



# Ultrablast - Nickel Slag

## Material Safety Data Sheet

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### SECTION 1 – PRODUCT IDENTIFICATION & USE

Ultrablast (Crushed Nickel Slag)

**MSDS NO:** 384-2

#### MANUFACTURER AND SUPPLIER:

**Opta Minerals**

407 Parkside Drive  
Waterdown, Ontario  
L0R2H0

**Tel:** 905-689-6661 **Emergency:** 905-689-6661, Ext: 222

#### MATERIAL IDENTIFICATION AND USE

This material is a shiny, black, granular aggregate for use as a roofing granule or as a blasting media.

**Note:** This MSDS covers many products and individual physical and chemical properties will vary. Consult individual Technical Data Sheet's for specifics.

### SECTION 2 – HAZARDOUS INGREDIENTS

The approximate element composition of this material is as follows:

Ingredients	Chemical formula by weight	Typical %	CAS #
Iron Oxide	Fe <sub>2</sub> O <sub>3</sub> + FeO	30 - 37	1309-37-1
Amorphous Silica	SiO <sub>2</sub> (total)	32 - 42	61790-53-2
Aluminum Oxide	Al <sub>2</sub> O <sub>3</sub>	3 - 10	1344-28-1
Magnesium Oxide	MgO	5 - 12	1309-48-4
Calcium Oxide	CaO	3 - 6	1305-78-8
Chromium Oxide	Cr <sub>2</sub> O <sub>3</sub>	2 - 3	7440-47-3
Nickel	Ni	0.1 - 1.0	7440-02-0
Silicon Dioxide (crystalline)	SiO <sub>2</sub> (crystalline)	0.3	14808-60-7

### SECTION 3 – PHYSICAL DATA

**APPEARANCE:** Solid, angular granules. Shiny black colour.

**ODOUR:** No appreciable odour.

**SOLUBILITY IN WATER (%):** Insoluble.

**MELTING POINT:** Not Available.

**pH:** Not Available.

### SECTION 4 – FIRE AND EXPLOSION DATA

**FLAMABILITY:** No

**EXTINGUISHING MEDIA:** Not applicable

**SPECIAL FIRE FIGHTING PROCEDURES:** Not applicable

**UNUSUAL FIRE/EXPLOSION HAZARDS:** Not applicable

The product will not burn or explode.

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## SECTION 5 - REACTIVITY DATA

<b>PRODUCT STABILITY:</b>	Stable
<b>HAZARDOUS POLYMERIZATION:</b>	Will not occur
<b>CONDITIONS TO AVOID:</b>	Not applicable
<b>INCOMPATIBILITY:</b>	Not applicable
<b>HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:</b>	Not applicable

## SECTION 6 - TOXICOLOGICAL PROPERTIES

<b>EYE CONTACT:</b>	May cause irritation due to presence of "foreign object".
<b>SKIN CONTACT:</b>	Possible skin irritation.
<b>INHALATION:</b>	
<b>EFFECTS OF ACUTE EXPOSURE:</b>	Exposure may cause irritation to nose, throat and lungs.
<b>EFFECTS OF CHONIC EXPOSURE:</b>	Exposure may cause irritation to nose, throat and lungs.
<b>INGESTION:</b>	May cause irritation.
<b>OCCUPATIONAL EXPOSURE LIMITS:</b>	The following Threshold Limit Values (TLV's) refer to airborne concentrations of substances. The potential hazard of solid particles depends on particle size, which is expressed in three forms:

Inhalable (< 100  $\eta\text{m}$ ) – when deposited anywhere in the respiratory tract

Thoracic (< 25  $\eta\text{m}$ ) – when deposited anywhere within the lung airways and the gas-exchange region

Respirable (< 10  $\eta\text{m}$ ) – when deposited in the gas-exchange region

Substance	C.A.S. No.	PEL	TWA	STEL/C	Critical Effect(s)
PNOC <sup>1</sup> Inhalable		15	10	-	Lung
Respirable		5	3	-	Lung
Fe <sub>2</sub> O <sub>3</sub> (Iron Oxide)	1309-37-1	10	5	-	Pneumoconiosis
AL <sub>2</sub> O <sub>3</sub> (Aluminum Oxide)	1344-28-1	15	10	-	Lung; irritation
CaO (Calcium Oxide)	1305-78-8	5	2	-	Irritation
MgO (Magnesium Oxide)	1309-48-4	15	10	-	Irritation; metal fume fever
Ni (Nickel, elemental/metal)	7440-02-0	1	1.5	-	Dermatitis; pneumoconiosis; kidney
Cr <sub>2</sub> O <sub>3</sub> (Cr II Compounds)	7440-47-3	0.5	0.5	-	Irritation; dermatitis

<sup>1</sup>Particulates (Insoluble) Not Otherwise Classified

**OSHAPEL** – Permissible Exposure Limit (mg/m<sup>3</sup>)

**ACGIHTWA** – Time Weighted Average (mg/m<sup>3</sup>)

**STEL/C** – Short-term Exposure Limit / Ceiling (mg/m<sup>3</sup>)

In other jurisdiction, please consult appropriate occupational exposure regulations.

**Reference:** 1999 TLV's and BEI's Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices

## SECTION 7 - PREVENTATIVE MEASURES

<b>EYE PROTECTION:</b>	Safety goggles or glasses, as required by nature of task(s) being performed.
<b>SKIN PROTECTION:</b>	Impervious gloves recommended and other clothing as required by nature of work being done.
<b>VENTILATION:</b>	Use adequate ventilation and dust collection.
<b>RESPIRATORY PROTECTION:</b>	The following chart specifies the types of respirators to be used based on airborne concentrations of respirable crystalline silica. This chart has been provided as a guide for protection of personnel that may be exposed to airborne concentrations of any particulate matter.

### Airborne Concentration

(Respirable Free Silica)

< or equal to 10 X TWAEV

< or equal to 25 X TWAEV

### Type of Respirator Required

Half-mask particulate respirator with N-, R-, or P- series filter and 95, 99, or 100% efficiency.

Powered air purifying respirator equipped with a hood or helmet, and any type of particulate filter; or supplied air respirator equipped with a hood or helmet and operated in a continuous flow mode.

**TWAEV** – time-weighted average exposure value

Where applicable, respirators should be fitted, maintained, and cleaned in accordance with the regulations made under the Occupational Health and Safety Act.

**OTHER PROTECTIVE EQUIPMENT:** As required by nature of work being done.

**LEAKS AND SPILLS:** Avoid breakage of bagged material or spills of bulk material. Do not dry sweep, use a dustless system (vacuum) for clean up so that airborne dust does not exceed the permissible exposure limit.

**WASTE DISPOSAL INFORMATION:**

Dispose in accordance with federal, state or local regulations. Material contaminated in use may have special disposal requirements. Dispose in accordance with federal, state or local regulations

**HANDLING PROCEDURES AND EQUIPMENT:**

Use adequate ventilation and dust collection. Do not permit dust to collect on walls, floors, ledges, machinery, or equipment. Use dustless system (vacuum) for handling, storage and clean up so that airborne dust does not exceed the permissible exposure limit.

**STORAGE REQUIREMENTS:**

No special storage procedures required. Avoid dust generation when handling.

**SECTION 8 – FIRST AID MEASURES**

- SKIN CONTACT:** Wash with soap and water.
- EYE EXPOSURE:** Flush with water and seek medical advice if irritation persists.
- INGESTION:** Seek immediate medical aid.
- INHALATION:** Remove to fresh air. If breathing difficulty is encountered, seek medical aid.

**SECTION 12 - PREPARATION DATE OF MSDS**

The MSDS was prepared from information provided by raw material suppliers to Opta Minerals.

- DATE ISSUED:** September 13, 2006
- CONTACT:** Operations Supervisor  
Quality Control Coordinator

For non-emergency questions, please contact your sales person.  
General inquiries may be directed to 905-689-6661.