

## ANTI-MATERIAL BACTERIA

Halfway between killer germs and exotic industrial bacteria, these are microorganisms designed to attack nonliving things rather than animals or plants. Some types that are already under development (making them TL8) include:

*Explosive-Eating Bacteria:* Usually targeted at a specific chemical explosive; e.g., TNT, RDX, Plastex-B, etc. These will knock out explosive warheads and chemical propellants.

*Petroleum-Eating Bacteria:* Based on bacteria used to clean up oil spills, these are designed to eat hydrocarbon-based lubricants and fuels such as gasoline, diesel and jet fuel.

*Rubber-Eating Bacteria:* These could destroy tires, fuel lines, valves, boots, etc., disabling vulnerable equipment.

*Other Types:* At TL9+, more exotic types of bacteria (or nanomachines that work like bacteria) may become available that can rapidly degrade plastics, various biotech materials and even silicon chips. However, bacteria won't have much chance against metal, stone or most advanced composites and ceramics. Other types of microbes may also be used.

If equipment or supplies that are vulnerable to a particular anti-material bacteria are in an area that is contaminated, or come into contact with infected material, check for infection. Use the Contagion rules (p. B443) as guidelines to see if the bacteria infect particular material. Ignore modifiers for eating flesh, but "intimate contact" would be direct physical contact with contaminated material - e.g., topping off an uninfected fuel tank with contaminated gasoline, or spraying the bacteria directly into a mechanism. If the HT of the material (or its container) is unknown, use HT 10 for machines, 12 for solid objects.

Anti-material bacteria work slowly. Generally, infected material will show initial signs of rot or contamination after 24 hours and become useless (eaten away, turned to goo, etc.) within 48 hours. During this time, the bacteria can infect other material it contacts. A roll against Hazardous Materials skill (with appropriate equipment) can detect contamination early enough to treat it (using disinfectant bleaches, etc.). A fully airtight container or seal will protect against anti-material bacteria. In the case of sealed vehicles or bases, GMs can require occasional rolls vs. Hazardous Materials skill, with a failure or indicating that some sort of mistake was made (e.g., a seal left open), which will allow a chance of contamination. Of course, saboteurs can always open up machinery and spray the bacteria into it!

In general, anti-material bacteria are devastating against unprepared targets (especially at TL7 or less) but will be of limited use against targets equipped with countermeasures, such as ultra-tech military forces. See also *Cleanup* (p. 114).

### *Anti-Nano Bacteria (TL10)*

One of the primary applications of nanomachines is to seek and destroy cells of various types. Turning this around, it is possible to engineer microbes to seek and destroy nanobots. This is a trickier task for the developers, as they need to equip the bacteria with the ability to detect nanomachines - which can come in a wide variety of physical shapes - and the ability to damage them.

At TL11 it becomes possible to engineer bacteria to *reprogram* nanobots. Reprogramming bacteria would cost at least as much as the purchase price of the reprogrammed nanobots, but the advantage is that the original nanobot controller may be unaware of the reprogramming, and might even be fed false information.

