

This information was up to date at the time of release to the Heads of Midwifery.
 The editorial board does not accept liability for any errors or omissions following its subsequent publication.
 Updating arrangements for the formulary should be decided upon and implemented at a local level.

YOU MUST BE AUTHORISED BY NAME, UNDER THE CURRENT VERSION OF THIS PGD BEFORE YOU ATTEMPT TO WORK ACCORDING TO IT

Plasma-lyte 148[®] (PGD)	
Legal status (GSL, P or POM on exemption list, or PGD)	<ul style="list-style-type: none"> ▪ POM - Midwife may supply/administer in accordance with a PGD
Clinical indication:	<p>Sudden drop in systolic blood pressure.</p> <p>Replacement of fluid to maintain circulatory volume until blood is available as per local guideline for postpartum haemorrhage.</p>
Inclusion criteria:	Women requiring resuscitation with intravenous fluids including hypotension and haemorrhage.
Exclusion criteria:	<p>Known hypersensitivity to any components of the medicine.</p> <p>Patients with:</p> <ul style="list-style-type: none"> • Extracellular hyperhydration or hypervolaemia • Severe renal insufficiency (with oliguria/anuria) • Heart block • Hyperkalaemia • Hypernatraemia • Hyperchloraemia • Hypermagnesaemia • Hypochlorhydria • Metabolic or respiratory alkalosis
Potential adverse reactions	<p>Hypersensitivity/infusion reactions:</p> <ul style="list-style-type: none"> • Tachycardia, palpitations • Chest pain/discomfort • Dyspnoea, increased respiratory rate • Flushing, fever • Peripheral oedema • Urticaria • Infusion site reactions: pain, irritation, infection <p>Hypervolaemia Seizures Thrombophlebitis Venous thrombosis</p> <p>If a serious adverse reaction is suspected please report to the MHRA Yellow Card Scheme. http://yellowcard.mhra.gov.uk</p>

Plasma-lyte 148[®] (PGD)

<p>Cautions/Need for further advice/Circumstances when further advice should be sought from the doctor:</p>	<p>Use with caution in patients with or at risk from:</p> <ul style="list-style-type: none"> • hypermagnesaemia i.e. mild renal impairment, myasthenia gravis, patients being treated with magnesium sulphate infusions (for eclampsia or pre-term labour). • hypocalcaemia. Plasma-lyte contains no calcium and an increase in plasma pH due to alkalinizing effect may lower the concentration of ionized calcium. • hyperkalaemia, particularly patients with cardiac disease, renal or adrenocortical insufficiency and acute dehydration, or extensive tissue destruction as occurs with severe burns. <p>Use with caution in patients at risk of fluid overload or conditions that cause sodium retention and oedema. Solutions containing sodium should be carefully administered to patients with hypertension, heart failure, peripheral or pulmonary oedema, impaired renal function, pre-eclampsia, aldosteronism, or other conditions associated with sodium retention</p>
<p>Action if patient declines or is excluded:</p>	<ul style="list-style-type: none"> ▪ refer to authorised prescriber or doctor ▪ document in maternity record
<p>Referral arrangements for further advice/cautions:</p>	<p>Refer to medical staff</p>
<p>Medicine Details</p>	
<p>Pharmacology</p>	<p>Plasma-Lyte 148 is an isotonic solution of electrolytes. The electrolytes constituents of Plasma-Lyte 148 solution and their concentrations are designed to match those of plasma.</p> <p>The pharmacological properties of Plasma-Lyte 148 solution are those of its components (water, sodium, potassium, magnesium, chloride, acetate and gluconate).</p> <p>The main effect of Plasma-Lyte 148 is the expansion of the extracellular compartment including both the interstitial fluid and the intravascular fluid.</p> <p>It is used in maternal resuscitation post haemorrhage to initially replace fluid loss to increase the circulating blood volume. In the management of haemorrhage it may need to be followed by colloids or blood products.</p>
<p>Name, form & strength of medicine:</p>	<p>Plasma-lyte 148 (pH 7.4) solution for intravenous infusion. 500ml and 1000ml bags available</p> <p>Each 1000ml contains:</p> <p>Na⁺ 140 mmol K⁺ 5 mmol Mg²⁺ 1.5 mmol Cl⁻ 98 mmol</p> <p>(For full details see the Summary of Product Characteristics)</p>

Plasma-lyte 148 (PGD)

Route/Method of administration:	Intravenous infusion
Dosage (include maximum dose if appropriate):	<p>maternal resuscitation (including sudden drop in systolic blood pressure): 500ml or 1 litre bag to be infused through a 14/16 gauge needle as quickly as possible</p> <p>Maximum of 2 litres in case of haemorrhage (unless no colloid or blood is available and women still haemorrhaging - continue until help arrives).</p> <p>If giving for any other reason maximum of 1 litre.</p> <p>Ideally when given rapidly the solution should be warmed to no more than 37°C.</p>
Frequency:	As above
Duration of treatment:	As above
Maximum or minimum treatment period:	As above
Quantity to supply/administer:	As above
▼ Black Triangle Drug:*	No
Is the use outwith the SPC:**	No
Storage requirements and product details	<p>Store at room temperature</p> <p>Use immediately after opening</p> <p>Use only if the solution is clear, without visible particles and if the container is undamaged.</p>
<p>*The black triangle symbol (▼) identifies newly licensed medicines that are monitored intensively by the MHRA/CSM</p> <p>** Summary of Product Characteristics</p>	
Warnings including possible adverse reactions and management of these:	<p>Must not be infused in the same line as blood. Potential for interactions with the following;</p> <ul style="list-style-type: none"> • corticosteroids • potassium sparing diuretics • ACE inhibitors, angiotensin –II receptor antagonists • tacrolimus, cyclosporin • digoxin • acidic drugs such as salicylates, barbiturates and lithium • alkaline drugs such as ephedrine and pseudoephedrine • if there is a drug interaction, consult with a doctor/GP before administration or supply • document consultation in maternity record • refer to current BNF for latest information on interactions

Plasma-lyte 148 (PGD)

<p>Overdose</p>	<ul style="list-style-type: none"> • Overuse or too fast administration can lead to water and sodium overload with oedema. • Other symptoms due to excess of other ingredient; • hyperkaleamia - paraesthesia, muscle weakness, paralysis, cardiac arrhythmias, heart block, cardiac arrest, and mental confusion • hypermagnesaemia - loss of deep tendon reflexes and respiratory depression (both due to neuromuscular blockade), nausea, vomiting, flushing of the skin, thirst, hypotension due to peripheral vasodilatation, drowsiness, confusion, muscle weakness, bradycardia, coma, and cardiac arrest • Excessive administration of chloride salts may cause a loss of bicarbonate with an acidifying effect. • Excessive administration of compounds, such as sodium acetate and sodium gluconate, which are metabolised to form the bicarbonate anion may lead to hypokalaemia and metabolic alkalosis, especially in patients with impaired renal function. Symptoms may include mood changes, tiredness, shortness of breath, muscle weakness, and irregular heartbeat. Muscle hypertonicity, twitching, and tetany may develop especially in hypocalcaemic patients. Treatment of metabolic alkalosis associated with bicarbonate overdose consists mainly of appropriate correction of fluid and electrolyte balance. <ul style="list-style-type: none"> • immediate assessment/ treatment is essential - refer to medical staff • management should be in accordance with established treatment guidelines or see BNF overdose section • for further advice contact National Poisons Centre 0344 892 0111
	<ul style="list-style-type: none"> • A manufacturer's patient information leaflet should be available if requested by patient.
<p>Monitoring (if applicable):</p>	<p>If used for sudden drop in blood pressure or postpartum haemorrhage urgent obstetric and anaesthetic help is required Monitor serum urea and electrolytes and if for PPH full blood count and send blood for group and screen. Position woman flat on one side. Monitor pulse and BP.</p>
<p>Follow up:</p>	<p>As above</p>
<p>References</p> <ol style="list-style-type: none"> 1. Summary of Product Characteristics Plasma-lyte 148. Text revision 12.12.2018. Accessed 23.12.2019. http://www.medicines.org.uk/ 2. http://www.bnf.org/ 	