Technical Data Sheet – Biogenic 110M

1. Physical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>pH @25°C</td>
<td>12.0 ~ 13.5</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.00 ± 0.10 g/mL</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Complete</td>
</tr>
<tr>
<td>Application</td>
<td>Rubber</td>
</tr>
<tr>
<td>Shelf life</td>
<td>12 Months 12 months</td>
</tr>
</tbody>
</table>

2. Preparation

2-1. Biogenic-110M dilution


2-2. Oxalic acid dilution

- Oxalic acid must be diluted with soft water to get the pH value under 2.0 ~ 3.0.

2-3. Soft water

- Preferably, soft water should be used for rinsing and diluting detergent and acid solutions.

2-4. Equipments

a. The detergent degreasers must be used to be acceptable for Nike Production.

b. pH meters (usually supplied as part of the degreaser) must be calibrated at least once a week. If pH meters do not show constant value or extraordinary value, please check the battery of pH meters and confirm the performance of pH meters with standard buffer solutions.
3. Procedure

a. Cleaning bath

As mentioned in “Detergent dilution”, Biogenic110M is diluted to approximately 20:1 and placed into the main cleaning tank of the machine. pH must be measured to insure that solution is running above pH 10.0 and temp. range is 50 ~ 80℃ (122 ~ 176°F). Out-sole should be submerged in the detergent more than 45 seconds.

Biogenic-110M以约20：1的比例进行稀释。然后放在机器内主要的清洗桶内。测量pH值以确保使用中的溶液高于10.0且温度范围为50~80℃ (122 ~ 176°F)。在洗涤剂内浸泡45秒以上。

b. Air spraying

Removing process of residual detergent liquid on sole surface by air (air pressure : 4 ~ 6 kgf/cm³).

用空气去除残留在鞋底表面的洗涤剂（空气压力：4 ~ 6 kgf/cm³）。

c. 1st rinsing

If possible use soft water. Rinse time is more than 35 sec, temp. 50 ~ 80℃ (122 ~ 176 ℉).

如可能使用软水。洗涤时间35秒以上，温度50 ~ 80℃ (122 ~ 176 ℉)。

d. 2nd rinsing

Oxalic acid can be easily dissolved in warm water. Prepare 5 ~ 10% solution. Add this solution to 2nd rinsing bath until the pH value of rinsing bath goes below 3.0. Rinsing time is more than 35 sec, temp. 50 ~ 80℃ (122 ~ 176 ℉).

草酸在温水中能容易的溶解。准备5~10%的溶液。将此溶液加在第2个洗涤槽内直到此洗涤槽的pH值低于3.0。洗涤时间35秒以上，温度50~80度 (122~176 ℉)。

e. Air spraying

Removing process of residual cleaning liquid on sole surface by air (air pressure : 4 ~ 6 kgf/cm³).

用空气去除残留在鞋底表面的的洗涤液体（空气压力：4 ~ 6 kgf/cm³）。

f. Drying by hot air.

4. Rubber conditions

a. Outsole may not be more than 13 days old. If possible, only outsoles less than 7 days old should be used. If the outsoles are older than 13 days they must be mechanically roughed.

鞋底不能超过13天。如可能应在7天内使用。如超过13天，必须进行机械打磨。

b. Outsole must be primed within 5 hours after cleaning. If not, should be re-cleaned.
5. Maintenance

a. Detergent pH must be checked (2 hour intervals minimum).
   检查洗涤剂的pH（最低间隔2小时检查一次）
   If the value goes down, add fresh detergent until proper pH range.
   如数值下降，加入新的BIO-110M直到达到正确的pH值范围

b. Acid pH must be checked (2 hour intervals minimum).
   检查酸的pH（最低间隔2小时检查一次）
   If the value goes up, add the acid solution until proper pH range.
   如数值上升，加入酸直到达到正确的pH值范围

c. Oil separators must be cleaned once a week depending on machine.
   根据机器的情况，油分离器必须每周清洗一次

d. Detergent tank should be disposed of every 2 weeks. But replenishment period should be different on the number of cleaned rubber and machine condition.
   每2个周处理一次洗涤桶。但是根据洗涤的鞋底及机器状况，补充期间应不同

e. Rinse and acid in wash tanks should be replenished once a day or every two days.
   清洗桶内的清洗水和酸应每天或每两天补充一次

f. pH meters were re-calibrated.
   重新校准pH测量仪

6. Disposal

Waste liquids of detergent and rinse tanks can be mixed together and pH adjusted with either citric or oxalic acid or NaOH to achieve a pH range of 6.5 ~ 7.5. Neutralized solution may be disposed through sewer or drainage system. Oils and sludge from separators or bottom of detergent tank may be incinerated in regally approved facility.

混合洗涤桶和清洗桶的废液体并用标准酸或草酸或氢氧化钠将pH值调整到6.5~7.5的范围。中和的溶液排到下水道或排水系统中。分离器或洗涤桶底部的油和淤泥可以用法律批准的设备焚烧

7. Note

a. Please do not contact with skin and keep a safety because of high temp.
   因高温禁止接触皮肤并保证安全
b. Please keep the working temp. Under low working temperature, the cleaning performance will be reduced significantly.

请保持在作业温度低于作业温度时，将明显降低清洗效果

c. Please store at room temp. and use after mixing.

在室温下贮存并混合后使用

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