



Ballistic Gel - Powder

Ballistic gel powder is a specific technical gelatine, which when mixed to a specific density creates an analogue for human tissue. This is used by various industries and law enforcement agencies around the world to test bullet penetration and medical procedures amongst many other things.

This is the ORIGINAL terminal ballistic analogue and is the only material that is accepted as evidence in courts all around the world.

QUICK GUIDE

Making Your Gel:

- 1) Measuring out 10% gel powder (by weight) to 90% cold water (by weight or volume), add the water to the gel powder and mix gently.
- 2) Place in the fridge and allow the mixture to "Bloom" for 2 hours.
- 3) Heat the mixture up to 39C and stir slowly, allowing the mixture to melt throughout. If you do not have a thermometer, the mixture will become like a syrup without lumps.
- 4) Pour into your mould making sure there are no large bubbles and place in the fridge for 24 hours.
- 5) Gently remove from the mould and use as required.

Using Your Gel:

- 1) Making sure your gel is at a suitable temperature, place the gel on a flat surface.
- 2) If required and if using large calibre firearms, tie down the gel with string or cord.
- 3) At a suitable distance, shoot your gel.

Note: Please follow all standard safety procedures when using firearms.

For more information on the use of your gel, please download the full product guide at www.defensible.co.uk/downloads



10% (Standard) - The standard mixture is the benchmark reference for forensic testing around the world. Used for when a repeatable and calibrated human analogue is required and can be used for all types of projectiles or penetrating objects. This is made using 10% gel powder by weight and 90% water by weight (or volume). See below for an example mixture chart:

The 10% Ballistic Gel Chart

| | | Cold Water | | | | | | | | | |
|------------------------|------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Gel | | 90ml | 180ml | 270ml | 360ml | 450ml | 540ml | 630ml | 720ml | 810ml | 900ml |
| Ballistic Gel (Powder) | 10g | 100g | | | | | | | | | |
| | 20g | | 200g | | | | | | | | |
| | 30g | | | 300g | | | | | | | |
| | 40g | | | | 400g | | | | | | |
| | 50g | | | | | 500g | | | | | |
| | 60g | | | | | | 600g | | | | |
| | 70g | | | | | | | 700g | | | |
| | 80g | | | | | | | | 800g | | |
| | 90g | | | | | | | | | 900g | |
| | 100g | | | | | | | | | | 1000g |



20% (NATO) - The NATO mixture is normally used for high velocity projectiles that are armour penetrating. This offers the advantage of being stronger and not being as temperature sensitive. This is made using 20% gel powder by weight and 80% water by weight (or volume). See below for an example mixture chart:

The 20% (NATO) Ballistic Gel Chart

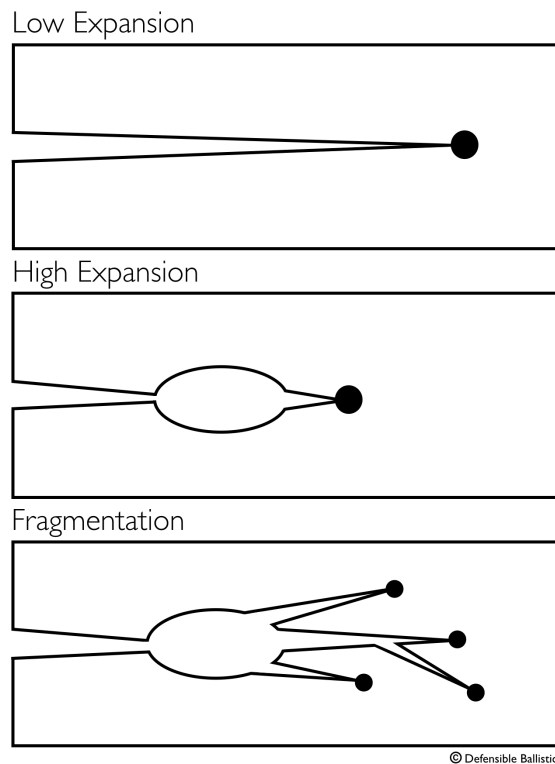
| | | Cold Water | | | | | | | | | |
|------------------------|------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Gel | | 80ml | 160ml | 240ml | 320ml | 400ml | 480ml | 560ml | 640ml | 720ml | 800ml |
| Ballistic Gel (Powder) | 20g | 100g | | | | | | | | | |
| | 40g | | 200g | | | | | | | | |
| | 60g | | | 300g | | | | | | | |
| | 80g | | | | 400g | | | | | | |
| | 100g | | | | | 500g | | | | | |
| | 120g | | | | | | 600g | | | | |
| | 140g | | | | | | | 700g | | | |
| | 160g | | | | | | | | 800g | | |
| | 180g | | | | | | | | | 900g | |
| | 200g | | | | | | | | | | 1000g |



Storage: When storing your gel powder, keep it dry, sealed and out of direct sunlight. Gel powder can last unto a year. After you have cast your gel, keep it refrigerated until use. Cast gel will last 3 days unless treaded with our preservative “Extender”. For more information on this preservative, see the “Extender” section below.

Calibration: Once you have cast your gel, for it to be calibrated to international standards it will need to be kept at particular temperatures. For Standard 10% gel this is 3C, for NATO 20% gel this is 14C. Generally for Standard 10% gel this would require refrigeration up to 30 minutes for before use. For non-professional use, these values are guidelines.

Understanding your results: The analysis of ballistic gel falls under two main categories, penetration analysis, fracture analysis. Penetration analysis looks at the distance a projectile has penetrated into the gel and fracture analysis looks at the areas of broken (fractured) gel within a block to find out how much energy was imparted into the block. An example of what the wound profiles can be like are below:



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More information on this can be found in the product guide at www.defensible.co.uk/downloads.



Extender: If you are using our preservative (Extender), your gel will will not break down or produce mould as easily if not continually refrigerated or over longer periods of time. If you choose not to keep it in the fridge, please keep it wrapped up (air tight) and in a cool place. If you do keep your block refrigerated it will last longer (up to 6 weeks).

Re-usability: Your gel can be used more than once when using Extender. For more information on this, check out our Extender product or contact our team.

Safety information: This product is natural 250-260 bloom gelatine, derived from pig skin and poses no known health risks. Although natural gelatine is edible, we request that you do not eat this product. If this product is eaten, no action is required. If this product is inhaled (powder form only) give the casualty water and seek medical assistance. If this product is on the skin, wash with warm soapy water. If this product gets into eyes, wash the casualty's eyes with water and seek medical assistance if irritation continues.