

# English

## Sii Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-Valent)

### DESCRIPTION:

Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) is a sterile suspension of saccharides of the capsular antigens of *Streptococcus pneumoniae* serotypes 1, 5, 6A, 6B, 7F, 9V, 14, 19A, 19F and 23F individually conjugated by using 1-cyano-4-dimethylaminopyridinium tetrafluoroborate (CDAP) to non-toxic CRM197 protein. The polysaccharides are specifically activated and then covalently linked to the protein carrier CRM197 to form the conjugate.

Individual conjugates are compounded and then polyborate 20 and aluminium phosphate are added to formulate the vaccine.

The potency of the vaccine is determined by the quantity of the saccharide antigens and the saccharide-to-protein ratios in the individual glycoconjugates. The vaccine meets the requirements of WHO, IP and BP when tested by the methods outlined in WHO TRS 977, IP and BP.

### COMPOSITION:

#### Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-Valent) 0.5 ml - 1 dose

Each dose of 0.5 ml contains:

Saccharide for serotypes 1, 5, 9V, 14, 19A, 19F, 23F, 7F, 6A 2 mcg each  
Saccharide for serotype 6B 4 mcg  
Conjugated to CRM197 carrier protein 19 to 48 mcg  
Aluminium (as Aluminium phosphate) 0.125 mg  
Dose: 0.5 ml intramuscular injection.

### INDICATIONS:

Active immunization against invasive disease, pneumonia and acute otitis media caused by *Streptococcus pneumoniae* serotypes 1, 5, 6A, 6B, 7F, 9V, 14, 19A, 19F and 23F in infants and toddlers from 6 weeks up to 2 years of age.

The use of vaccine should be determined on the basis of relevant recommendations and take into consideration the disease impact by age and regional epidemiology.

### DOSAGE AND ADMINISTRATION: For Intramuscular use only :

The dose is 0.5 ml given intramuscularly, with care to avoid injection into or near nerves and blood vessels. The product is a suspension containing an adjuvant, shake vigorously immediately prior to use to obtain a homogenous, whitish turbid liquid in the vaccine container. The vaccine should not be injected in the gluteal area. Do not administer Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) intravascularly. The vaccine should not be injected intradermally, subcutaneously or intravenously, since the safety and immunogenicity of these routes have not been evaluated.

One-dose multi-dose vials should be kept between -2°C and +8°C. Multi-dose vials of Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) from which one or more doses of vaccine have been removed during an immunization session may be used in subsequent immunization sessions for up to a maximum of 28 days, provided that all of the following conditions are met (as described in the WHO policy statement): Handling of multi-dose vaccine vials after opening, WHO/IVB/14.07:

- The vaccine is currently prequalified by WHO;

- The vaccine is approved for use for up to 28 days after opening the vial, as determined by WHO;

- The expiry date has not passed;

- The vaccine vial has been, and will continue to be, stored at WHO- or manufacturer recommended temperatures; furthermore, the vaccine will monitor, if one is attached, is visible on the vaccine label and is not past its discard point, and the vaccine has not been exposed to freezing.

The vaccine should be visually inspected for any foreign particulate matter and / or variation of physical aspect prior to re-use. In event of either being observed, discard the vaccine.

### Vaccination Schedule:

Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) is to be administered as a three-dose primary series at 6, 10, and 14 weeks of age or 2, 3 and 4 months of age, with or without, depending on recommended dosing schedule, a booster dose at 9-10 or 12-15 months of age. The minimum interval between doses should be 4 weeks. If a booster dose is given, it should be at least 6 months after the last primary dose.

Alternatively, Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) is given as a two-dose primary series with booster dose. The first dose may be administered from the age of 6 weeks, with a second dose at age of 14 weeks. The third (booster) dose is recommended between 9-18 months of age.

Table 1: Vaccination Schedule for Infants and Toddlers

Dosage Schedules	Dose 1 <sup>a,b</sup>	Dose 2 <sup>b</sup>	Dose 3 <sup>b</sup>	Dose 4 <sup>c,d</sup>
3p+1	6 weeks	10 weeks	14 weeks	9 - 10 months or 12-15 months
3p+0	6 weeks	10 weeks	14 weeks	-
2p+1	6 weeks	-	14 weeks	9 - 18 months

<sup>a</sup> Dose 1 may be given as early as 6 weeks or at 2 months of age

<sup>b</sup> The recommended dosing interval is 4 to 8 weeks

<sup>c</sup> A booster (fourth) dose is recommended at least 6 months after the last primary dose and may be given from the age of 9 months onwards (preferably between 12 and 15 months of age)

<sup>d</sup> A booster dose is recommended at the age of 9-18 months of age.

For children who are beyond the age of routine infant schedule, the following Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) schedule is proposed:

The catch-up schedule, for children 7 months through 2 years of age who have not received Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent):

Table 2: Vaccination Schedules for Unvaccinated Children 7 Months of Age Through 2 Years of Age

Age at first dose	Total Number of 0.5 ml doses
7-11 months of age	3 <sup>a</sup>
12-24 months of age	2 <sup>b</sup>

a. The vaccination schedule consists of two primary doses of 0.5 ml with an interval of at least 1 month between doses. A booster (third) dose is recommended in the second year of life with an interval of at least 2 months after the last primary dose.

b. The vaccination schedule consists of two doses of 0.5 ml with an interval of at least 2 months between doses.

### CONTRAINDICATIONS:

Hypersensitivity to any component of the vaccine, including diphtheria toxoid.

### SPECIAL WARNINGS:

As with all injectable vaccines, appropriate medical treatment and supervision must always be readily available in case of a rare anaphylactic event following the administration of the vaccine.

### PRECAUTIONS:

ADMINISTER INJECTION (1:1000) MUST BE IMMEDIATELY AVAILABLE SHOULD AN ACUTE ANAPHYLACTIC REACTION OCCUR DUE TO ANY COMPONENT OF THE VACCINE. For treatment of severe anaphylaxis the initial dose of adrenaline is 0.1 - 0.5 mg (0.1 - 0.5 ml of 1:1000 injection) given s.c or i.m. Single dose should not exceed 1 mg (1 ml). For infants and children the recommended dose of adrenaline is 0.01 mg/kg (0.01 ml/kg of 1:1000 injection). Single pediatric dose should not exceed 0.5 mg (0.5 ml). The mainstay in the treatment of severe anaphylaxis is the prompt use of adrenaline, which can be lifesaving. It should be used at the first suspicion of anaphylaxis.

As with the use of all vaccines the vaccinee should remain under observation for not less than 30 minutes for possibility of occurrence of severe such as anaphylactic reaction. Hydrocortisone and antihistamines should also be available in addition to supportive measures such as oxygen and resuscitation equipment.

Special care should be taken to ensure that the injection does not enter a blood vessel. IT IS EXTREMELY IMPORTANT WHEN THE PARENT/GUARDIAN RETURNS FOR THE NEXT DOSE IN THE SERIES, THE PARENT AND GUARDIAN SHOULD BE QUESTIONED CONCERNING OCCURRENCE OF ANY SYMPTOMS AND/OR SIGNS OF AN ADVERSE REACTION AFTER THE PREVIOUS DOSE.

Minor illnesses, such as mild respiratory infection, with or without low grade fever, are not generally contraindications to vaccination. The decision to administer or delay vaccination because of a current or recent febrile illness depends largely on the severity of the symptoms and their etiology. The administration of Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) should be postponed in subjects suffering from acute severe febrile illness. As with any intramuscular injection, Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) should be given with, caution to infants or children with thrombocytopenia or any coagulation disorder, or to those receiving anticoagulant therapy. This vaccine is not intended to be used for treatment of active infection. As with any vaccine, Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) may not protect all individuals receiving the vaccine from pneumococcal disease.

SPECIAL PRECAUTIONS: Safety and immunogenicity data on Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) are not available for children in specific groups at higher risk for invasive pneumococcal disease (e.g., children with congenital or acquired asplenia, dysfunction, HIV infection, malignancy, nephrotic syndrome). Children in these groups may have reduced antibody response to active immunization due to impaired immune responsiveness. Limited data have demonstrated that other pneumococcal conjugate vaccines induce an immune response in children with HIV, sickle cell disease, and children born prematurely with a safety profile similar to that observed in non-high-risk groups. The use of Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) in high-risk groups should be considered on an individual basis.

Apnea in Premature Infants: Based on experience with use of other pneumococcal conjugate vaccines, the potential risk of apnea and the need for respiratory monitoring for 48-72 hours should be considered when administering the primary immunization series to very premature infants (born < 28 weeks of gestation) and particularly for those with a previous history of respiratory immaturity. As the benefit of vaccination is high in this group of infants, vaccination with Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) should not be withheld or delayed.

PREGNANCY & LACTATION:  
Human data on the use during pregnancy or lactation are not available.

PEDIATRIC USE:  
Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) is not intended for use in children below the age of 6 weeks. The safety and effectiveness in children below the age of 6 weeks has not been established.

INTERACTIONS:  
Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) can be given with any of the following vaccine antigens, either as monovalent or combination vaccines: diphtheria, tetanus, whole-cell pertussis, *Haemophilus influenzae* type b, inactivated polio vaccine, varicella, hepatitis B, rotavirus, yellow fever virus, hepatitis A, meningococcal ACWY, and rotavirus. Studies with other pneumococcal conjugate vaccines co-administered with mumps, varicella, vaccines and the co-administered vaccines were unaffected. Studies with other pneumococcal conjugate vaccines co-administered with mumps, varicella, vaccines and the co-administered vaccines were unaffected.

In clinical trials, when other pneumococcal conjugate vaccines were given concomitantly but at a different site/route, with rotavirus or hepatitis A vaccine, no change in the safety profiles for these infants was observed.

Different injectable vaccines should always be given at different injection-sites. Till date Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) clinical studies have been conducted in India and the Gambia in toddlers and infants.

In the Gambia Phase 1 study, there was evidence that administration of Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) to healthy infants resulted in a significant increase in the antibody levels to pneumococcal polysaccharides compared to the control group.

In the Gambian Phase 3 study, non-inferiority of the immune responses induced by EPI vaccines between treatment groups was demonstrated for all EPI vaccines co-administered during the three-dose primary vaccination series (6 weeks, 10 weeks and 14 weeks).

Both the study, namely the Gambian Phase 3 study, and the Indian Phase 3 study, demonstrated non-inferiority of the immune responses induced by the Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) to the licensed pneumococcal conjugate vaccines.

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This section will continue to be updated along with further studies.

ADVERSE REACTIONS:

Summary of the safety profile:  
Safety assessment of Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed) (10-valent) was based on clinical trials involving the administration of 1,86 doses to 2,216 healthy infants as primary immunisation. Furthermore, 793 children received a booster dose of 0.5 ml containing:

Saccharide for serotypes 1, 5, 9V, 14, 19A, 19F, 23F, 7F, 6A 2 mcg each

Saccharide for serotype 6B 4 mcg

Conjugated to CRM197 carrier protein 19 to 48 mcg

Aluminium (as Aluminium phosphate) 0.125 mg

Dose: 0.5 ml intramuscular injection.

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