

MATERIAL SAFETY DATA SHEET	TERAVITA LIMITED	Updated 11/01/01
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INTERNATIONAL TARIFF CODE FOR PROCESSED LIGNITE – 2702.10.00.00
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SECTION I – COMPANY AND PRODUCT INFORMATION

MANUFACTURER'S NAME TeraVita Limited	EMERGENCY TEL. NO. 717-291-7251	CHEMTREC: (800) 424-9300
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ADDRESS (number, street, city, state, zip code) 128 Weaver Road, Lancaster, PA 17603 USA

CHEMICAL NAME AND SYNONYMS Naturally occurring peat & brown bituminous coal. Processed lignite.	TRADE NAME (S) AND SYNONYMS TeraVita SP-85
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CHEMICAL CHARACTERIZATION: Humic acid, sodium and potassium salts	CAS# 68131-04-4	CONTENT 85-95%
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SECTION II – HAZARDOUS IDENTIFICATION

HAZARDS DESCRIPTION:	Not applicable
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HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES – NONE KNOWN
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SECTION III – PHYSICAL DATA

MELTING POINT	>3000° C	SPECIFIC GRAVITY (H ₂ O = 1)	1.5
VAPOR PRESSURE (mm Hg.)	N/A	FLAMMABILITY	Not flammable
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE	1.0 atm
MOISTURE CONTENT	11 – 15%	pH (in 0.01% solution)	8.5 – 9.2
ACTIVITY (Soluble Humic Acids)	85 – 95 %	SOLUBILITY IN WATER	88 – 92 %
APPEARANCE / FORM	Dark brown to black powder	ODOR	Almost odorless

SECTION IV – FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA Water, carbon dioxide, extinguishing powder.
SPECIAL FIRE FIGHTING PROCEEDURES Wear self-contained respirator and fully protective suit.
UNUSUAL FIRE AND EXPLOSION HAZARDS Any fine dust may explode if it is suspended in air and proper ignition source is present. Under extreme temperatures, powder burns similar to coal.

SECTION V – FIRST AID MEASURES

AFTER INHALATION: Supply fresh air. If required, provide artificial respiration and seek medical advice. No toxic effects are known. Wash with water and soak and rinse thoroughly.
AFTER EYE CONTACT: Rinse opened eye for several minutes under running water. No eye reaction effects are known, but the powdered nature of the product could cause physical discomfort. Seek medical advice if irritation persists.
AFTER SWALLOWING: No detrimental effects of ingestion are known. Seek medical advice if discomfort arises.
EFFECTS OF OVEREXPOSURE No exposure limits have been determined and no particular reactions to this product have been reported. If combined with other products, use their MSDS information.

SECTION VI – REACTIVITY DATA

STABILITY Stable <input checked="" type="checkbox"/> Unstable ___	
MATERIALS TO AVOID - Oxidizing agents	INCOMPATIBILITY - Avoid mixing with materials that have a pH lower than 4.0
HAZARDOUS DECOMPOSITION PRODUCTS When burned, CO, CO ₂ , SO ₂ , hydrocarbons (including coal tar pitch and unknowns may be detected)	
HAZARDOUS POLYMERIZATION Will Occur ___ Will not occur <input checked="" type="checkbox"/>	

SECTION VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED Vacuum if possible to avoid generating airborne dust. Avoid breathing dust. Wear an approved respirator. Avoid adding water to the spill as the material will permanently stain most surfaces and may become slippery when wet.
WASTE DISPOSAL METHOD Follow Federal, State, or Local regulations for solid waste

SECTION VIII – HANDLING PRECAUTIONS

RESPIRATORY PROTECTION Use appropriate respiratory protection for airborne particulate based on consideration of airborne workplace concentration and duration of exposure.
VENTILATION Use local exhaust for ventilation; no mechanical or special exhaust is necessary.
PROTECTIVE GLOVES Recommended as a precautionary measure only.

EYE PROTECTION

Safety goggles or glasses are recommended

OTHER PROTECTIVE EQUIPMENT

As appropriate for the work environment. Dusty or dirty clothing should be laundered after use. Product may stain clothes.

SECTION IX – PHYSICAL CHARACTERISTICS

Organic carbon (active carbon)		53%	
Spectrum Analysis Data:			
Element	%	Element ppm	
Si	2.25	Ni	1
Al	1.25	Co	9
Mg	0.70	V	8
Ca	5.0	Cr	1.5
Fe	2.0	Mo	70
Na	8.0	Zr	8
K	5.0	Nb	4.5
Ti	0.35	Cu	4
P	0.05	Pb	2
B	0.05	Ag	2
Ba	0.02	Ga	9
Sr	0.03	Y	1
Mn	0.012	Zn	70
Other elements including Cd, Hg, and Ar were not found			

SECTION X – TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: one the skin, some irritation may occur. One the eye, some irritation may occur. Sensitizing: no sensitizing effect known

SUBACUTE TO CHRONIC TOXICITY:
Other than potential irritation above, no information on illness or injury is known.

OTHER TOXICOLOGICAL INFORMATION:
No classification data on the carcinogenic properties of this material is available.

SECTION XI – ECOLOGICAL INFORMATION

General Information:	Humic acids are very active substances. Excessive applications to the plants or soil could inhibit plant growth for an undetermined length of time. No aquatic dangers are known.
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SECTION XII – TRANSPORTATION INFORMATION

Not a hazardous material for transportation

The information contained herein is based upon knowledge believed to be reliable, but neither TeraVita Limited, nor its affiliates, makes any warranties, expressed or implied, as to the accuracy or adequacy thereof. Nothing herein excuses the recipient hereof from such duties as shall be imposed by the Occupational Safety & Health Act of 1970 and regulations issued pursuant thereof.