containing no Asbestos and &lt;1% Crystalline silica-respirable dust)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopentane (78-78-4)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH ACGIH TWA (ppm)</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Alberta OEL TWA (mg/m³)</td>
<td>1770 mg/m³</td>
</tr>
<tr>
<td>Alberta OEL TWA (ppm)</td>
<td>600 ppm</td>
</tr>
<tr>
<td>British Columbia OEL TWA (ppm)</td>
<td>600 ppm</td>
</tr>
<tr>
<td>Ontario OEL TWA (ppm)</td>
<td>600 ppm (in force until January 1, 2018)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Glass, oxide, chemicals (65997-17-3)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA OSHA OSHA PEL (TWA) (mg/m³)</td>
<td>15 mg/m³ total dust, 5 mg/m³, respirable fraction 8 hr</td>
</tr>
<tr>
<td>USA NIOSH NIOSH REL (TWA) (mg/m³)</td>
<td>3 fibers/cm³ (fibers ≤3.5 µm in diameter &amp; ≥10µm in length), TWA 5mg/m³ (total)</td>
</tr>
</tbody>
</table>

Exposure Controls

Appropriate Engineering Controls: 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. Ensure all national/local regulations are observed. Proper grounding procedures to avoid static electricity should be followed. Product to be handled in a closed system and under strictly controlled conditions. Use explosion-proof equipment. Gas detectors should be used when flammable gases or vapors may be released.


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.

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.

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Off-white viscous</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>4 - 6</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>210 °C (410 °F)</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>0 mm Hg @ 20 °C (68 °F)</td>
</tr>
<tr>
<td>Relative Vapor Density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>0.95 - 1.35 (water = 1)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Slightly soluble in standard organic solvents. Slightly soluble in water.</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Oxidizing liquid 3 - May intensify fire; oxidizer.</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Explosives, Division 1.5 - Very insensitive explosives that have a mass explosion hazard</td>
</tr>
<tr>
<td>Explosion Power</td>
<td>ASV 325-400 kJ/100g</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Explosive, insensitive but has a mass explosion hazard. Oxidizer: increases the burning rate of combustible materials.

Chemical Stability: Extreme risk of explosion by shock, friction, fire or other sources of ignition. May intensify fire; oxidizer.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight, extremely high or low temperatures, ignition sources, combustible materials, incompatible materials.

Incompatible Materials: Oxidizable materials, metal powder, bronze & copper alloys, fuels (e.g. lubricants, machine oils), fluorocarbon lubricants, acids, corrosive liquids, chlorate, sulphur, sodium nitrite, charcoal, coke and other finely divided combustibles. Strong oxidizing and reducing agents.

Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified
Acute Toxicity (Dermal): Not classified
**Centra Control, Centra Intense**

**Safety Data Sheet**


- **Acute Toxicity (Inhalation):** Not classified
- **LD50 and LC50 Data:** Not available
- **Skin Corrosion/Irritation:** Not classified
- **pH:** 4 - 6
- **Eye Damage/Irritation:** Causes serious eye irritation.
- **pH:** 4 - 6
- **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 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.

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

### Information on Toxicological Effects - Ingredient(s)

**LD50 and LC50 Data:**

<table>
<thead>
<tr>
<th>Ingredient (CAS#)</th>
<th>Data</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium nitrate (6484-52-2)</td>
<td>LD50 Oral Rat</td>
<td>2217 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Rat</td>
<td>&gt; 88.8 mg/l/4h</td>
</tr>
<tr>
<td>Petroleum (8002-05-9)</td>
<td>LD50 Oral Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Sorbitan monooleate (1338-43-8)</td>
<td>LD50 Oral Rat</td>
<td>&gt; 39800 mg/kg</td>
</tr>
<tr>
<td>Silane, dichlorodimethyl-, reaction products with silica (68611-44-9)</td>
<td>LD50 Oral Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Rat</td>
<td>0.45 mg/l/4h</td>
</tr>
<tr>
<td>Petroleum (8002-05-9)</td>
<td>IARC Group</td>
<td>3</td>
</tr>
<tr>
<td>Silica, amorphous, precipitated and gel (112926-00-8)</td>
<td>IARC Group</td>
<td>3</td>
</tr>
<tr>
<td>Glass, oxide, chemicals (65997-17-3)</td>
<td>IARC Group</td>
<td>2B</td>
</tr>
</tbody>
</table>

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity**

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

<table>
<thead>
<tr>
<th>Ingredient (CAS#)</th>
<th>Data</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium nitrate (6484-52-2)</td>
<td>LC50 Fish 1</td>
<td>542 mg/l</td>
</tr>
<tr>
<td></td>
<td>EC50 Daphnia 1</td>
<td>555 mg/l</td>
</tr>
<tr>
<td>Petroleum (8002-05-9)</td>
<td>LC50 Fish 1</td>
<td>7.1 mg/l (Species: Pimephales promelas, Exposure time 96 h)</td>
</tr>
<tr>
<td></td>
<td>LC50 Other Aquatic Organisms 1</td>
<td>2.7 mg/l LL50 96 hr (Kelp forest mysid shrimp)</td>
</tr>
<tr>
<td></td>
<td>EC50 Daphnia 1</td>
<td>6.9 mg/l (Exposure time: 48 h)</td>
</tr>
</tbody>
</table>
Centra Control, Centra Intense
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).

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 Fish 1</th>
<th>EC50 Daphnia 1</th>
<th>ErC50 (algae)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, precipitated and gel (112926-00-8)</td>
<td>10000 mg/l</td>
<td>2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
<td>&lt;= 10000 mg/l Scenedesmus subspicatus, OECD Guide-line 201</td>
</tr>
<tr>
<td>Isopentane (78-78-4)</td>
<td>&gt; 10000 mg/l Brachydanio rerio, OECD Guide-line 203</td>
<td>&gt; 10000 mg/l OECD Guide-line 202</td>
<td></td>
</tr>
<tr>
<td>Silane, dichlorodimethyl-, reaction products with silica (68611-44-9)</td>
<td>&gt; 10000 mg/l Brachydanio rerio, OECD Guide-line 203</td>
<td>&gt; 10000 mg/l OECD Guide-line 202</td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and Degradability**

**Bioaccumulative Potential**

**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.

**Additional Information:** Container may remain hazardous when empty. Continue to observe all precautions.

**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 issued.

**In Accordance with DOT**

**Proper Shipping Name**: EXPLOSIVE, BLASTING, TYPE E or Agent blasting, Type E
**Hazard Class**: 1.5D
**Identification Number**: UN0332
**Label Codes**: 1.5D
**ERG Number**: 112

**In Accordance with IMDG**

**Proper Shipping Name**: EXPLOSIVE, BLASTING, TYPE E (AGENT, BLASTING, TYPE E)
**Hazard Class**: 1.5D
**Identification Number**: UN0332
**Label Codes**: 1.5D
**EmS-No. (Fire)**: F-B
**EmS-No. (Spillage)**: S-Y

**In Accordance with IATA**

**Proper Shipping Name**: EXPLOSIVE, BLASTING, TYPE E
**Hazard Class**: 1.5D
**Identification Number**: UN0332
**ERG Code (IATA)**: 1L

**In Accordance with TDG**
**Proper Shipping Name**: EXPLOSIVE, BLASTING, TYPE E  
**Hazard Class**: 1.5D  
**Identification Number**: UN0332  
**Label Codes**: 1.5D  
**Packing Group**: II

### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

<table>
<thead>
<tr>
<th>Centra Control, Centra Intense</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SARA Section 311/312 Hazard Classes</strong></td>
<td><strong>Health hazard - Serious eye damage or eye irritation</strong>&lt;br&gt;<strong>Health hazard - Specific target organ toxicity (single or repeated exposure)</strong>&lt;br&gt;<strong>Health hazard - Carcinogenicity</strong>&lt;br&gt;<strong>Physical hazard - Explosive</strong>&lt;br&gt;<strong>Physical hazard - Oxidizer (liquid, solid or gas)</strong></td>
</tr>
<tr>
<td><strong>Ammonium nitrate (6484-52-2)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td><strong>Polyisobutylene (9003-27-4)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td><strong>Soybean oil (8001-22-7)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td><strong>Petroleum (8002-05-9)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td><strong>Sorbitan monooleate (1338-43-8)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td><strong>Isopentane (78-78-4)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td><strong>Silica, dichlorodimethyl-, reaction products with silica (68611-44-9)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td><strong>Glass, oxide, chemicals (65997-17-3)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td><strong>Water (7732-18-5)</strong></td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

#### US State Regulations

<table>
<thead>
<tr>
<th>Ammonium nitrate (6484-52-2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - Massachusetts - Right To Know List</td>
<td></td>
</tr>
<tr>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
<td></td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</td>
<td></td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soybean oil (8001-22-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Petroleum (8002-05-9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - Massachusetts - Right To Know List</td>
<td></td>
</tr>
<tr>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
<td></td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
<td></td>
</tr>
</tbody>
</table>

| Silica, amorphous, precipitated and gel (112926-00-8) |  |
Centra Control, Centra Intense

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).

Isopentane (78-78-4)

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

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)

Soybean oil (8001-22-7)
Listed on the Canadian DSL (Domestic Substances List)

Petroleum (8002-05-9)
Listed on the Canadian DSL (Domestic Substances List)

Sorbitan monooleate (1338-43-8)
Listed on the Canadian DSL (Domestic Substances List)

Silica, amorphous, precipitated and gel (112926-00-8)
Listed on the Canadian DSL (Domestic Substances List)

Isopentane (78-78-4)
Listed on the Canadian DSL (Domestic Substances List)

Polymer, acrylonitrile-methacrylonitrile-methyl methacrylate (38742-70-0)
Listed on the Canadian DSL (Domestic Substances List)

Silane, dichlorodimethyl, reaction products with silica (68611-44-9)
Listed on the Canadian DSL (Domestic Substances List)

Glass, oxide, chemicals (65997-17-3)
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: 05/29/2018

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.

GHS Full Text Phrases:

Expl. 1.5 Explosive Category 1.5
H205 May mass explode in fire
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. 1B Carcinogenicity Category 1B
Eye Irrit. 2A Serious eye damage/eye irritation Category 2A
Ox. Liq. 3 Oxidizing liquids Category 3
STOT RE 2 Specific target organ toxicity (repeated exposure) Category 2
H272 May intensify fire; oxidizer
H319 Causes serious eye irritation
H350 May cause cancer
Centra Control, Centra Intense

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).

<table>
<thead>
<tr>
<th>H373</th>
<th>May cause damage to organs through prolonged or repeated exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

All information contained herein and in any supporting documents is provided for informational purposes only and is as accurate and up-to-date as possible at the time of publication. Since Orica and its related entities cannot anticipate or control the conditions under which this information may be used, users must review this information in the specific context of the intended application and must make their own determinations as to the suitability of this information for such users’ purposes. To the maximum extent permitted by law, nothing contained herein and in any supporting documents shall be deemed to be an express or implied warranty, and Orica expressly disclaims all warranties and representations, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Orica will not be responsible for any loss whatsoever resulting from any use or reliance upon this information.

NA GHS SDS 2015 (Can, US)