

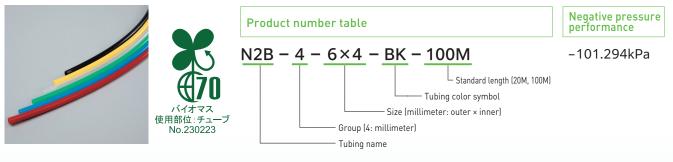
## **Biomass tubing** (Tubing derived from plant)

The product is made from plant-derived raw material, and contributes to the reduction of CO<sub>2</sub> emission.

## **Biomass nylon tubing**

- The nylon tubing is made from castor oil and can be replaced into the petroleum-based nylon tubing as there is no functional difference.
- Biomass mark certified by the Japan Organics Recycling Association (JORA).
- **N2B tubing** The biomass value is 84% (calculated value, based on ASTM D6866), 74% (calculated value, based on JORA).

Relation between the working temperature and the maximum working pressure



## Operating fluid, working temperature range

| Operating fluid          | Working temperature range |
|--------------------------|---------------------------|
| Air                      | −40℃~+100℃                |
| Water                    | 0℃~+70℃                   |
| General<br>operating oil | −40℃~+100℃                |

|  | 100      |  |   |          |   |  |   | $\mathbf{V}$ |   |   |   |   |   |           |
|--|----------|--|---|----------|---|--|---|--------------|---|---|---|---|---|-----------|
|  | 90       |  |   |          |   |  |   | <b>1</b>     |   |   |   |   |   |           |
|  | 80       |  | - | -        | - |  | - | -            |   | - | - | - | - |           |
|  | 70       |  | - | -        | - |  | - | -            |   | - | - | _ | - |           |
|  | 60       |  | - | -        | - |  | - | -            | - |   |   | _ | - | $\square$ |
|  | 50       |  | - | -        |   |  |   | -            | - | - |   |   |   |           |
|  | 40       |  | - | <u> </u> |   |  |   | _            | _ | - |   |   |   |           |
|  | 30       |  |   |          |   |  |   |              |   |   |   |   |   |           |
|  | 30<br>20 |  |   |          |   |  |   |              |   |   |   |   |   |           |
|  | 10       |  |   |          |   |  |   |              |   |   |   |   |   |           |
|  | 10       |  |   |          |   |  |   |              |   |   |   |   |   |           |
| -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 |          |  |   |          |   |  |   |              |   |   |   |   |   |           |
| Working temperature(°C)                          |          |  |   |          |   |  |   |              |   |   |   |   |   |           |

The maximum working pressure varies with the working temperature (environmental temperature). For use at an abnormal temperature, always check the maximum working pressure change in the graph below and keep the pressure within the indicated range.

▲ Caution: Using tubes at a pressure outside the range may cause accidents or damage, for which Nitta is not liable.

| - |      |      |      |      |       |
|---|------|------|------|------|-------|
|   | land | lina | inst | ruct | ions  |
|   | iunu | ung  |      | act  | 10115 |

- ▲ Caution: When water is used as the operating fluid, the tubing material might degrade depending on the additive. Contact us for details.
- Caution: When water is used as the operating fluid,keep the surge pressure below the maximum working pressure. Also, do not allow the water to freeze.

| Туре        | Outer diameter              | Max.<br>working pressure<br>(MPa at 20℃) | Min.<br>bending radius<br>(mm) | Reduction<br>amount of CO <sub>2</sub><br>(g-CO <sub>2</sub> /m)*1 | Standard color (color symbol) |             |            |             |       |     |     |
|-------------|-----------------------------|--|--------------------------------|--|-------------------------------|-------------|------------|-------------|-------|-----|-----|
|             | ×<br>Inner diameter<br>(mm) |  |                                |  | Black                         | Milky white | Yellow     | Blue        | Green | Red |     |
|             |                             |  |                                |  | BK                            | MW          | YL         | BU          | GN    | RE  |     |
| N2B-4 -4×   | 2.5                         | 4 × 2.5                                  | 3.3                            | 15   | 28                            |             | 0          | ●*2         | ●*2   | •*2 | ●*2 |
| N2B-4 -6×   | 4                           | 6×4                                      | 3.0                            | 20   | 60                            |             | $\bigcirc$ | $\bigcirc$  |       |     |     |
| N2B-4 -8×   | 6                           | 8×6                                      | 2.0                            | 35   | 81                            |             | 0          | 0           |       |     | •   |
| N2B-4 - 10> | ×8                          | 10×8                                     | 1.6                            | 45 -   | 102                           |             | $\bigcirc$ | 0           |       |     |     |
| N2B-4 - 12> | ×9                          | 12×9                                     | 2.0                            |  | 179                           |             | 0          | <b>•</b> *2 | ●*2   | ●*2 | •*2 |
| N2B-4 - 16> | ×13                         | 16×13                                    | 1.6                            | 100  | 245                           | •           | 0          | ●*2         | •*2   | •*2 | •*2 |

\*1 Assuming that raw material made from petroleum is replaced into raw material made from plant. \*2 Made to Order (F Contact us for other operating fluids.





The biomass value and the reduction amount of CO2 emission are calculated on the basis of raw material manufacturers' data and are not guaranteed.



Regarding precautions and disclaimers for the handling of the listed products, to ensure safe use of our products, please be sure to read catalogues of "Tubing, Fitting & CHEMIFIT™" on our website before using our products.

## NITTA CORPORATION

https://www.nitta.co.jp/en/

Nitta Moore Div. Head office 4-4-26 Sakuragawa Naniwa-ku, Osaka 556-0022 JAPAN Phone:+81-6-6563-1241 Fax:+81-6-6563-1243

