

RATIO: The weight comparison of the output of ISO (A) to the output of POLYOL (B).

Necessary Items:

- 30 gallon or larger plastic bag
- Gram scale

RATIO PROCEDURE:

1. Connect mix tube adapter to SLUG block.
2. Open both the ISO (A) and POLYOL (B) ball valves, take a “short shot” (2-3 seconds) to clear the lines.
3. Close the POLYOL (B) ball valves and keep the ISO (A) ball valves OPEN. Take a 10-second shot of ISO into a plastic bag and tie shut immediately.
4. Reopen POLYOL (B) ball valves and take a second “short shot”.
5. Close the ISO (A) ball valves and keep the POLYOL (B) ball valves OPEN. Take a 10-second timed shot of POLYOL into a plastic bag and tie shut immediately.
6. Open the ISO (A) ball valves, take a third “short shot”.
7. Place gun on stand, attach muffler and air purge for 30 seconds.

RATIO CALCULATION:

(Gram weight is necessary for accuracy.)

Ratio = ISO (A) : POLYOL (B)

Formula: $\frac{\text{ISO (A) Weight} \times 100}{\text{ISO (A) Weight}}$: $\frac{\text{POLYOL (B) Weight} \times 100}{\text{ISO (A) Weight}}$

Example: 10 second shot:

ISO (A) weight = 1350 g

POLYOL (B) weight = 1260 g

$$\frac{1350\text{g} \times 100}{1350\text{g}} : \frac{1260\text{g} \times 100}{1350\text{g}}$$

$$1 \times 100 : 0.93 \times 100$$

$$100 \text{ ISO (A) } : 93 \text{ POLYOL (B)}$$

GUN SIZE	SHOT TIME
45-PPM	6 seconds
30-PPM	10 seconds
15-PPM	10 seconds
6-PPM	10 seconds

THROUGHPUT: The number of pounds per minute (PPM) dispensed from the SLUG dispensing unit. It is the weight of foam from a 10 or 6 second timed shot expressed in lbs./min.

Necessary Item:

- 30 gallon or larger plastic bag
- Scale

THROUGHPUT PROCEDURE: (6-PPM, 15-PPM OR 30-PPM SLUG)

1. Attach mix tube to adapter and secure with mix tube collar.
2. Take a 10-second shot into a plastic bag.
3. After shot, place gun on stand, attach muffler and air purge for 30 seconds.
4. Wait 5 minutes to allow foam to cure on a warm flat surface.
5. Weigh the foam bag on a gram scale and record weight.

THROUGHPUT PROCEDURE: (45-PPM SLUG)

1. Attach mix tube to adapter and secure with mix tube collar.
2. Take a 6-second shot into a plastic bag.
3. After shot, place gun on stand, attach muffler and air purge for a minimum of 30 seconds.
4. Wait 5 minutes to allow foam to cure on a warm flat surface.
5. Weigh the foam bag on a gram scale and record weight.

CALCULATIONS: (Gram weight is necessary for accuracy.)

Formula:

$$a) \frac{\text{Weight in grams}}{454} = \text{Weight in lbs}$$

$$b) \frac{\text{Weight in lbs} \times 60}{10 \text{ seconds}} = \frac{\text{Weight in lbs}}{1 \text{ minute}}$$

$$c) \text{Throughput} = \text{Weight in lbs/min}$$

Example: A 10-sec. shot from a 15-PPM gun unit weighs 1135 grams.

$$a) \frac{1135 \text{ g}}{454} = 2.5 \text{ lbs}$$

$$b) \frac{2.5 \text{ lbs} \times 60}{10 \text{ sec}} = 15 \text{ lbs/min}$$

$$c) \text{Throughput} = 15 \text{ lbs/min (0.25 lbs/sec)}$$

REACTION PROFILE: The sequential stages, that is, the String-Gel and Tack-Free times, from the time the ISO (A) and POLYOL (B) are mixed/dispensed until the urethane reaction is complete.

REACTION PROFILE Q.C. – Measuring, recording and comparing the stages and comparing to the specific system Technical Data Sheet. For daily production purposes, String-Gel measurement is the focus and suggested minimum Q.C. check.

STRING-GEL – The duration of time from the moment when the chemical is mixed/dispensed until the foam adheres to a thin wire (approximately 1/16" in diameter, similar diameter to a wire coat hanger) and becomes "stringy" like bubble gum.

Necessary Items:

- 30 gallon or larger plastic bag
- Large box, receptacle or trash can
- Stop watch or other timing device
- 1/6" diameter wire (similar diameter to a wire coat hanger)

STRING-GEL MEASUREMENT PROCEDURE: (6PPM, 15PPM OR 30PPM SLUG)

1. Dispense a 10 second shot into a plastic bag and simultaneously start stop watch.
2. 10 seconds prior to the specific system STRING-GEL, provided on Technical Data Sheet, begin poking 4" - 12" deep into the rising foam with wire. Repeat at 5 second intervals into a fresh foam surface until the foam sticks to the wire and reaches a "stringy" bubble-gum like consistency.
3. Record time when foam reaches "stringy" consistency.

STRING-GEL MEASUREMENT PROCEDURE: (45PPM+ SLUG)

1. Dispense a 6 second shot into a plastic bag and simultaneously start stop watch.
2. 10 seconds prior to the specific system STRING-GEL, provided on Technical Data Sheet, begin poking 4" - 12" deep into the rising foam with wire. Repeat at 5 second intervals into a fresh foam surface until the foam sticks to the wire and reaches a "stringy" bubble-gum like consistency.
3. Record time when foam reaches "stringy" consistency.