DIY Manual

WARNING: This product contains nicotine. Nicotine is an addictive chemical.

Liquid Barn DIY Manual

This manual is designed to help beginners understand the concepts of creating their own eLiquid.

Begin mixing only after fully understanding the concepts and safety precautions of mixing your own eLiquid.

Doing these simple calculations prior to mixing will not only help you make more accurate recipes, but also give you more control over the contents of your eLiquid. You can adjust, compensate, and recreate any recipe.

Always use protection when handling nicotine solutions, regardless of dilution.

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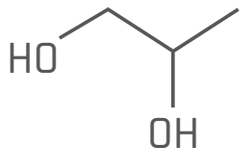
For more information please visit
www.liquidbarn.com

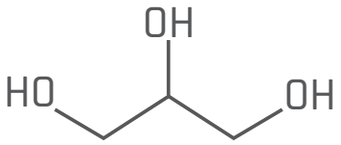
Introduction to eLiquid

eLiquid - The nicotine or non-nicotine solution used in electronic cigarettes. This solution predominately consists of two compounds:

Propylene Glycol (PG)



Vegetable Glycerin (VG)



Propylene Glycol and **Vegetable Glycerin** serve as the base liquids for Nicotine Solutions and Flavor Concentrates.

When mixing your eLiquid, you will need to decide the overall ratio between your **PG** and **VG**, since the ratio between the two bases can have a profound effect on your final eLiquid. When choosing the **PG** / **VG** ratio of your eLiquid, you will want to balance the characteristics of each base liquid to your own needs:

Higher PG Ratio

Stronger throat-hit
Lower vapor production
Thinner eLiquid

Higher VG Ratio

Smoother throat-hit
Higher vapor production
Thicker eLiquid

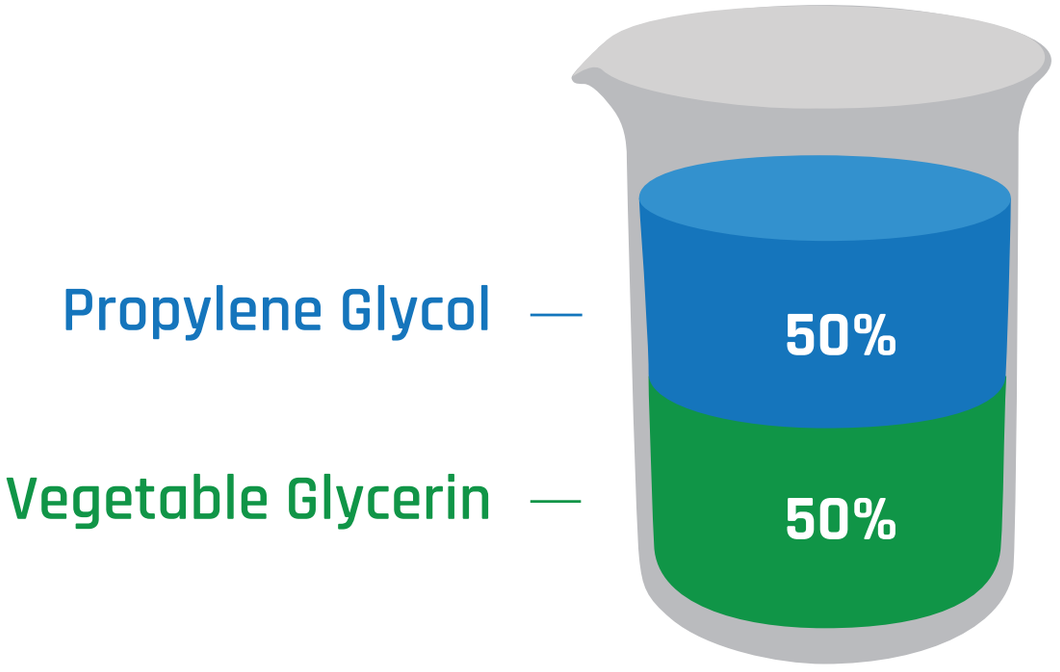
*Do not use PG if you have any PG allergens.

Base Ratios

Think of your batch size as a whole, or 100%, and your **PG** / **VG** percentages are what will make up this 100%.

Since your nicotine and flavoring are also composed of **PG** and/or **VG**, your nicotine and flavoring will be accounted for in either your **PG Ratio** or **VG Ratio** depending on the dominant base of that liquid.

If you don't already have a preferred **PG** to **VG** ratio, start off using 50/50



Flavoring

Flavor concentrates are made up of multiple components. Typically, flavors will consist of a dominant **PG** or **VG** base.

Your Flavor Concentrates will be accounted for in either your **PG** or **VG** ratio depending on the dominant base.

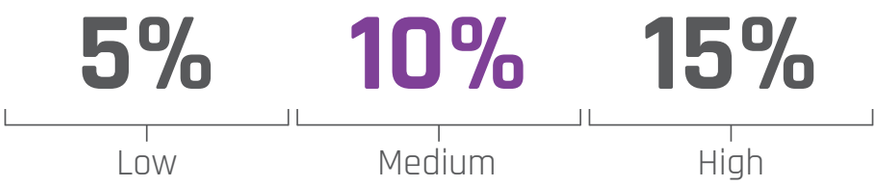
The dominant base of all Liquid Barn flavors can be found on our website in resources or on each individual flavor page with the statement:

This flavor is ■ **PG Dominant** | This flavor is ■ **VG Dominant**

You can also determine the dominant base of your flavor by looking at which base comes first under **Non-flavoring Ingredients** on your Liquid Barn bottle.

If you don't know the dominant base of your flavor, assume **PG**

Determine your desired **Flavor Strength**



Flavor Strength is the amount of flavoring you will use in your mix, stated as a percentage of your total mix. The percentage used will vary depending on your personal preference. Just like cooking, you will perfect this through trial and error.

Suggested Starting Percentage **10%**

All Liquid Barn flavor concentrates have a **Suggested Starting Percentage** printed on the side of the bottle. This percent is intended for use as a single flavor mix.

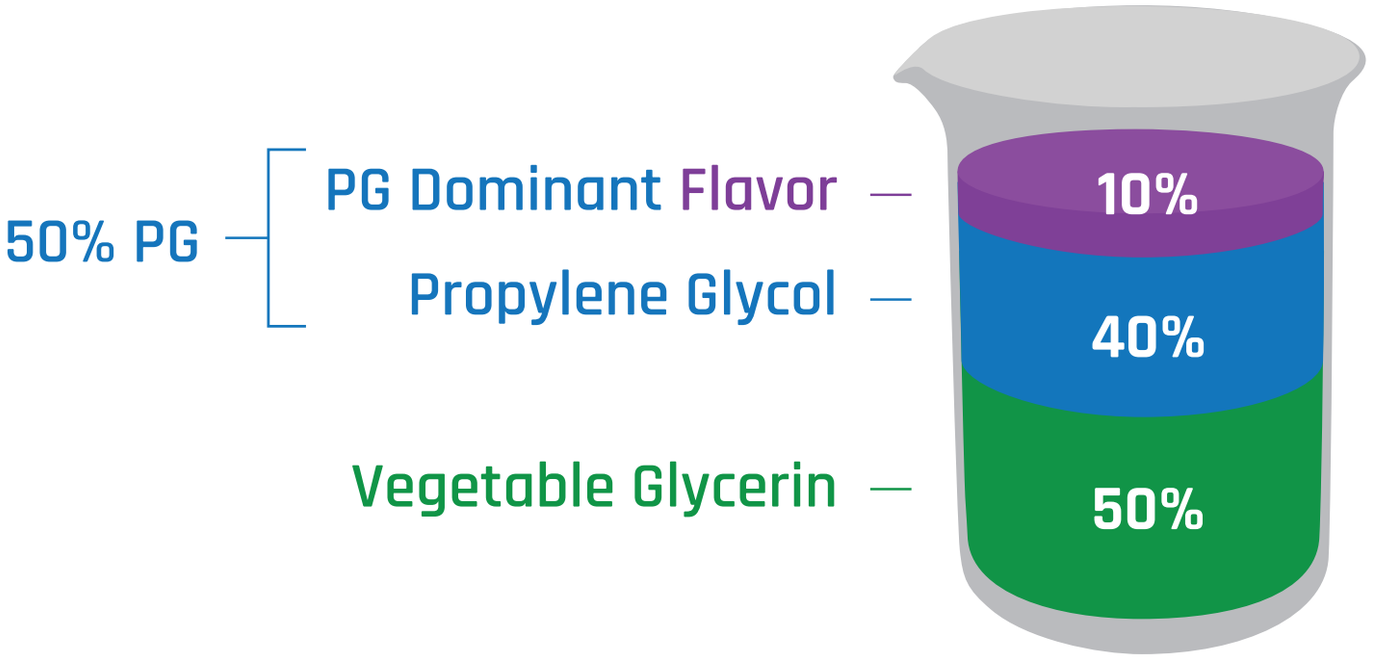
We recommend starting off with single flavor recipes to familiarize yourself with different flavor profiles. You can then move on to more complex flavor recipes. When mixing multiple flavors, you will want to lower the percentage of each flavor and take careful note of how they blend with each other.

It is recommended to keep the total percentage of all your flavors under 20%.

Example (No Nicotine)

For this example we will be making a batch of eLiquid using a **Flavor Strength of 10%**. We will assume our flavor concentrate is **PG Dominant**.

Since **10% Flavoring** is being counted towards our total **PG** ratio, we will now only need to use **40% PG** to maintain our **50/50** ratio.



Nicotine Solution

WARNING: This product contains nicotine. Nicotine is an addictive chemical.

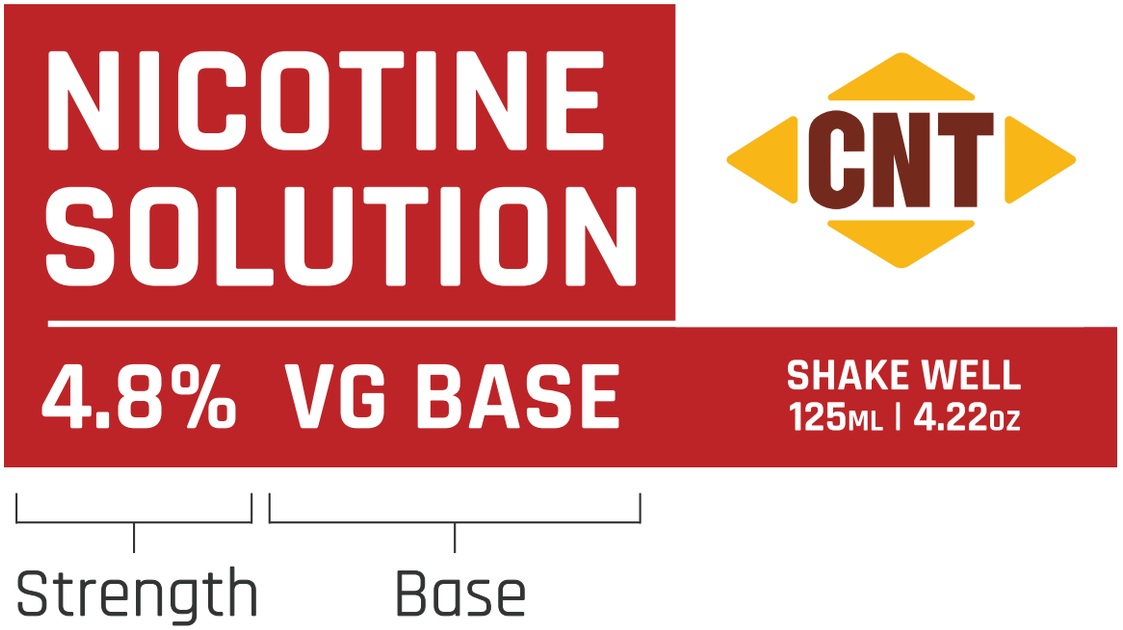
Nicotine is not required nor recommended in your eLiquid. Do not use nicotine if you do not require it. Nicotine is addictive, dangerous, and should be handled only after reading all warning labels on bottles. You should never handle highly concentrated nicotine, especially in its pure form.

Nicotine strengths are commonly displayed as **milligrams per milliliter (mg/ml)** or as **percent by volume (%)**

Nicotine is available in a **PG** or **VG** Base.

Your Nicotine Solution will need to be diluted down to a vapable strength in your final eLiquid batch.

Identify the **Strength** and **Base** of your Nicotine Solution



The above example shows a Nicotine Solution with a strength of **48mg/ml (4.8%)** in a **VG Base**.

Just like flavoring, your nicotine will be accounted for in either your **PG** or **VG** ratio depending on the base of your Nicotine Solution.

Determine your desired **Target Strength**

3MG Low | **6MG** Medium | **12MG** High

Target Strength is the strength you want your final eLiquid to be.

In order to figure out how much of your **Nicotine Solution** you will need to reach your **Target Strength**, simply divide your **Target Strength** by the strength of your Nicotine Solution (**Base Strength**), then multiply by 100.

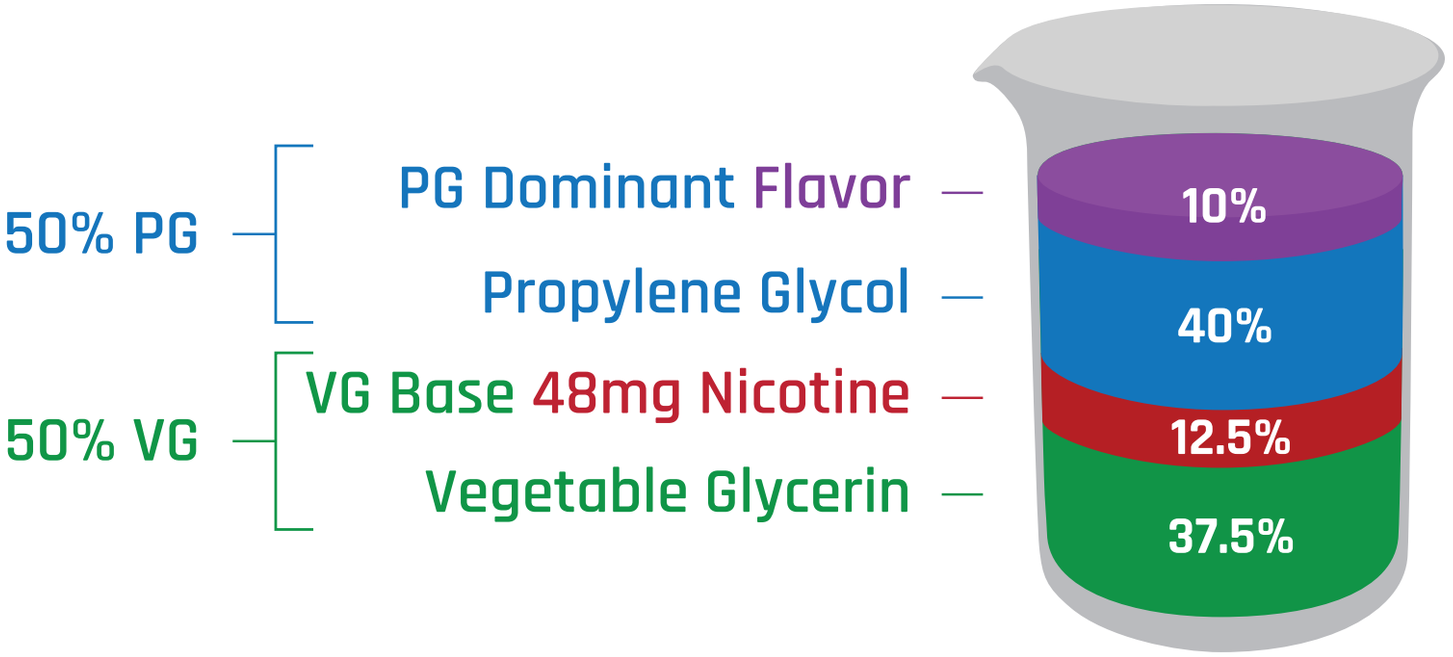
$$\frac{\text{Target Strength}}{\text{Base Strength}} \times 100 = \text{\% Nicotine Needed in batch}$$

Example (With Nicotine)

For this example we will be making a batch of **6mg** eLiquid using a **VG Base Nicotine Solution** of **48mg/ml**.

$$(6 \div 48) \times 100 = 12.5\%$$

Since **12.5%** of our **Nicotine Solution** is being counted towards our total **VG** ratio, we will now only need to use **37.5% VG** to maintain our **50/50** ratio.



Mixing By Volume

Once you know the percentage of each ingredient needed in your eLiquid, mixing by volume is as simple as multiplying by your **Batch Size** (your percentages will be the same no matter how large or small your batch).

Percentage × Batch Size

Keep in mind you will need to convert percentages to decimals for your calculations. Please refer to your mixing mat for help with calculations and more detailed information about mixing by volume.

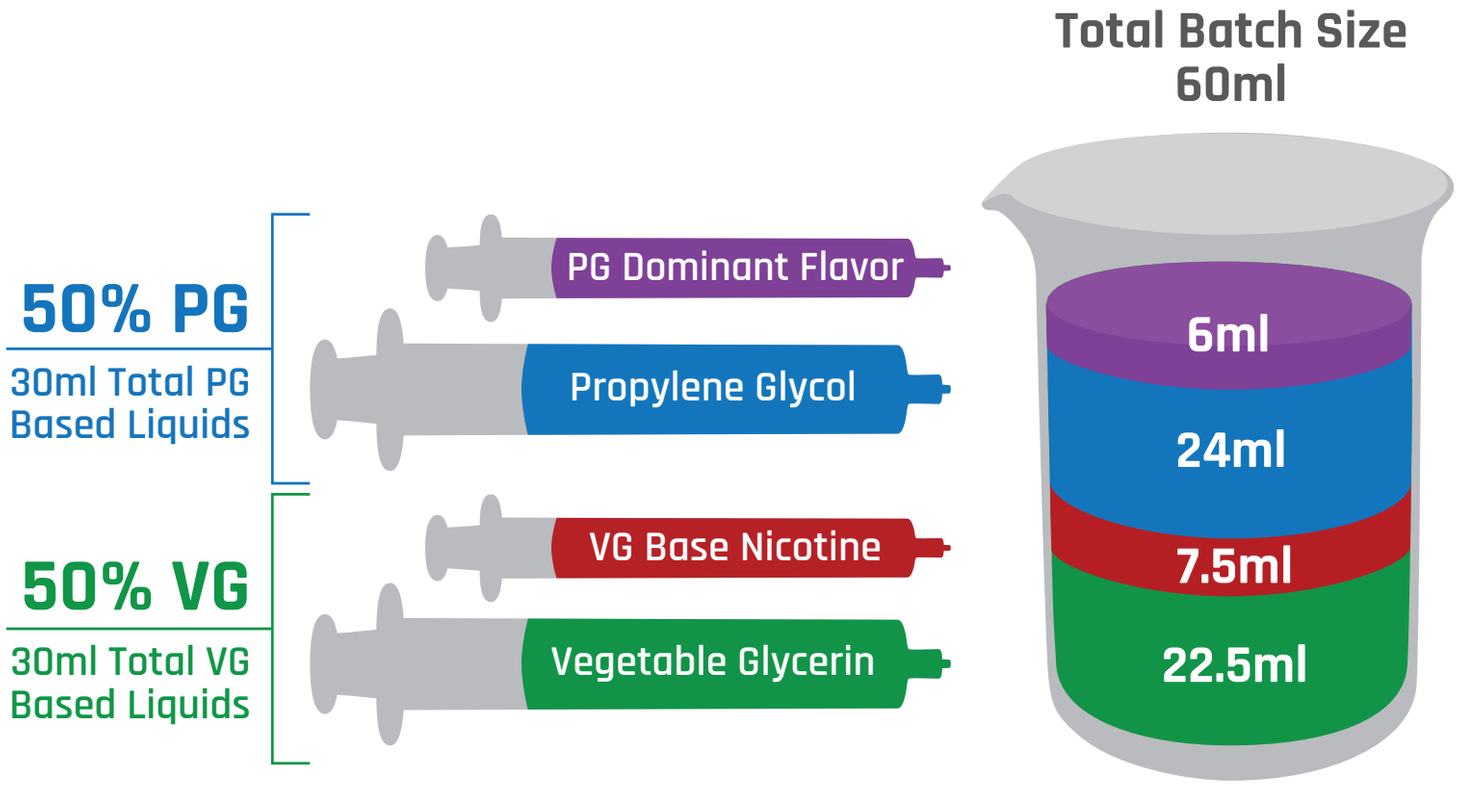
Alternatively, we recommend using an online eLiquid calculator to do the math for you fast and accurately.

www.liquidbarn.com/calculator

Example (By Volume)

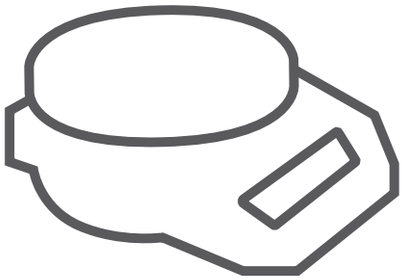
For this example we will be making a **60ml Batch** of eLiquid.

Flavor 10%	.10	×	60	= 6ml Flavor
PG 40%	.40	×	60	= 24ml PG
Nicotine 12.5%	.125	×	60	= 7.5ml Nicotine
VG 37.5%	.375	×	60	= 22.5ml VG



Mixing By Weight

(Optional)



Once you know the volume (ml) of ingredients you need in your eLiquid, you can opt to mix by weight (g) instead by multiplying the volume of your ingredients by their **Specific Gravity** (density in g/ml).

Volume (ml) × Specific Gravity (g/ml)

Each ingredient you use will have their own Specific Gravity. Please refer to your mixing mat for more detailed information on the specific gravity of ingredients and the process of mixing by weight.

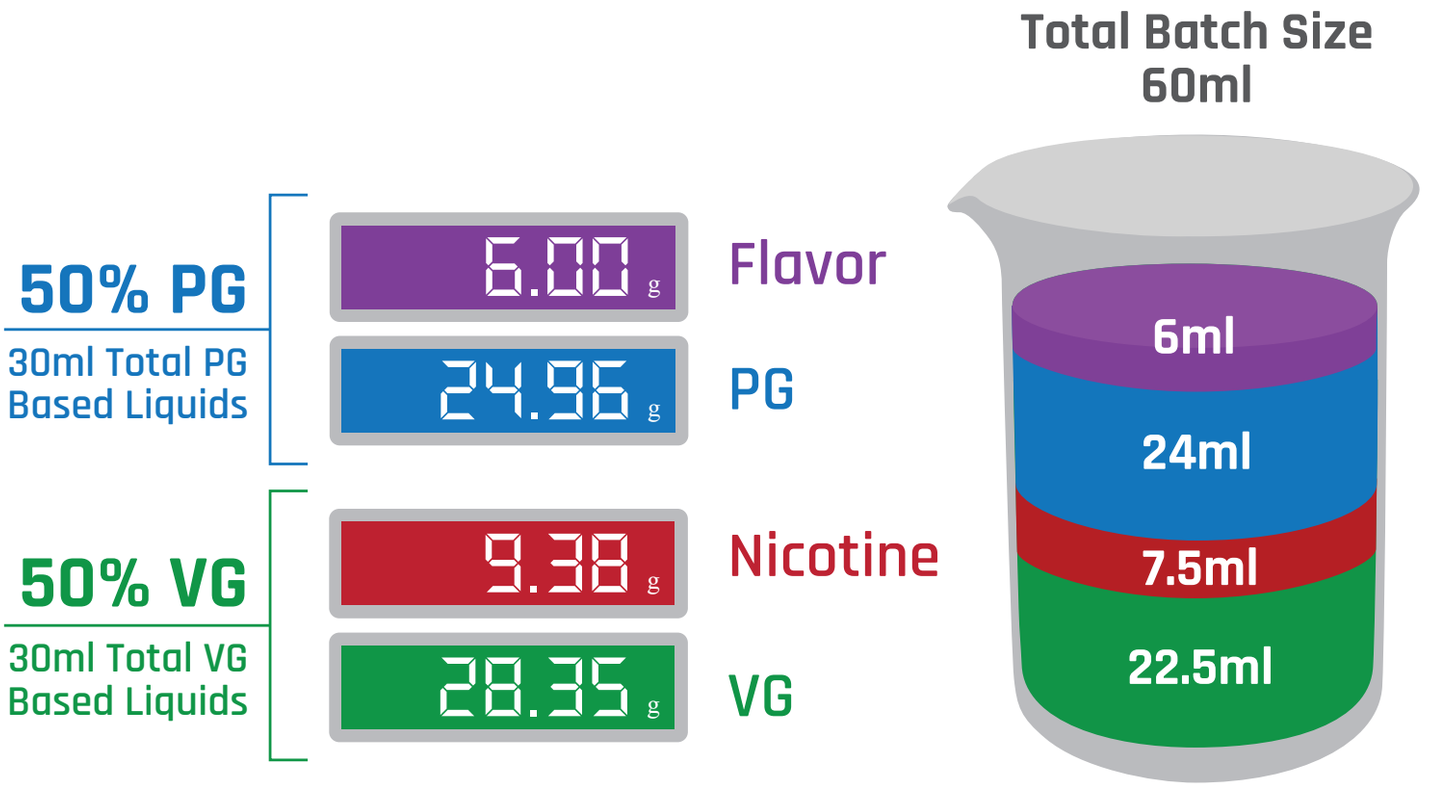
Alternatively, we recommend using an online eLiquid calculator to do the math for you fast and accurately.

www.liquidbarn.com/calculator

Example (By Weight)

For this example we will use our previous 60ml batch of eLiquid and convert milliliters (ml) to grams (g) using **Specific Gravity**.

Flavor 6ml	6	× 1.00	=	6.00g Flavor
PG 24ml	24	× 1.04	=	24.96g PG
Nicotine 7.5ml	7.5	× 1.25	=	9.38g Nicotine
VG 22.5ml	22.5	× 1.26	=	28.35g VG



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