Kush® Canine – particles for i.a. injection

VETERINARIAN PACKAGE INSERT

WARNING—FOR ANIMAL USE ONLY. KEEP OUT OF REACH OF CHILDREN

PRODUCT DESCRIPTION

Kush Canine particles for intra-articular (i.a.) injection is a sterile gel-particle veterinary device. Each particle is an insoluble complex composed of highly purified liquid and solid materials. The particles are cut from a solid mass, are greater than 90% aqueous liquid and the solids are bovine collagen (~70%), bovine elastin (~20%) and porcine heparin (~10%), which are cross-linked with glutaraldehyde and dispersed in phosphate-buffered physiological saline. A similar Gel-Del particle medical device product has been successfully tested in a multi-center human clinical trial for dermal correction under the product name, CosmetaLife® (www.ClinicalTrials.gov, search CosmetaLife, NCT00414544).

The purified collagen, elastin and heparin components, which make the structure found in skin, connective tissue, cartilage and bone, are known biocompatible materials. These components provide the structural and biological attributes of Kush Canine particles by forming an insoluble, hydrated material that provides lubricity, resiliency and elasticity while wetted. Crosslinking steps provide strength and biodurability, making the material resistant to proteolytic degradation.

The Kush Canine particles act like micro-sized sponges (75-100 microns in diameter) to take up the joints synovial fluid to be slippery (lubricious) and the fluid's inherent physical characteristics combine with the particles durable structure to provide a soft springy cushion when force is applied to them, mimicking and augmenting the effects of natural cartilage.

This product is for veterinary application only and requires licensed veterinarian supervision.

INDICATIONS AND USAGE

Kush Canine particles for intra-articular injection product is designed to prevent the occurrence and reoccurrence of joint pain from loss of cartilage or tissue-bone mechanical malfunction caused by joint dysfunction not associated with infection (e.g., lameness, osteoarthritis).

MECHANISM OF ACTION

Kush Canine particles are injected as a veterinary device to augment synovial fluid function, without pharmacologic, chemical or metabolic action. The gel-particles act as a soft mass of material that integrates well into the synovial fluid and surrounding space to provide a soft, lubricous, elastic cushion. The synovial fluid is absorbed by and passes through the particles making them nearly indistinguishable to the surrounding cartilage in their solid and liquid makeup of components and in their physical attributes. The Kush Canine particles are insoluble and will only very slowly degrade by enzymes (proteases) that naturally populate the joint. Other viscosupplements (e.g., hyaluronic acid) degrade rapidly and because of their size will readily pass through the synovial membrane while the Kush particles are too big. It is anticipated that all degradation products (e.g. amino acids and monosaccharides) are naturally resorbed while the Kush effects have been shown to last about a year.

CONTRAINDICATIONS/ WARNINGS/ PRECAUTIONS

WARNING: Kush Canine particles must not be injected if inflammation is substantial at the injection site (i.e., showing swelling, tenderness, redness). Kush Canine particles can be injected if the inflammation is only mild at the injection site and then only if a prior effective treatment with anti-inflammatory agents were given to this site.

WARNING: Kush Canine particles must not be injected into blood vessels.

WARNING: Implantation of Kush Canine particles into blood vessels may cause vascular occlusion, infarction, or embolic phenomena.

RISKS

The potential risks associated with the use of the Kush Canine particles for injection are similar to those risks associated with commercially available lameness veterinary products:

- infection,
- bleeding,
- hematoma/seroma,
- if injected into a blood vessel, interference with local circulation, resulting in vessel laceration or occlusion, and abscess at implant site which may result in hardening of the tissue and/or scar formation, and
- using drugs that reduce coagulation (aspirin or NSAIDs) may cause increased bruising or bleeding at the injection site.

Additionally, other bovine collagen products have shown the rare occurrences of the following symptoms:

- systemic events such as flu-like symptoms (e.g. fever, headache, myalgia, neuralgia, nausea, malaise or dizziness),
- itching,
- rash, and
- anaphylactic response.

HOW SUPPLIED

- Kush Canine particles are made up of lubricous gel-particles that are soaked in phosphate buffered saline, supplied sterile in a disposable 1 mL or 5 mL syringe.
- The syringe consists of the outer barrel, a plunger stopper, finger grip and plunger rod.
- The syringe, with sterile contents, is capped and together with an insert package, is packed in a sealed bag.

STORAGE DIRECTIONS

- Kush Canine particles can be refrigerated or kept in controlled room temperature environment (50-90 degrees F). DO NOT FREEZE OR APPLY HEAT TO THE SYRINGE.
- Kush Canine particles should be at room temperature (approximately 60°-90° F) for 15 to 30 minutes prior to use.

- Settling of the Kush Canine particles in the saline solution during storage is normal. Before use the syringe should be shaken or vortexed to form a uniform suspension.
- Kush Canine particles have a translucent whitish appearance. In the event that a syringe contains clumped non-uniform discolored material and/or dark non-translucent material, do not use the syringe.
- Use of Kush Canine particles is recommended within 12 months of the manufacture date on the package.
- Each syringe is for a single use only – DO NOT ATTEMPT TO REUSE.
- Do not attempt to resterilize.
- Do not use if the package is open or damaged.

DIRECTIONS FOR USE

Assembly of the Needle

1. Unscrew the tip cap of the syringe carefully.
2. Take a loose grip on the narrow part of the needle shield and mount the needle on the Luer-lok by screwing until you feel some counter-pressure.
3. Take a new firm grip on the wider part of the needle shield. Press and turn it a further 90 (a quarter of a turn).
4. Pull off the needle shield.

Treatment Procedure

1. Remove Kush Canine particles syringe from the refrigerator and let stand at room temperature (approximately 66°-80° F) for 15-30 min before use.
2. Shake the Kush Canine particles syringe to form a uniform suspension.
3. The Kush Canine particles syringe contains air bubble(s) from the filling process.
4. After ensuring that the treatment area has been thoroughly washed with soap and water, the area should be swabbed with alcohol or other antiseptic.
5. Before injecting, press the rod carefully until a small droplet is visible at the tip of the needle so all air bubble(s) are expressed from the syringe prior to injection.
6. The injection technique, location, amount of synovial fluid removal, depth of injection needle type, and the administered quantity, may vary per veterinarian preference and exact joint application procedure.
7. Kush Canine particles are administered using a sterile needle (e.g.,18-25G x 1/2-4"). The needle is inserted to best approximate needle tip location for best treatment as determined by veterinarian.
8. Inject Kush Canine particles by applying even pressure on the plunger rod.
9. The amount of particles injected should represent about 65%-85% of the synovial space as the veterinarian determines from aspiration and other known physical factors to makes sure enough particles will be present at the articulating sites between the bones.

Disposal

1. The syringe and any unused material must be discarded after a single treatment visit.
2. Follow national, local or institutional guidelines for use and disposal if medical sharp devices. Obtain prompt medical attention if injury occurs.
3. To help avoid needle breakage, do not attempt to straighten a bent needle. Discard and complete the procedure with a replacement needle.
4. Do not reshield used needles. Recapping by hand is a hazardous practice and should be avoided.
5. Discard unshielded needles in approved sharps containers.

STERILIZATION OF DEVICE

The Kush Canine particles device is terminally sterilized in glutaraldehyde prior to being placed into syringes via an aseptic fill process. Glutaraldehyde has been used as a sterilant for numerous implantable products and has been shown to have both bactericidal and virocidal properties. Sterilization validation studies were completed with similar Kush Canine particles and demonstrated a sterility assurance level (SAL) of greater than 10^{-6}. Quality control sterility tests have been performed by an independent laboratory for every lot of Kush Canine particles before the devices are released for use. Third party one and two year duration stability studies were also successfully accomplished using similar Kush Canine particles, showing stability for up to 25 months.

Manufactured by:

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