## Sestina Infantry Combat Armor

Designed, like many recent Elysian weapons, as a cheap and easily mass-producible defensive measure, the Sestina is the standard armament of a Plebeian infantryman. *The Sestina is NOT an infantry power armor* (the Cestus Infantry Power Armor, in development, is intended to manage the elite of Plebeian infantry) and should not be confused as one. It is, rather, an armored suit which offers notable damage resilience and a number of enhancements and techniques to the infantryman so equipped.

In appearance, the Sestina appears something like full plate armor, interlocking over the entire body of the Plebeian. The forearms are rather wider than proportional on a Plebeian body, as they each house a high-yield rechargeable/replaceable battery cell. The legs appear as a "skirt" of sorts. The wings are sheathed in arced sheafs, and the head is protected by a helmet which connects seamlessly with the rest of the armor. There are no sharp corners on the Sestina, everything is rounded, and has a swept-back appearance. In coloration, the Sestina is glossy white with bands of sky blue on the forearms, lower 'skirt', and wing sheaves. The armor adds a mere 8cm of height and girth to the wearer and weighs about 16 kilograms.

Donning the Sestina armor is a process of three to four minutes. The armor latches at the back, and the smart-polymer will stretch to better fit the wearer. It is four pieces (greaves, torso, skirt, and helmet), all of which latch together seamlessly once the armor is activated.

The armor is composed of three basic layers. Against the skin is a 4cm layer of a smart-polymer which absorbs a high degree of the force of attacks. This layer is laced with electrical nodes which stimulate the muscles of the wearer, significantly increasing strength and reflexes. The combination of heightened physical strength (though results vary somewhat, one can typically exert an additional 50 to 65 kg of pressure while so stimulated; lifting capacities tend to increase by 100 to 130 kg) and the lessening of kinetic force make this an excellent complement to the highly reflective/refractory Aspis infantry shield. The enhanced strength and reflexes also allow for a slightly faster speed on foot (not dramatically so) and generally superior performance with Xiphos and Phaelaes. The electrical impulse is powered by the battery cells in the forearms. Each cell can power the armor for 12 hours, allowing for a total 24-hour maximum range before needing to be recharged. The batteries can also be replaced if they are exhausted in combat, this process takes about forty seconds for a soldier properly trained in the Sestina. A battery cell weighs 0.3 kilograms.

The second layer of the armor rests over the polymer base, a 3cm set of interlocking and overlapping plates of Aggregated Diamond Nanorods. Over the legs, the ADNR layer is twofold - one snugly against the polymer coating, and a second thinner 'skirt' over the rest. The refractive and protective properties of ADNR are immense - ADNR can withstand a pressure of 492 gigapascals (GPa). In comparison, kevlar can withstand 3, and IIa Diamond can withstand roughly 200. The refractory properties of ADNR allow it to withstand temperatures well in excess of 2,000 Celsius. Thusly physical blows against the Sestina need a huge amount of force to be effectively felt by the soldier, and it takes a lot of energy to break through...

The last layer is a superconductive grid protected by a very thin ( < 1mm ) layer of ultrahard fullerite. This allows electrical energy and EMPs to disperse harmlessly over the perimeter of the armor. Ultrahard fullerite can withstand around 320 GPa, and has similar refractory qualities to ADNR.

The helmet of the Sestina is composed in the same way as the rest of the armor, however, it contains a

number of sensory systems directly interfaced with the brain of the infantryman. A combination of radar, sonar, heat, and magnetic resonance sensors work in a radius of ten kilometers. Additionally, the one actual weapon of the Sestina is controlled by neural impulse through the interfacing in the helmet. All told, the helmet is somewhat thicker and better protected than the rest of the armor, the ADNR layer being 4.5 centimeters thick.

The 'weapon' of the Sestina is mounted on top of the forearm, opposite the battery cell, on either arm. This is a small EMP generator, capable of creating a strong radio pulse in a 15m radius. This is powered directly by the battery cells, and each pulse reduces approximate operating time by about an hour. The hyper-conductive layer of the Sestina renders it nicely immune to its own EMP, and to other EMPs which may go off.

## **OOC Notes**

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