

Armor Basics

After a good half-year of basic training, it was time for Carter and his comrades to learn more about armor and combat protection. After all, one day they would have to do their service in combat gear. Once again, the expertise of the famous Salvani weapons expert Kwax came to bear.

On a rainy afternoon, the recruits ran to the armory next to the simulation room. There Major Dunn waited for them with Kwax.

She said: »Here they come. There's nothing like military punctuality. Quite different from your unreliable chitin-ass. At least your goods are always there on time.«

»People who treat me with respect rarely have to wait for me. When you call, I always make a few extra detours.«, it came from Kwax.

»I really believe that you damn bug!«, Dunn laughed.

She addressed her words to the group: »Now that you are more and more involved in the military's tasks, everything you learn is crucial. The more you know, the more versatile your tasks will be. A basic prerequisite for most missions outside of this base is the sensible use of armor.«

She pointed behind her where a whole range of different types of armors was placed. There were interesting things, Carter found.

Dunn nodded to Kwax and he walked along the row and explained the cornerstones of the models. The first was one of their military outfits.

»This is the standard human military ensemble. Tightly woven microfiber kevlar fabrics with integrated magnetic field pads for holsterless weapon mounting. Increased protection against small calibers and bladed weapons, but useless against real guns or high-quality blades.«

He went on to a slim armor in a light red camouflage pattern. The model was sleek and had plating on the chest, back and legs. »Here is a classic soldier's armor for light infantry. Compacted kevlar fabric with ultra heat resistant coating. The plates are flexible to guarantee maximum freedom of movement. Simple helmet with HUD half visor and removable breathing apparatus for missions in areas without oxygen. My expert opinion: Shitty quality.«, Kwax and Dunn criticized and grinned.

The next one was a much more stylish, slim armor made of hard looking material with movable parts on the belly, back, arms and legs that covered everything completely.

»This is more reasonable. Full armor for elite troops made of special kevlar ceramic polymer refined with an alloy of various light metals. Full mobility with strong armoring. This thing can withstand a lot more than the other one. The helmet is removable and has integrated breathing protection, which is activated automatically when required. The HUD is also of a higher quality.«

Dunn added: »Years will pass before one of you is allowed to wear one of these.«

Next to this model was a much broader piece with thick armor plates that looked hard and inflexible.

Kwax made a humming noise. »This is the armor of a storm soldier, an aggressor. Heavy armor with higher metal content and less flexibility. It can extend a shield on its arm to repel larger calibers. You're pretty safe in there if you're not planning on moving.«

The group giggled. There were a few lighter variants and some with fabric elements for scouts and snipers. Further back there was a massive,

much bigger tank, which looked pretty heavy.

»What about that?«, Roderick asked and pointed to it.

Dunn replied: »This is an exo-suit, not a body armor. They're really nasty, but you're not ready for that yet. You'd better focus on the basics.«

Carter asked: »Isn't synthium used for armor?«

Kwax looked at Dunn and she replied: »Synthium would probably be unbeatable as armor, but they haven't tested all the outside influences yet. When you explore a world that is cold, hot, poisonous or whatever, you have to be sure that the protection will last. We use that for spaceships, but even there only in combination with the usual materials. It would be far too expensive for mass production.«

»There are rumors in black market circles that Syntech has researched prototypes, but this has never been confirmed.«, Kwax added.

»You should know that better than anyone.«, Roderick interjected.

Carter replied: »Why? Do you think my father comes home every day and tells me about secret projects at Syntech? How exactly do you imagine that happening? ›Hello my boy, how was your day? By the way, today we started an ultra-secret project for synthium armor that nobody should know about. Of course, I'll tell you anyway. What do we want to eat?«

The others laughed, but Roderick only looked back skeptically.

Each recruit received a simple soldier's equipment for testing because they had to wear this kind of armor in the future. It was like putting on a full-body suit and then putting an armor over it. The whole thing resembled football equipment in terms of effort. Carter put the helmet

on and the breathing protection hung down to the side. You had to attach it to a holder on the chest each time to prevent it from dangling around. The red camouflage pattern was eye-catching, but this seemed to be of secondary importance in missions to unknown worlds. In Carter's opinion, the suits looked silly and did not deserve the name ›armor‹. It didn't feel like the clothes were protecting from anything except being taken seriously. They stood next to each other in the soldier's gown and looked at each other. Kelly looked completely different because you could see neither her bronze hair nor her curves. The equipment hid the female traits quite strongly because the thick material pressed everything to the body. With Leena, it wasn't tragic because she had fewer curves by nature, but she looked strange anyway. Her graceful appearance corresponded to that of a technician or computer expert, not a front-line soldier. Henry and the others seemed to feel comfortable in it. Carter and Kelly seemed to be the only ones who didn't have such a good feeling about it. Roderick looked like a bull and Nambur's green face formed a strange contrast to the bright red of the helmet. »Now you look like a unit.«, Dunn said. »A poor and pitiful unit that dies first in action.«, she added with a grin.

»How is this weird flexible stuff supposed to help us survive?«, Urma asked.

»Oh, if you get hit, it hurts like hell, but most bullets are prevented from entering. Think of it as a full-body condom. You still feel something, but less, and nothing bad can actually happen as long as nothing tears. Works in ninety-nine percent of all cases.«, she winked.

The group laughed and Dunn explained how they activated the suit. This brought the HUD in the helmet to life and a short hum was heard.

They felt a slight vibration in their back when the noise came.

»What you are hearing is a Mark I shield generator. A battery, supported by motion energy and kinetic energy, provides it with power to work smoothly.«, the major explained.

Gina was very interested in technology and wanted to know how it worked.

Kwax took the answer: »You must have learned that today's bullets are based on hattokinetics. Well, any physical principle can be reversed. In this case, this is called neysanics because it was developed by a T'zun called Neysa Kurare. Strictly speaking, neysanics existed before hattokinetics. Both technologies are based on the same principles. Hattokinetic projectiles consist of pure energy, but there are different forms of energy that can be used for this.

Neysanics works with general energy that is effective against all hattokinetic projectiles. In principle, a hit on the shield causes an increase in the amount of energy in it. The thrust is deflected and dissipated over the ground if the nature of the ground allows it. If not, the excess energy is diverted to the suit's systems. If this happens, too many hits in a short period of time can lead to an overcharge, which temporarily turns off the shield so that you are not cooked in your armor. The whole thing is an outdated technology.

Humans are the only species that still use it. Here, too, I have heard of new developments that the T'zun are about to explore.«

»What about special ammunition? Armor-piercing projectiles and similar things?«, Roderick asked, who was interested in the subject.

»The term ›armor-piercing‹ is a human term for bullets with high penetrating power. What you mean exists in different variations. Tunnel

ammunition can penetrate shields by using an anti-hattokinetic energy signature to open a tunnel through the barrier. Shifter projectiles change their vibrational frequency in rapid succession and simply pass through a simple shield. And blackout shells generate electromagnetic feedback and completely shut off the shield. All these types of ammunition are armor-piercing because they can penetrate any material known to us. Only synthium is immune. That's why human spaceships are so hard to destroy.«

Dunn commented: »You don't have to worry about these special types. This ammunition is fucking expensive and hard to get. Someone who can afford this stuff has better things to do than shoot a few recruits. The only types of ammunition we work with here are energy projectiles and piercer ammunition such as the Blow-92 uses.«

Carter was fascinated by the wealth of technology available to the military. He wondered if he would ever see more of it than the shabby standard equipment for cannon fodder.