

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

<b>PRODUCT TRADE NAME</b>	ProTerra DE Pro
<b>MANUFACTURER</b>	ProTerra, 903 N. Marshall Way, Layton, UT 84041
<b>TELEPHONE NO.</b>	1-888-679-2280
<b>CHEMICAL NAME</b>	Diatomaceous Earth, Natural
<b>CHEMICAL FAMILY</b>	Silica
<b>MATERIAL USE</b>	Functional additive, Filler
<b>DATE OF PREPARATION</b>	August 22, 2014

**SECTION 2: HAZARDS IDENTIFICATION**

<b>EMERGENCY OVERVIEW: Appearance//Color/Odor</b>	A buff to off-white, low density powder. There is no distinctive odor.
<b>OSHA REGULATORY STATUS</b>	This material is considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200)
<b>POTENTIAL HEALTH EFFECTS</b>	See below and Section 11 for additional information
<b>Likely Routes of Exposure</b>	See below
<b>EYE</b>	May cause irritation (tear formation and redness) if dust gets in eyes.
<b>SKIN</b>	Not absorbed by the skin, but may cause dryness if prolonged exposure.
<b>INGESTION</b>	Ingestion of small to moderate quantities is not considered harmful, but may cause irritation of the mouth, throat and stomach.
<b>INHALATION</b>	Acute inhalation can cause dryness of the nasal passage and lung congestion, coughing and general throat irritation. Chronic inhalation of dust should be avoided.
<b>CHRONIC EFFECTS</b>	Chronic inhalation of dust in excess of the Permissible Exposure Limit (PEL) established by OSHA, or the Threshold Limit Value (TLV) recommended by the American Conference of Governmental Industrial Hygienists (ACGIH) over a prolonged number of years may cause pneumoconiosis. Pneumoconiosis is a non-cancerous lung disease.
<b>CONDITIONS AGGRAVATED BY EXPOSURE</b>	Pre-existing diseases of the upper respiratory tract and lung such as bronchitis, emphysema, and asthma.
<b>ENVIRONMENTAL EFFECTS</b>	There are no significant environmental effects.

**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

INGREDIENT IDENTIFICATION	APPROXIMATE CONCENTRATION (%)	C.A.S. NUMBERS	EINECS
Diatomaceous Earth, Natural (kieselguhr)	100%	61790-53-2	612-383-7
Crystalline Silica (Quartz)	< 1%	14808-60-7	238-78-4

**SECTION 4: FIRST AID MEASURES**

<b>EYE</b>	Flush eyes with generous quantities of water or eye rinse solution. Consult physician if irritation persists.
<b>SKIN</b>	Use moisture renewing lotions if dryness occurs.
<b>INGESTION</b>	Drink generous amounts of water to reduce bulk and drying effects.
<b>INHALATION</b>	Remove to fresh air. Blow nose to evacuate dust.
<b>NOTE TO PHYSICIANS</b>	No special notes.
<b>ANTIDOTE</b>	Not applicable

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## SECTION 5: FIRE FIGHTING MEASURES

FLAMMABILITY	This material is not flammable.
EXTINGUISHING MEDIA	Not applicable, the material is not flammable.
FIRE-FIGHTING PROCEDURES	Not applicable, the material is not flammable.
PROTECTIVE EQUIPMENT	Not applicable, the material is not flammable
HAZARDOUS COMBUSTION PRODUCTS	Not applicable, the material does not combust.
SPECIFIC PHYSICAL AND CHEMICAL HAZARDS	Not applicable, the material is not flammable.
EXPLOSION DATA	Not applicable, the material is not explosive.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	If dust is present, use respirator fitted with particulate filter as specified in Section 8. Protect eyes with goggles.
ENVIRONMENTAL PRECAUTIONS	This material is not a significant environmental concern.
CONTAINMENT AND CLEANUP	Vacuum clean spillage, wet sweep or wash away. Avoid creating dust.

## SECTION 7: HANDLING AND STORAGE

HANDLING	Minimize dust generation. Avoid contact with eyes. Avoid breathing dust. Repair or dispose of broken bags.
STORAGE	Store in a dry place to maintain packaging integrity and product quality. Do not store near hydrofluoric acid. Observe all label precautions and warnings.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>EXPOSURE GUIDELINES:</b>				
Component	OSHA PEL	ACGIH TLV	MSHA PEL	NIOSH REL
Diatomaceous Earth, Natural (kieselguhr)	10 mg/m <sup>3</sup> total dust for products containing < 1% quartz	3 mg/m <sup>3</sup> respirable dust	5 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>
Crystalline Silica (Quartz)	See above	See above	See above	See above
<b>ENGINEERING CONTROLS</b>	Local – Control dust within recommended TLV/PEL. Refer to ACGIH publication “Industrial Ventilation” or similar publications for design of ventilation systems.			
<b>PERSONAL PROTECTIVE EQUIPMENT:</b>	See below			
<b>EYE / FACE</b>	Goggles to protect from dust			
<b>SKIN</b>	No special equipment is needed.			
<b>RESPIRATORY</b>	Respirators fitted with filters certified to standard 42CFR84 under series N95 should be worn when dust is present. If the dust concentration is less than ten (10) times the Permissible Exposure Limit (PEL) use a quarter or half-mask respirator with a N95 dust filter or a single use dust mask rated N95. If dust concentration is greater than ten (10) times and less than fifty (50) times the PEL, a full-face piece respirator fitted with replaceable N95 filters is recommended. If dust concentration is greater than fifty (50) and less than two hundred (200) times the PEL use a power air-purifying (positive pressure) respirator with a replaceable N95 filter. If dust concentration is greater than two hundred (200) times the PEL use a type C, supplied air respirator (continuous flow, positive pressure), with full face piece, hood or helmet.			
<b>GENERAL HYGIENE</b>	Avoid breathing dust. Avoid contact with eyes. Wash hands after handling and before eating or drinking.			

For sampling silica dusts refer to NIOSH Analytical Method 7500 or OSHA method ID 142

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE, COLOR	Buff to off white powder	ODOR	Odorless
PHYSICAL STATE	Solid	pH (10% SUSPENSION)	6-8
VAPOR PRESSURE	Not applicable	VAPOR DENSITY	Not applicable
BOILING POINT	Not applicable	MELTING POINT	> 1300° C
FLASH POINT	Not applicable	FLAMMABILITY	Not applicable
FLAMMABILITY LIMITS	Not applicable	AUTOIGNITION TEMPERATURE	Not applicable
DECOMPOSITION TEMPERATURE	> 1300° C	SPEC. GRAVITY / REL. DENSITY	2.0
EVAPORATION RATE	Not applicable	COEFF. - WATER / OIL	Not applicable
ODOR THRESHOLD	Not applicable	SOLUBILITY - WATER	< 2%
PARTITION COEFFICIENT	Not applicable		

## SECTION 10: STABILITY AND REACTIVITY

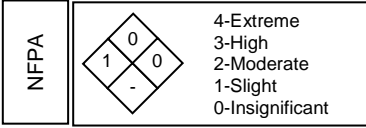
CHEMICAL STABILITY	Material is stable.
PHYSICAL HAZARDS	Material is not reactive.
CONDITIONS TO AVOID	Not applicable
INCOMPATIBLE MATERIALS	Hydrofluoric acid. Products containing silica may react violently with hydrofluoric acid.
HAZARDOUS DECOMPOSITION PRODUCTS	Not applicable

## SECTION 11: TOXICOLOGICAL INFORMATION

CHRONIC EFFECTS / CARCINOGENICITY	These natural products are composed predominantly of amorphous silica, but can contain a small fraction (< 1%) of crystalline silica. Amorphous silica is not classifiable as carcinogenic to humans. Crystalline silica, when inhaled as respirable dust, has been classified as carcinogenic to humans over prolonged and sustained exposure. Long-term inhalation of respirable crystalline silica may contribute to the respiratory disease "silicosis", a non-cancerous lung disease. In a 1997 monograph (Volume 68, "Silica"), the International Agency for Research on Cancer (IARC) concluded that overall the epidemiological findings support increased risk of lung cancer from inhaled crystalline silica resulting from occupational exposure (classified in Group 1), while there was inadequate evidence in humans for the carcinogenicity of amorphous silica (classified in Group 3).
ROUTE OF EXPOSURE	Inhalation (chronic)
SYMPTOMS	Not available
LD50	Not available
IMMEDIATE AND DELAYED EFFECTS	No immediate effects. See CHRONIC EFFECTS for potential long-term effects when prolonged exposure to levels of crystalline silica in excess of OSHA PEL and ACGIH TLV.
CORROSIVENESS, SENSITIZATION, IRRITANCY	Not applicable
REPRODUCTIVE TOXICITY	Not available
TERATOGENICITY, MUTAGENICITY	Not available
TOXICOLOGICALLY SYNERGISTIC PRODUCTS	Inhaled smoke from tobacco products (chronic).

## SECTION 12: ECOLOGICAL INFORMATION

CHARACTERISTICS	Non-biodegradable, inert, with little potential for bioaccumulation.
POSSIBLE EFFECTS	Diatomaceous earth products have shown some efficacy as a natural insecticide, but otherwise have no demonstrated toxicity in regards to aquatic or terrestrial life.

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<b>SECTION 13: DISPOSAL CONSIDERATIONS</b>							
<b>WASTE DISPOSAL</b>	If this material as supplied becomes a waste, use solid waste disposal common to landfill type operations or in slurry to sumps. Not considered a hazardous waste under RCRA (40CFR Part 261).						
<b>PACKAGING DISPOSAL</b>	Dispose of in accordance with applicable laws and regulations, typically solid waste disposal common to landfill type operations.						
<b>SECTION 14: TRANSPORT INFORMATION</b>							
<b>BASIC SHIPPING INFORMATION</b>	DOT shipping classification 55 (no restrictions). Technical name is "Diatomaceous Earth".						
<b>ADDITIONAL INFORMATION</b>	No special requirements or placarding necessary.						
<b>SECTION 15: REGULATORY INFORMATION</b>							
<b>U.S. FEDERAL:</b>							
<b>OSHA</b>	Under the Hazard Communication Standards, crystalline silica is classified as a toxic and hazardous substance.						
<b>TSCA</b>	Crystalline silica appears on the EPA TSCA inventory list, but is not regulated.						
<b>CERCLA</b>	Crystalline silica is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR 302.						
<b>SARA TITLE III</b>	Not listed.						
<b>NTP</b>	Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as a carcinogen.						
<b>INTERNATIONAL:</b>							
<b>IARC</b>	"Inhaled crystalline silica from occupational sources" – Group 1 – is classified in IARC as a carcinogen.						
<b>WHMIS Classification</b>	These products are not regulated by WHMIS						
<b>WHMIS Ingredient Disclosure List</b>	Crystalline silica Included for disclosure at 1% or greater, does not apply for these products.						
<b>SECTION 16: OTHER INFORMATION</b>							
	 <p>4-Extreme 3-High 2-Moderate 1-Slight 0-Insignificant</p>	<table border="1"> <tr> <td rowspan="4" style="writing-mode: vertical-rl; transform: rotate(180deg);">HMIS</td> <td>* Health</td> </tr> <tr> <td>0 Flammability</td> </tr> <tr> <td>0 Reactivity</td> </tr> <tr> <td>E Protective Equipment</td> </tr> </table>	HMIS	* Health	0 Flammability	0 Reactivity	E Protective Equipment
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<b>REVISION DATE</b>	August 22, 2014						
<b>REVISION NO.</b>	15						

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