

SAFETY DATA SHEETS

This SDS packet was issued with item:

078698863

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078698830 078698848 078698855 078772082

Material Safety Data Sheet

Section 1 – Product and Company Information

Product Name:	Osteo-Allograft Canine or Feline Bone Graft
Product Number:	Various beginning with CBxxxx or FBxxxx
Company:	Veterinary Transplant Services, Inc.
Street Address:	215 East Titus Street
City, State, Zip, Country:	Kent, Washington 98032 USA
Technical Phone:	(253) 520-0771
Fax:	(253) 856-1830
Website / E-mail	www.VTsonline.com

Section 2 – Composition/Information on Ingredients

Substance Name:

Bone of either canine or feline origin.

Synonyms:

allograft bone, bone matrix, demineralized bone powder, demineralized bone matrix (DBM), cancellous chips, bone implant, bone sections, whole bone, bone wedges, bone dowels, bone blocks, frozen bone graft, freeze-dried bone graft

Section 3 – Hazards Identification

This material is not classified as hazardous under OSHA regulations, this MSDS contains valuable information for the safe handling and proper use of this product. It should be retained and available for employees and others who use this product.

Emergency Overview:

Processed animal bone allografts pose little or no immediate hazard.

Potential Health Effects:

There are no known health hazards to individuals handling canine or feline bone.

All our donors must be in good systemic health. They must be generally healthy and canines must have been vaccinated at least for: rabies, distemper, hepatitis, and parvovirus. Exclusions include malignancies, diabetes, septicemia, bacteremia, autoimmune disorders, ingestion of toxic substances, knowledge of recent exposure to or history of rabies, distemper, or parvovirus, general unexplained lethargy or malaise.

At the time of euthanasia, blood samples are drawn and tested for transmissible diseases. Canines are tested for brucella, heartworm antigen, and a tick-borne disease panel that includes E. Canis, B. Canis, R. Rickettsii and B. Burgdorferi. Felines are tested for Feline Leukemia Virus and Feline Immunodeficiency Virus. If possible, we also archive a serum sample from our donors in the event that additional tests become necessary.

Veterinary Transplant Services puts serious emphasis on donor screening and tissue transplantation safety. We recognize that there are limitations in sensitivities of screening tests and limitations in available medical and social history for animals. Therefore, although we screen and test each donor and all tissues, as with transplantation in humans, there is always some small inherent risk of disease transmission. Therefore, VTS cannot assume responsibility or liability for the clinical use of the tissue it provides. It should be recognized however, that the risk of disease transmission from living, healthy pet cats and dogs to humans is very low, and that risk when it does exist, typically comes from exposure via scratches or bites. To further reduce any risk of disease transmission, our tissue processing methods are designed to eliminate living cellular components in bone grafts and that for irradiated grafts, gamma radiation (1.8 mRads; 18 kG) provides an additional sterilizing effect, thus even further reducing the potential for disease transmission.

Section 4 – First Aid Measures

Oral Exposure:	Ingestion is unlikely.
Inhalation Exposure:	Inhalation is unlikely
Dermal Exposure:	Wash exposed area with water
Eye Exposure:	Rinse the eyes well with water while lifting the eyelids. If irritation persists, consult a physician.

Section 5 – Fire Fighting Measures

Flammable Properties:

Not Flammable

Extinguishing Media:

Use extinguishing media that is appropriate for the surrounding fire.

Unusual Fire and Explosion Hazards:

None

Section 6 – Accidental Release MeasuresProcedure to be Followed in Case of Spill:

Sweep up and place the spilled material in a waste disposal container.

Procedure for Personal Precautions:

Typically, product is opened in a surgical setting and personal protections (mask, hair cover, gloves, and gown) are already in place. No additional protections are required.

Methods for Cleaning Up:

Wash the area with usual soap and water or disinfectant.

Section 7 – Handling and StorageHandling:

Practice good hygienic work practices. Grafts are packaged in multiple layers of plastic, Tyvek or other pouches or wrappers. This serves to protect the graft from contamination during storage and handling. Ensure that these layers are not damaged or punctured prior to use.

Storage:

All grafts should be kept in their sealed containers until ready for use. Freeze-dried grafts can be stored at typical room temperatures ($\sim 25^{\circ}\text{C}$), refrigerator temperatures or frozen (down to -80°C). The recommended maximum temperature for freeze-dried bone is 45°C . This is based on the stability of the growth factors, not of the collagen. Frozen grafts should be stored at -40°C or colder down to -80°C . This will allow maximum shelf life (5 years). Frozen grafts stored at warmer temperatures (e.g., -10°C) will have a significantly shortened shelf life; typically 6 months at those warmer temperatures. Transient excursions to room temperature will not affect the stability of the growth factors, but if any surviving microorganisms remained in the graft undetected they could have a remote chance of proliferating, hence the recommendation to maintain frozen grafts at frozen temperatures.

Section 8 – Exposure Controls / PPEEngineering Controls:

None

Personal Protective Equipment:

Respiratory: None needed

Hand: None needed, though gloves are recommended

Eye: None needed
 Skin: None needed

General Hygiene Measures:

Wear gloves, avoid contact with mucous membranes.

Exposure Limits:

OSHA: Not applicable

Section 9 – Physical/Chemical Properties

Appearance:

Physical State: Dry or frozen particles, segments or whole bone material
 Color: Ivory to off white, pale yellow or white

Properties:

pH 6.5-7.4
 Odor Irradiated grafts may have a slight odor of ozone,
 Frozen grafts have no odor
 BP Range N/A
 MP Range N/A
 Solubility: Insoluble in water
 Vapor Pressure: N/A
 Vapor Density: N/A
 Water Content: Freeze-dried grafts ~<8% residual moisture;
 Frozen grafts are fully hydrated (~19% moisture).
 Residuals of Processing Additives: Although processing steps are designed to
 reduce or eliminate processing additives, there may be
 slight residuals of antibiotics used for disinfection steps or
 phosphate buffer salts.

Section 10 – Stability and Reactivity
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Stability:

Stable

Conditions to Avoid:

Temperatures warmer than recommended above
 Repeated freezing and thawing.

Hazardous Decomposition Products:

None

Hazardous Exothermic Reactions:

None

Hazardous Polymerization:

Section 11 – Toxicological Information

Product is not listed on the OSHA Carcinogen list.

Section 12 – Ecological Information

Bone is biodegradable and has no known adverse effect on the aquatic environment.

Section 13 – Disposal Considerations

Appropriate Method of Disposal:

This product does not meet the criteria for hazardous waste. It may be disposed of in a landfill according to federal, state and local regulations.

Section 14 – Transport Information

The U.S. Department of Transportation Shipping Name:

This product is not classified as a hazardous material. Not regulated.

Section 15 – Regulatory Information

Toxic Substance Control Act (TSCA) Status:

Not listed in the TSCA inventory.

CERCLA Reportable Quantity:

None

SARA Title III, Section 302 Extremely Hazardous Substances:

Not listed as an Extremely Hazardous Substance.

Section 311/312 Hazard Categories:

Nonhazardous under Section 311/312

Section 313 Toxic Chemical:

No ingredient present at 1% or more is contained in the SARA Title III, Section 313 list.

RCRA Status:

If discarded in its purchased form, this product would not be a hazardous waste.

Section 16 – Other Information

Disclaimer:

For use in animals only, by technically qualified persons (e.g., veterinarians). Not for transplant into humans.

Warranty:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This MSDS and the associated products are intended for use only by technically qualified persons, and at their own discretion and risk. Since conditions and manner of use are outside the control of Veterinary Transplant Services, Veterinary Transplant Services makes no warranties, either expressed or implied, and shall not be held liable for any damage resulting from handling or from contact with the above product. If there are further questions please contact Veterinary Transplant Services at (800) 558-5223 or visit the website at: www.VTOnline.com.