

bitter

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **38**
- SRM **6.4**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **15.9 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **10.7 liter(s)**
- Total mash volume **13.4 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-----------------|-------|-----|
| Grain | Pale Malt (2 Row) US | 2.4 kg (89.4%) | 79 % | 4 |
| Grain | Biscuit Malt | 0.185 kg (6.9%) | 79 % | 45 |
| Grain | Karmelowy Czerwony | 0.1 kg (3.7%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|--------------------|--------|--------|------------|
| Boil | East Kent Goldings | 8 g | 60 min | 9.2 % |
| Whirlpool | Challenger | 50 g | 30 min | 6.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | Fermentis |