Every effort has been made to ensure the accuracy of the information published. However, it remains the responsibility of the readers to familiarize themselves with the product information contained on the USA product label or package insert.

VANGUARD® DA2MP

**Pfizer Animal Health**

**Canine Distemper-Adenovirus Type 2-Measles-Parainfluenza Vaccine, Modified Live Virus**

**U.S. Vet. Lic. No.:** 189

**Description:** VANGUARD® DA2MP contains highly attenuated strains of CD virus, measles virus, CAV-2, and CPI virus propagated on an established canine cell line and freeze-dried to preserve stability. Contains penicillin and streptomycin as preservatives.

**Indications:** VANGUARD® DA2MP is for vaccination of healthy dogs 6-12 weeks of age as an aid in preventing canine distemper caused by canine distemper (CD) virus, infectious canine hepatitis (ICH) caused by canine adenovirus type 1 (CAV-1), respiratory disease caused by canine adenovirus type 2 (CAV-2), and canine parainfluenza caused by canine parainfluenza (CPI) virus.

**Directions:**
1. **General Directions:** Vaccination of healthy dogs 6-12 weeks of age is recommended. Aseptically rehydrate the freeze-dried vaccine with the sterile diluent provided, shake well, and administer 1 mL intramuscularly.
2. **Primary Vaccination:** Administer a single 1-mL dose to healthy dogs between 6 and 12 weeks of age.
3. **Revaccination:** Dogs should be revaccinated at 14-16 weeks of age with a canine distemper, canine adenovirus type 2, and canine parainfluenza vaccine. In most cases, a complete immunization program will also include vaccination for canine parvovirus, *Leptospira canicola*, and *L. icterohaemorrhagiae*. At the discretion of the veterinarian, annual revaccination with a single dose against any or all of these pathogens is recommended.

**Precaution(s):** Store at 2°-7°C. Prolonged exposure to higher temperatures and/or direct sunlight may adversely affect potency. Do not freeze.

Use entire contents when first opened. Sterilized syringes and needles should be used to administer this vaccine. Do not sterilize with chemicals because traces of disinfectant may inactivate the vaccine. Burn containers and all unused contents.

**Caution(s):** Vaccination of pregnant bitches should be avoided. As with many vaccines, anaphylaxis may occur after use. Initial antidote of epinephrine is recommended and should be followed with appropriate supportive therapy. This product has been shown to be efficacious in healthy animals. A protective immune response may not be elicited if animals are incubating an infectious disease, are malnourished or parasitized, are stressed due to shipment or environmental conditions, are otherwise immunocompromised, or the vaccine is not administered in accordance with label directions.

**Warning(s):** For use in dogs only. For veterinary use only.

**Discussion:** Disease Description: CD is a universal, high-mortality viral disease with variable manifestations. ICH, caused by CAV-1, is a universal, sometimes fatal, viral disease of dogs characterized by hepatic and generalized endothelial lesions. CAV-2 respiratory infection is commonly associated with infectious tracheobronchitis ("kennel cough") in dogs of all ages. CPI is a common viral upper respiratory disease. Uncomplicated CPI may be mild or subclinical, with signs becoming more severe if concurrent infection with other respiratory pathogens exists.

**Trial Data:** Safety and Efficacy: Laboratory evaluation demonstrated that VANGUARD® DA2MP immunized dogs against CD, ICH, CAV-2 respiratory disease, and CPI, and that no significant immunologic interference existed among the vaccine fractions. No adverse reactions to vaccination were observed in any of the test dogs. The viral fractions of the vaccine all have an extensive clinical history of safe and effective use in other Pfizer Animal Health vaccines. Protection against CD is desirable at the earliest possible age. However, successful vaccination may not be possible in puppies with maternal antibodies against CD. By 12 weeks of age, maternal CD antibodies decline in almost all dogs to
levels that do not neutralize attenuated vaccine virus. Measles virus stimulates heterotypic protection against CD in puppies regardless of circulating CD antibody levels. The resistance provided by measles virus, however, does not appear to be as effective in very young puppies as in those 6 weeks of age or older. Thus, a combined CD and measles virus vaccine increases the probability of protecting puppies against CD during the period when they commonly carry maternal antibodies. For example, studies showed that 45/76 experimental dogs at 6 weeks of age had maternal antibody levels sufficient to interfere with active immunization. When vaccinated with a combination distemper-measles vaccine at 6 weeks of age, 63/67 puppies (94%) were protected, 42 of them by the measles virus fraction. Figure 1 shows the proportion of puppies at various ages protected by measles and CD virus fractions, and overall percentages of protection in puppies inoculated with a combination distemper-measles vaccine.

Figure 1. Protection Against Canine Distemper Challenge Afforded by Distemper-Measles Virus Fractions in a Combined Vaccine

Use of measles vaccine in adult bitches may produce high levels of measles antibodies that can interfere with successful protection of puppies in the next generation. Thus, VANGUARD® DA₂ MP is recommended for use in puppies 6-12 weeks of age. Heterotypic immunity should not be relied on for protection after 16 weeks of age. It has been demonstrated that CAV-2 vaccine cross-protects against ICH caused by CAV-1. The CAV-2 fraction in Vanguard® vaccines is used as a replacement for CAV-1 because it has significant advantages. Some CAV-1 vaccines may produce undesirable reactions, including persistent kidney infections, uveitis, and corneal opacity (“blue eye”), which have not been reported after vaccination with CAV-2. In addition, the CAV-2 strain used in Vanguard® vaccines has been specially selected for freedom from oncogenic properties characteristic of adenoviruses. Studies demonstrated that the CAV-2 fraction in VANGUARD® DA₂ MP not only protects against ICH, but against CAV-2 respiratory disease as well. Although conventional CAV-1 (ICH) vaccines cross-protect against CAV-2, they may not prevent subclinical infection and spread of the CAV-2 agent. Canine adenovirus type 2 challenge virus was not recovered from CAV-2-vaccinated dogs. A test of the CPI immunizing agent showed that hemorrhagic lung lesions characteristic of infection were absent or greatly diminished in vaccinated dogs necropsied after challenge. Nonvaccinated control dogs all had characteristic lung lesions, in some cases distributed in all lobes.

References: Available upon request.

Presentation: Cartons of 25 x 1 dose vials.

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