

# VRLA Refined Lead Technical Datasheet

## Uses

Nyrstar VRLA Refined Lead is a high-purity bismuth-enhanced product suitable for all types of batteries, and is used by battery companies world-wide.

## Chemical specification

| Chemical specification | Guaranteed analysis |
|------------------------|---------------------|
| Bi                     | 0.05 – 0.06 %       |
| Ag                     | ≤ 0.001%            |
| As                     | ≤ 0.0001%           |
| Ba                     | ≤ 0.0005%           |
| Cd                     | ≤ 0.0005%           |
| Co                     | ≤ 0.0001%           |
| Cr                     | ≤ 0.0002%           |
| Cu                     | ≤ 0.001%            |
| Fe                     | ≤ 0.0002%           |
| Mo                     | ≤ 0.0003%           |
| Mn                     | ≤ 0.0003%           |
| Ni                     | ≤ 0.0002%           |
| S                      | ≤ 0.0007%           |
| Sb                     | ≤ 0.0001%           |
| Se                     | ≤ 0.0001%           |
| Sn                     | ≤ 0.0005%           |
| Te                     | ≤ 0.00003%          |
| V                      | ≤ 0.0002%           |
| Zn                     | ≤ 0.0005%           |

## Physical data

| Physical property       | Unit               | Value  |
|-------------------------|--------------------|--------|
| Density solid (@ 20 °C) | kg/dm <sup>3</sup> | 11.337 |
| liquid (@ 327.3 °C)     | kg/dm <sup>3</sup> | 10.686 |
| Melting point           | °C                 | 327.3  |

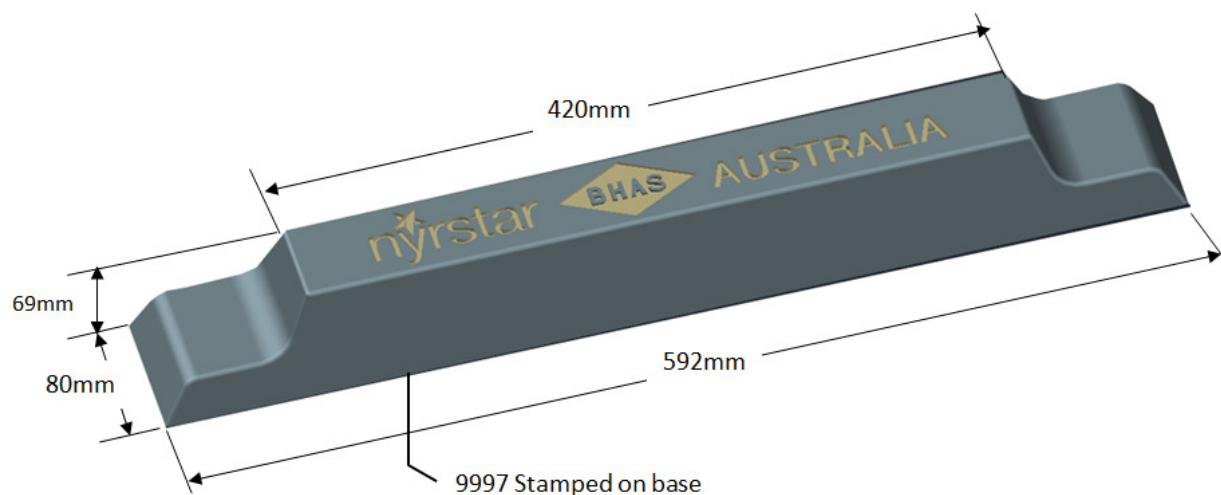
## Available shapes/package

| Shape/package                       | Nominal weight (in kg) | Dimensions (in mm) |
|-------------------------------------|------------------------|--------------------|
| Ingot                               | 25                     | 592 x 80 x 69      |
| Ingot bundle (42 ingots per bundle) | 1050                   | 592 x 592 x 476    |

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## Ingot

Nominal mass 25 kg  
Dimensions 592 x 80 x 69



## Ingot bundle (42 ingots per bundle)

Nominal mass 1050 kg  
Dimensions 592 x 592 x 476

