# Prostin E2 Sterile Solution 10 mg/ml
# (dinoprostone)

## 1. NAME OF THE MEDICINAL PRODUCT

Prostin E2 Sterile Solution 10 mg/ml.

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains 10 mg dinoprostone (5 mg per ampoule).
Following dilution in accordance with instructions, each ml of the resultant solution for infusion contains 5 micrograms dinoprostone.

Excipient with known effect
Prostin E2 Sterile Solution 10 mg/ml contains 400 mg anhydrous ethanol in each 0.5 ml ampoule which is equivalent to 800 mg/ml (80% w/v).

For the full list of excipients, see section 6.1.

## 3. PHARMACEUTICAL FORM

Concentrate for solution for infusion (sterile concentrate).

The concentrate is a clear, colourless, alcoholic solution free from particulate matter, for intravenous administration after appropriate dilution.

## 4. CLINICAL PARTICULARS

### 4.1 Therapeutic indications

Oxytocic agent. Prostin E2 Sterile Solution 10 mg/ml is indicated for the therapeutic termination of pregnancy, missed abortion and hydatidiform mole by the intravenous route.

### 4.2 Posology and method of administration

Usage is restricted to qualified health care professionals and to hospitals and clinics with specialised obstetric units with facilities for continuous monitoring.

The recommended dose should not be exceeded, and the dosing interval should not be shortened as this increases the risk of uterine hyperstimulation, uterine rupture and uterine haemorrhage.

Posology

*Adults*
*Directions for the Preparation of a Dilute Solution:*
For use by IV drip (a drip set delivering 60 drops per ml must be used) or constant rate infusion pump. Withdraw 0.5 ml from the ampoule using an aseptic technique and add to 1,000 ml of sterile normal saline or 5% dextrose. Shake to ensure uniformity.

After dilution, attach the infusion bag label provided. Use dilute solution within 24 hours of preparation and store in a refrigerator at 2-8°C.

*The following is a guide to dosage:*
A solution of Prostin E2 Sterile Solution in normal saline or 5% dextrose containing 5.0 micrograms per ml should be prepared in accordance with instructions given above. The initial rate of infusion (pump or IV drip delivering 60 drops per ml) will be 2.5 micrograms per minute, and this rate should be maintained for at least the first 30 minutes. If a satisfactory uterine contractility response is produced, this rate should be maintained; if not, the rate should be increased to 5 micrograms per minute. If satisfactory uterine activity is not produced after at least 4 hours at this rate of infusion, the rate may be increased up to 10 micrograms per minute, side-effects permitting, and maintained until abortion occurs or the treatment is considered a failure. If significant side-effects occur, the rate of infusion should be decreased by 50% or discontinued.

If a constant rate infusion pump is used, a different concentration of solution (e.g. 15 micrograms per ml) may be required, dependent on the type of pump, but the dose rates (micrograms per minute) should remain as above.

The appearance of uterine hypertonus requires cessation of therapy until the state returns to normal. The situation should be re-assessed and, if necessary, the infusion can be recommenced, but at lower dosage rates, 50% of the last dose level used.

In all cases the dosage should be adapted to the patient's response. Continuous administration of the drug for more than two days is not recommended.

*Elderly*

Not applicable.

*Paediatric population*

Not applicable.

Method of administration

For intravenous administration only.

**4.3 Contraindications**

Hypersensitivity to the active substance(s) or to any of the excipients listed in section 6.1.
Prostin E2 Sterile Solution should not be used where the patient is sensitive to prostaglandins.

Prostin E2 Sterile Solution 10 mg/ml is not recommended in the following circumstances:

- For patients in whom oxytocic drugs are generally contra-indicated or where prolonged contractions of the uterus are considered inappropriate such as:
  - Cases with a history of Caesarean section or major uterine surgery.
  - Cases where there is evidence of a potential for obstructed labour.
- In patients with a past history of, or existing, pelvic inflammatory disease, unless adequate prior treatment has been instituted.
- Patients with active cardiac, pulmonary, renal or hepatic disease.

**4.4 Special warnings and precautions for use**

**This product is only available to hospitals and clinics with specialised obstetric units and should only be used where 24-hour resident medical cover is provided.**

Use caution in handling this product to prevent contact with skin. Wash hands thoroughly with soap and water after administration.

As with any oxytocic agent, the risk of uterine rupture should be considered. Concomitant medication and maternal status should be taken into consideration in order to minimise the risk of uterine hyperstimulation, uterine rupture and uterine haemorrhage. Careful and regular monitoring of uterine activity should be conducted during use of dinoprostone. Patients who develop uterine hypertonus or hypercontractility should be managed in a manner that addresses the welfare of the mother.

It is advised that Prostin E2 Sterile Solution should not be administered by the intramyometrial route since there have been reports of a possible association between this route of administration and cardiac arrest in severely ill patients.

Caution should be exercised in the administration of Prostin E2 Sterile Solution in patients with:

- asthma or a history of asthma
- epilepsy or a history of epilepsy
- glaucoma or raised intra-ocular pressure
- compromised cardiovascular, hepatic, or renal function
- hypertension
- ruptured chorioamniotic membranes.

Dinoprostone should be used with caution in patients with multiple pregnancy.

Animal studies lasting several weeks at high doses have shown that prostaglandins of the E and F series can induce proliferation of bone. Such effects have also been noted in newborn infants who received prostaglandin $E_1$ during prolonged treatment. There is no evidence that short-term administration of prostaglandin $E_2$ can cause similar bone effects.

Women aged 35 years or older, those with complications during pregnancy and those with a gestational age over 40 weeks have been shown to have an increased risk of post-partum disseminated intravascular coagulation. In addition, these factors may further increase the risk associated with labour induction (see section 4.8). Therefore, in these women, use of dinoprostone should be undertaken with caution. Measures should be applied to detect as soon as possible an evolving fibrinolysis in the immediate post-partum phase.

Excipient information:

**Ethanol (alcohol)**

Each 0.5 ml ampoule of Prostin E2 Sterile Solution 10 mg/ml contains 400 mg anhydrous ethanol (see section 2), which is equivalent to less than 10 ml beer or 4 ml wine.

The small amount of ethanol in this medicine will not have any noticeable effects.

Depending on the daily dose administered this medicinal product will deliver varying amounts of ethanol.

## 4.5 Interaction with other medicinal products and other forms of interaction

The response to oxytocin may be accentuated in the presence of exogenous prostaglandin therapy. Concurrent use with other oxytocic agents is not recommended. A dosing interval of

at least 6 hours is recommended in case of oxytocin use is considered necessary following dinoprostone administration. If used in sequence, the patient's uterine activity should be carefully monitored.

## 4.6 Fertility, pregnancy and lactation

Pregnancy

Prostin E2 Sterile Solution 10 mg/ml is only used during pregnancy for therapeutic termination of pregnancy, missed abortion and hydatidiform mole. There has been some evidence in animals of a low order of teratogenic activity, therefore, if abortion does not occur or is suspected to be incomplete as a result of prostaglandin therapy (as in spontaneous abortion, where the process is sometimes incomplete), the appropriate treatment for complete evacuation of the pregnant uterus should be instituted in all instances.

Breast-feeding

Prostaglandins are excreted in breast milk. This is not expected to be a hazard given the circumstances in which the product is used.

## 4.7 Effects on ability to drive and use machines

In view of the indication for Prostin E2 Sterile Solution 10 mg/ml, this section is not applicable.

## 4.8 Undesirable effects

*Cardiac disorders:* Cardiac arrest
*Vascular disorders:* Hypertension
*Gastrointestinal disorders:* Diarrhoea, nausea, vomiting
*General disorders and administration site conditions:* Fever, local tissue irritation/erythema (injection site), temporary pyrexia, local infections
*Immune system disorders:* Hypersensitivity reactions such as anaphylactoid reactions and anaphylactic reactions including anaphylactic shock
*Investigations:* Elevated WBC
*Musculoskeletal and connective tissue disorders:* Back pain
*Nervous system disorders:* Transient vasovagal symptoms (flushing, shivering, headache, dizziness)
*Pregnancy, puerperium and perinatal conditions:* Foetal death, stillbirth, neonatal death* (Frequency not known- cannot be estimated from the available data)

Maternal-related conditions: Uterine hypertonus, uterine rupture, abruptio placenta, pulmonary amniotic fluid embolism, rapid cervical dilatation

*Foetal death, stillbirth, and neonatal death have been reported after application of dinoprostone, especially following the occurrence of serious events such as uterine rupture (see sections 4.2, 4.3 and 4.4).

*Respiratory, thoracic and mediastinal disorders:* Asthma, bronchospasm
*Blood and lymphatic system disorders:* An increased risk of post-partum disseminated intravascular coagulation has been described in patients whose labour was induced by pharmacological means, either with dinoprostone or oxytocin (see section 4.4). The frequency of this adverse event, however, appears to be rare (<1 per 1,000 labours).

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product.

### 4.9 Overdose

Overdosage may be expressed by uterine hypercontractility and uterine hypertonus. During use, uterine activity and the progression of cervical dilation should be carefully monitored to detect possible evidence of undesired responses, e.g. hypertonus or sustained uterine contractions. Because of the transient nature of prostaglandin $E_2$ ($PGE_2$)-induced myometrial hyperstimulation, non-specific, conservative management should be used (rate of infusion should be decreased or discontinued, maternal position change and administration of oxygen). If conservative management is not effective, a tocolytic agent may be used in appropriate patients as a treatment of hyperstimulation following administration of $PGE_2$ or appropriate measures should be considered.

## 5. PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Prostaglandins, ATC-code: G02AD02

Dinoprostone is a prostaglandin of the E series with actions on smooth muscle. It induces contraction of uterine muscle at any stage of pregnancy.

### 5.2 Pharmacokinetic properties

Dinoprostone is rapidly metabolised in the body. Intravenous administration results in very rapid distribution and metabolism, with only 3% of unchanged drug remaining in the blood after 15 minutes. At least nine PGE2 metabolites have been identified in human blood and urine.

### 5.3 Preclinical safety data

There are no preclinical data of relevance to the prescriber which are additional to that already included in other sections of the Summary of Product Characteristics.

## 6. PHARMACEUTICAL PARTICULARS

### 6.1 List of excipients

Ethanol, anhydrous

### 6.2 Shelf life

Please refer to the outer carton for the expiry date.

### 6.3 Special precautions for storage

Please refer to the outer container for the storage condition.

### 6.4 Nature and contents of container

Ph. Eur. Type I glass ampoule, containing 0.5 ml sterile solution, packed in a carton.

## 6.5 Special precautions for disposal and other handling

Use caution in handling this product to prevent contact with skin. Wash hands thoroughly with soap and water after administration.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

Pfizer Corporation Hong Kong Limited
July 2022
Version approved: 16 DEC 2022