

# GREEN DIAMOND

## NICKEL SLAG

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### PRODUCT

TARGET Green Diamond Abrasive Grits are high efficiency blasting grits prepared by selective screening of nickel slag. Three gradations are available to provide materials suitable for most blast cleaning operations. All three grades have a Moh's hardness of 6.5 to 7, giving improved cutting relative to conventional industrial and silica sands. Green Diamond is manufactured by Cominco American for Target Products Ltd.

### USES AND ADVANTAGES

- Green Diamond is suitable for most grit blasting operations on metal surfaces. The shapes of the individual particles make this product ideal for the efficient removal of mill scale, rust or existing coatings from steel and other metals in preparation for fabrication or painting.
- The high fracture resistance of Green Diamond, plus the available dust reduction treatment, reduce dust formation and give increased recoverability, improved safety factors and reduced equipment maintenance costs while continuing to provide the required degree of etch.
- The low free silica content (less than 1%) of Green Diamond is a significant factor in situations where the use of silica sand blasting abrasives is not acceptable for environmental or safety reasons.
- Green Diamond is classified in Fisheries and Oceans Canada Report No. 1692 of January 1991 as:
  - (a) having moderate to low toxicity to fish, i.e. 96-h LC50  $\geq$  100 mg/L. (Test value was >66000 mg/L).
  - (b) not known to be persistent and not likely to accumulate in animal tissues.

### PHYSICAL PROPERTIES

Colour	Green/Grey
Grain Shape	Angular
Bulk Density	85 - 105 lb/ft <sup>3</sup> (1362 - 1682 kg/m <sup>3</sup> )
Hardness, Moh	6.5 - 7
Specific Gravity	3.3
Moisture Content	<0.1% weight

### CAUTION

Although Green Diamond is able to be used for blasting of concrete or wood surfaces, a test section should be done before proceeding with a project to ensure that the particles of abrasive do not become embedded in the work, causing a darkening of the exposed surfaces. TARGET silica sand or industrial sand abrasives are usually more suitable for such applications.

### PACKAGING

Green Diamond 16-36 and 20-50 are available in 36.3 kg (80 lb) or 25 kg (55 lb) paper bags or in bulk bags of approximately 1650 kg (3640 lb) each. Deliveries by pneumatic tank trucks are also available. The 30-60 grade is available only in 36.3 (80 lb) paper bags. Shipments to US destinations can also be made in 100 lb paper bags.

Product performance is affected by many factors, including storage, method and conditions of application and use. User testing is ESSENTIAL to determine suitability of product for intended method of application and use. Target's SOLE WARRANTY is that the product has been manufactured to specifications. No oral or written information or advice shall increase this warranty or create new warranties. Target's SOLE LIABILITY is to replace product proved defective. In no event shall Target be liable for any consequential, indirect or other damages whether arising from negligence or otherwise.

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### SAFETY

TARGET Green Diamond Abrasives do not contain any ingredients which require classification under WHMIS regulations. Because of the hazardous nature of abrasive blast cleaning operations and the toxicity of the dusts that can be created when removing certain coatings, all appropriate safety precautions must be followed when using Green Diamond or any other abrasive. Consult your local Industrial Health & Safety Regulations, NIOSH or other requirements for guidance on the required safety procedures and equipment.

### WASTE DISPOSAL

Before use, TARGET Green Diamond is not classified as a special waste. During use, however, the product can become contaminated with paints or other materials that would require classification of the waste material as a special waste. It is the responsibility of the user to undertake any necessary evaluation, classification and disposal of the material after use. Consult local authorities for information on the disposal requirements and procedures applicable to spent abrasive in your area.

### TYPICAL SIEVE ANALYSES

The sieve analyses given in the following table are typical values. Actual values could change from time to time.

Sieve Size		Individual % Retained			Cumulative % Passing		
ASTM E 11	Metric	Medium #16-36	Fine #20-50	Extra Fine #30-60	Medium #16-36	Fine #20-50	Extra Fine #30-60
No. 10	2.00 mm	0-1			99 - 100		
No. 12	1.70 mm	2 - 6	0		93 - 98	100	
No. 16	1.18 mm	30 - 45	0 - 2		50 - 65	98 - 100	
No. 20	0.85 mm	40 - 50	0 - 15		10 - 20	85 - 100	
No. 30	0.60 mm	5 - 15	30 - 50	0	2 - 9	40 - 60	100
No. 40	0.42 mm	2 - 6	20 - 50	5 - 20	0 - 3	5 - 25	80 - 95
No. 50	0.30 mm		5 - 20	25 - 40		0 - 6	45 - 65
No. 70	0.21 mm	0 - 2	0 - 5	25 - 35	0 - 1	0 - 1	15 - 35
No. 100	0.15 mm			5 - 25			5 - 15
Pan		0 - 1	0 - 1	5 - 15			

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### TYPICAL CHEMICAL ANALYSIS

All grades of TARGET Green Diamond have the following approximate chemical analysis. The metals are present as silicates and other complex compounds in a glassy, non-reactive matrix.

Iron (Fe <sub>2</sub> O <sub>3</sub> )	21.6 percent weight (dry basis)
Calcium (CaCO <sub>3</sub> )	None detected
Potassium (K <sub>2</sub> O)	0.03
Aluminum (Al <sub>2</sub> O <sub>3</sub> )	3.19
Magnesium (MgO)	29.18
Chromium (Cr <sub>2</sub> O <sub>3</sub> )	0.07
Combined Silica (SiO <sub>2</sub> )	43.05
Free Silica (SiO <sub>2</sub> )	0.20
Sulphur (S)	0.17
Chloride (Cl)	0.03
Lead Arsenate (PbHAsO <sub>4</sub> )	None detected
Carbonates (CO <sub>3</sub> )	0.02
Gypsum (CaSO <sub>4</sub> )	None detected

### TOTAL METALS, ppm

ELEMENT	Green Diamond 20-50 TOTAL METALS mg/kg	CCME 1996 Maximum Limit Commercial/Industrial
Arsenic	0.05	50
Barium	10	2000
Cadmium	<2.0	20
Chromium	1770	800
Cobalt	21.6	300
Copper	9.8	500
Lead	<10	1000
Mercury	<0.005	10
Molybdenum	7.6	40
Nickel	575	500
Selenium	<0.10	10
Silver	<2.0	40
Tin	<30	300
Zinc	25.8	1500

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