



# Development of Kirin Beverage “Gogo no Kocho” Ice Tea Glass Bottle

— Achieving Both Design Excellence and Packaging Resource  
Reduction —

KIRIN R&D DAY 2025  
Kirin Holdings Company, Limited  
Institute for Package Innovation  
Research & Development Division

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# Ice Tea Glass Bottle Wins the “Appropriate Packaging Award”

At the “2025 Japan Packaging Contest” organized by the Japan Packaging Institute, we received the “Appropriate Packaging Award” on Wednesday, August 27, 2025.

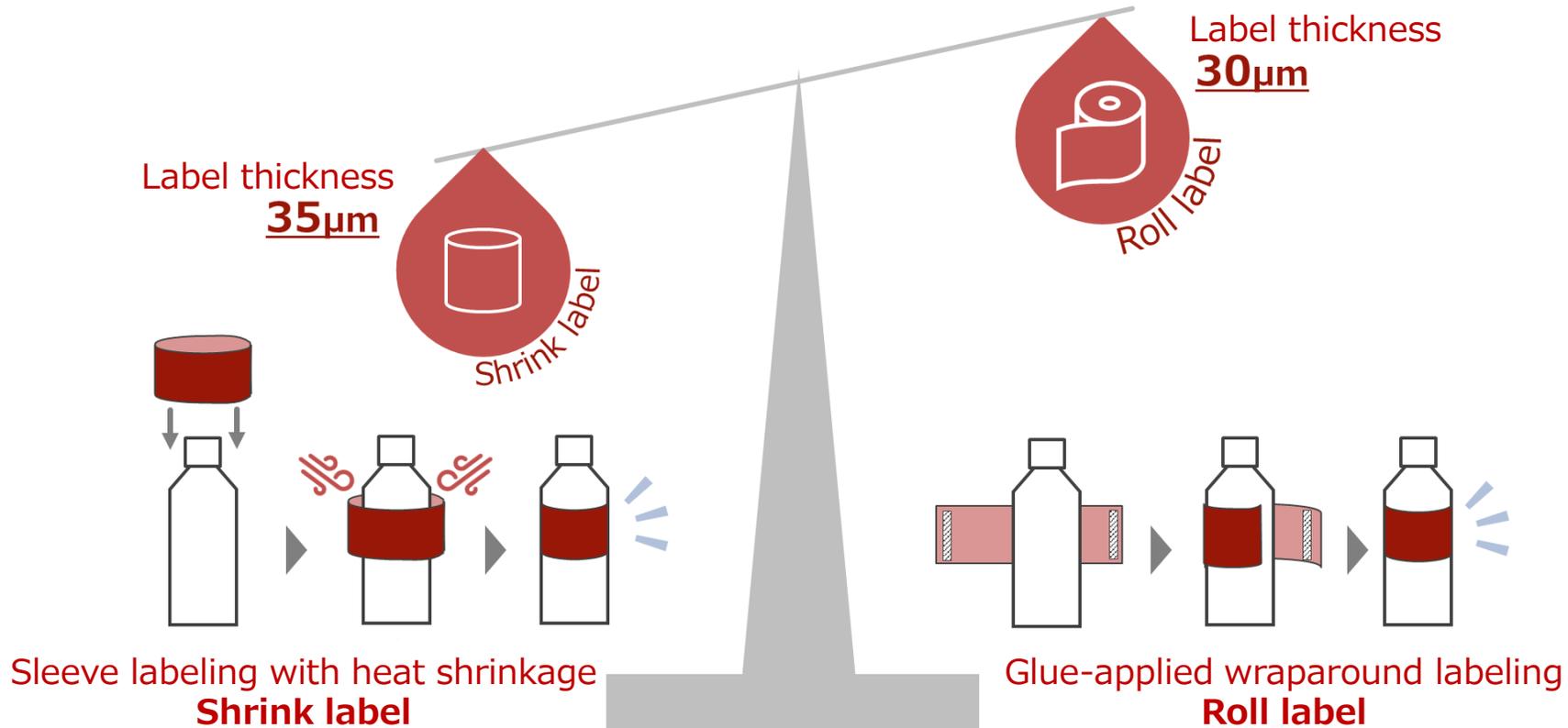


The bottle design was highly evaluated for combining a clear and sophisticated appearance with functionality, environmental consideration, and ease of use.

Point  
1

# Label Material Reduction

To help consumers understand our environmental considerations through label resource reduction, the label thickness was reduced, resulting in approximately a **44%** reduction in plastic usage compared to the current design. On an annual basis, this is expected to reduce plastic usage by approximately **166 tons**.



Point  
2

# Bottle lightweighting

By realizing a container shape designed with PET bottle lightweighting in mind, plastic usage has been reduced by approximately **10%** compared to the current design. On an annual basis, this is expected to reduce plastic usage by approximately **720 tons**.



# Container strength design

**A new rib design was developed** to prevent deformation, reduced buckling strength, and decreased grip performance caused by PET bottle lightweighting (patent pending). The design maintains buckling strength and grip performance while remaining compatible with roll-fed labeling.

## Features of the diagonal rib design

- ① Inverted V-shaped ribs
- ② Three and two ribs are alternately arranged at the diagonal sections so that they do not overlap.

## Effects of the diagonal rib design

### I : Deformation prevention

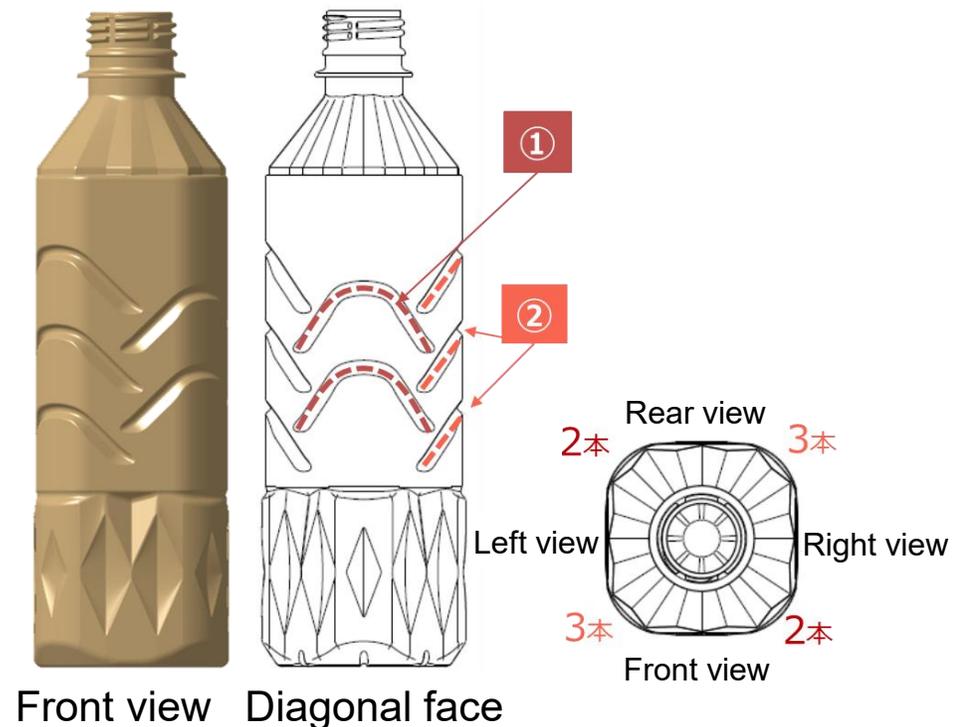
Bottle deformation and stress concentration are less likely to occur from the ribs.

### II : Improved buckling strength

Buckling strength is improved by distributing the applied load.

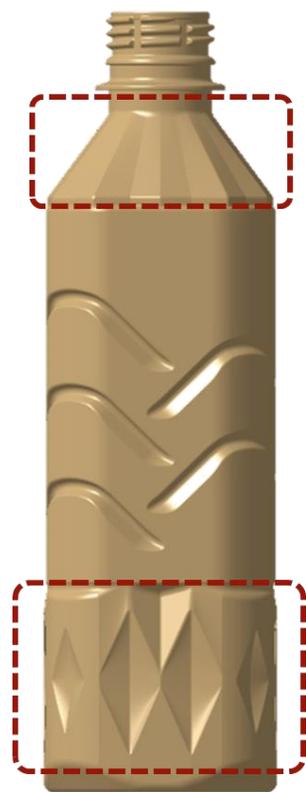
### III : Improved grip performance

Grip performance is also improved by arranging the ribs over the entire bottle.



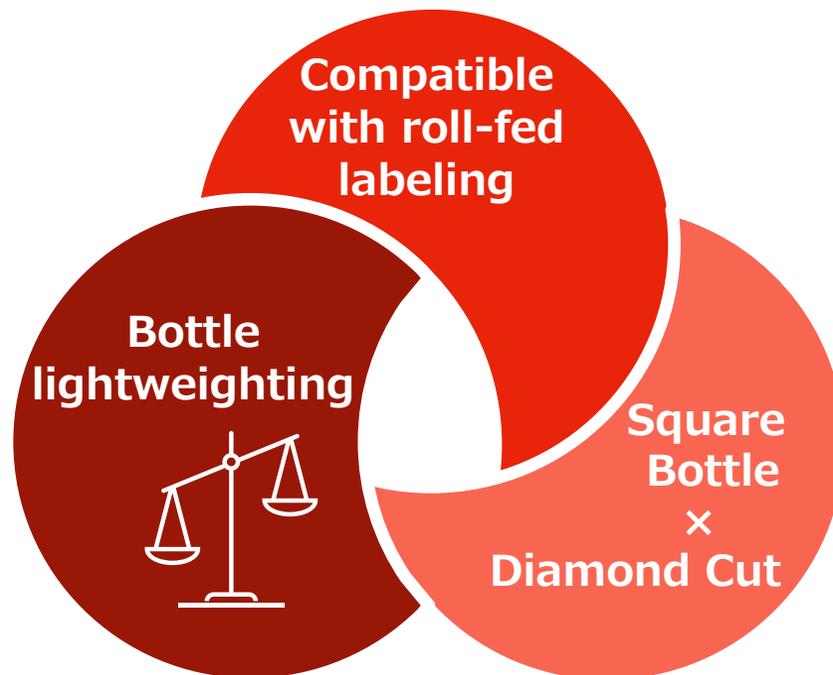
# Bottle design aesthetics

**A square PET bottle combined with diamond-cut detailing** that embodies the distinctive “Gogo no Kocho” brand identity was applied to the shoulder and base areas (design application filed). The shape allows the tea’s color to appear clearer and more appealing.



# Summary: Effects of the Container Development

Through this initiative, we successfully developed a PET bottle that meets **bottle design aesthetics** while supporting both **lightweighting** and **roll-fed labeling**. As a result, the developed PET bottle is expected to reduce plastic usage by approximately **866 tons** (including both the bottle and label), and greenhouse gas emissions by approximately **2,092 tons**.



Reduced Plastic Usage!

**866 t**



Reduced Greenhouse Gas Emissions!

**2,092 t**

# Kirin Group Plastic Policy

1. We promote resource circulation for PET bottles.
2. We strive to reduce single-use plastics.
3. We aim to improve the sustainability of PET bottle materials.



**A Society Where  
Plastics Continue  
to Circulate**