



# Material Safety Data Sheet

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## SECTION 1 – PRODUCT AND COMPANY INFORMATION

### Supplier(s):

Orica Canada Inc.  
Maple Street  
Brownsburg, QC  
For MSDS Requests: 1-450-533-4201

Orica USA Inc  
33101 E Quincy Ave  
Watkins, CO 80137-9406  
For MSDS Requests: 1-303-268-5000

**Product Name:** Primafuse™  
**Product Code:** 20085  
**Alternate Name(s):** Not available  
**UN-No:** UN0360 or UN0361 (Depending on packaging)  
**Recommended Use:** Non Electric Detonator assemblies for blasting.

**Emergency Telephone Number:** FOR CHEMICAL EMERGENCIES (24 HOUR) INVOLVING TRANSPORTATION, SPILL, LEAK, RELEASE, FIRE OR ACCIDENTS: **IN CANADA CALL:** ORICA CANANDA TRANSPORTATION EMERGENCY RESPONSE SYSTEM AT **1-877-561-3636**. **IN US CALL:** CHEMTREC **1-800-424-9300**. **IN THE U.S.** FOR LOST, STOLEN OR MISPLACED EXPLOSIVES CALL: BATF **1-800-800-3855**. FORM ATF F5400.0 MUST BE COMPLETED AND LOCAL AUTHORITIES (STATE/MUNICIPAL POLICE, ETC.) MUST BE ADVISED.

## SECTION 2 – HAZARD IDENTIFICATION

### Emergency Overview:

This product is an article. No exposure to hazardous chemicals is expected to occur during intended product use. Misuse of the product may result in exposure to hazardous chemicals. The following information is the potential hazards associated with the ingredient(s) in this product. It is our belief that, under conditions of normal occupational exposure, this product should pose no such hazards to the user. Main risk is that of explosion by shock, friction, fire or other sources of ignition. Read the entire MSDS for a more thorough evaluation of the hazards. Suspect cancer hazard – risk of cancer depends on duration and level of exposure. Irritating to respiratory system. Vapors may be irritating to eyes, nose, throat, and lungs.

**Appearance:**  
Yellow flexible cord

**Physical State:**  
Solid

**Odor:**  
Slight

## SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Pentaerythritol Tetranitrate	78-11-5	5-10
Calcium Estearate	1305-78-8	1-5
Charcoal	1333-86-4	1-5
Titanium Dioxide	13463-67-7	1-5
Dinitrotoluene (mixed isomers)	25321-14-6	1-5
Lead Styphnate	63918-97-8	1-5
Lead	7439-92-1	1-5
Zinc	7440-66-6	1-5
Amorphous Silica	7631-86-9	1-5
Sulfur	7704-34-9	1-5
Potassium Nitrate	7757-79-1	1-5
Dibutyl Phthalate	84-74-2	1-5

## SECTION 4- FIRST AID MEASURES

**General Advice:** In case of accident or if you feel unwell, seek medical advice IMMEDIATELY (show the product label where possible).

**Eye Contact:** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.

<b>Skin Contact:</b>	Wash off immediately with soap and plenty of water, removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
<b>Inhalation:</b>	Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is not breathing AND no pulse. Obtain medical advice IMMEDIATELY.
<b>Ingestion:</b>	Immediate medical attention is required. Do not induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, have victim lean forward with head positioned to avoid breathing in of vomitus, rinse mouth and administer more water.
<b>Notes to Physician:</b>	Symptomatic. Administer oxygen if there are signs of cyanosis. If clinical condition deteriorates, administer 10cc Methylene Blue intravenously. It is unlikely for this to be required with methemoglobin level of less than 40%. Do not give vasopressor drugs (i.e., epinephrine, adrenaline, ephedrine, etc.) as there may be danger of producing cardiac arrhythmia. Medical conditions that may be aggravated by exposure to this product include hypotension and skin disorders.

## SECTION 5 – FIRE-FIGHTING MEASURES

<b>Flammable properties:</b>	High explosive with mass detonation hazard. Expected to be sensitive to mechanical impact. Not expected to be sensitive to static discharge.
<b>Suitable extinguishing media:</b>	DO NOT FIGHT FIRES INVOLVING EXPLOSIVES. Evacuate surrounding areas. When controlling fire before involvement of explosives, fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Water may be applied through fixed extinguishing system (sprinklers) as long as people need not be present for the system to operate. Water may be used on small fires.
<b>Unsuitable extinguishing media:</b>	DO NOT FIGHT FIRES INVOLVING EXPLOSIVES.
<b>Specific hazards arising from the Chemical:</b>	DO NOT FIGHT FIRES INVOLVING EXPLOSIVE MATERIALS. Immediately evacuate all personnel from the area to a safe distance. Guard against re-entry. This product is a high explosive with a mass detonation hazard. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Protective equipment and precautions for fire fighters:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH approved (or equivalent) and full protective gear.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

<b>Methods for containment:</b>	No information available.
<b>Methods for cleaning up:</b>	Not required. If detonators are damaged, contact an Orica Canada Inc. or Orica USA Inc. technical representative.

## SECTION 7 - HANDLING AND STORAGE

<b>Handling:</b>	This product is an explosive and should only be used under the supervision of trained personnel. Protect containers from physical damage. Keep away from incompatible materials, heat, sparks, flames and other ignition sources. Avoid rough handling.
<b>Storage:</b>	Keep container tightly closed in a dry and well-ventilated place.

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering Measures:</b>	Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
<b>Personal Protective Equipment</b>	
<b>Eye/Face Protection:</b>	Tightly fitting safety goggles.
<b>Skin Protection:</b>	Not required for normal use.
<b>Respiratory protection:</b>	Use a NIOSH-approved respirator, if required.
<b>Hygiene Measures:</b>	Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Polyolefin tube with unspecified color	<b>Odor:</b>	None
<b>Physical State:</b>	Solid	<b>Viscosity:</b>	No Information Available
<b>pH:</b>	No data available	<b>Melting Point/Range:</b>	PETN melts at 140 °C / 284 °F
<b>Flammable Limits (upper):</b>	No data available	<b>Flammable Limits (lower):</b>	No data available
<b>Explosion Power:</b>	No data available	<b>Specific Gravity:</b>	Not available
<b>Water Solubility:</b>	Negligible	<b>Other Solubility:</b>	No information available
<b>Vapor Pressure:</b>	Not available	<b>Oxidizing Properties:</b>	No information available
<b>Partition Coefficient (n-octanol/water):</b>	No data available		

## SECTION 10 - STABILITY AND REACTIVITY

<b>Stability:</b>	Explosive. Stable under recommended storage conditions
<b>Conditions to avoid:</b>	Keep away from heat, sparks, flame, impact and friction.
<b>Incompatible materials:</b>	Strong oxidizing agents, Acids.
<b>Hazardous decomposition products:</b>	Thermal decomposition products are toxic and may include hydrocarbons, oxides of carbon and nitrogen.
<b>Hazardous polymerization:</b>	Hazardous polymerization does not occur.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Acute Toxicity

**Product Information:** This product has not been tested for toxicity. Information provided is based on the components.

**Carcinogenicity:** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Charcoal		Group 2B		X
Dinitrotoluene (Mixed isomers)	A3			
Lead Styphnate	A3	Group 2B		X
Lead	A3	Group 2A Group 2B		X

<b>Legend:</b>	A3 is listed as a known animal carcinogen. Group 2A is probably carcinogenic to humans Group 2B is possibly carcinogenic to humans. X is listed as the OSHA acknowledges these chemicals as carcinogens.
<b>Mutagenicity:</b>	There is no evidence of mutagenic potential
<b>Sensitization:</b>	None.
<b>Reproductive effects:</b>	An ingredient in the product may cause reproductive effects
<b>Developmental effects:</b>	A study in animals has shown that high exposures produce teratogenic effects in the absence of maternal toxicity
<b>Target Organ:</b>	Blood, Liver, Respiratory system, Eye, Reproductive System, Central Vascular System (CVS), Gastrointestinal tract (GI)

## SECTION 12 - ECOLOGICAL INFORMATION

**Ecotoxicity effects:** Environmental Effects: Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Burn under supervision of an expert at and explosive burning ground or destroy by detonation in boreholes, in accordance with applicable local, provincial and federal regulations. Call upon the services of an Orica Technical Representative.

## SECTION 14 - TRANSPORT INFORMATION

**DOT Proper Shipping Name:** Detonators Assemblies Non Electric  
**Hazard Class:** 1.4B or 1.1B (depending on packaging)  
**UN-No:** UN0361 or UN0360 (depending on packaging)  
**Packing Group:** II

**TDG Proper Shipping Name:** Detonators Assemblies Non Electric  
**Hazard Class:** 1.4B or 1.1B (depending on packaging)  
**UN-No:** UN0361 or UN0360 (depending on packaging)  
**Packing Group:** II

## SECTION 15 - REGULATORY INFORMATION

**CANADIAN CLASSIFICATION:** This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS contains all the information required by the CPR

**WHMIS hazard class:** This product is an explosive and is not regulated by WHMIS.

**USA CLASSIFICATION:**

**SARA Regulations Sections 313 and 40 CFR 372:** No reportable components present

**SARA 311/312 Hazardous Categorization**

**Acute Health Hazard:** Yes

**Chronic Health Hazard:** Yes

**Fire Hazard:** No

**Sudden Release of Pressure Hazard:** Yes

**Ozone Protection and 40 CFR 42:** No reportable quantities of ozone depleting agents

**Other Regulations/Legislations which apply to this product:** California Proposition 65, Pennsylvania Right-to-Know, Massachusetts Right-to-Know, Rhode Island Right-to-Know, New Jersey Right-to-Know.

**TSCA:** Complies

**DSL:** Complies

**NDSL:** Complies

## SECTION 16 - OTHER INFORMATION

**Prepared By:** Safety, Health & Environment  
303-268-5000

**Preparation Date:** 20-Sep-2007

**Revision Date:** 22-Oct-2008

The information contained herein is offered as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Orica will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein.

**End of MSDS**