

Precautions to ensure safe usage

The precautions given below are intended to ensure safe and correct use of the products.
Note that certain restrictions apply to use of these products. Failure to observe these could result in injury or property damage.

Warning	A potentially hazardous situation which could result in death or serious injury.
Caution	A dangerous situation which could result in minor or medium injury and/or in which only property damage is foreseen.

Warning TOYOX products have been developed and manufactured for general industrial applications.

For applications that require safety, confirm in advance.

Never use for implant or injection application or other applications where there is a possibility of the product partially remaining in the body.

Toyox makes no guarantee of the adaptability or safeness related to such applications.

Please read the Handling Precautions carefully before use.

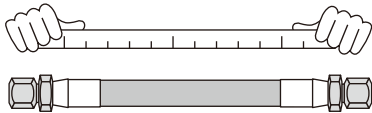
Note: See the terminology glosses on our website for words marked with a ※.

Toyox Hose Assemblies

1 Precautions regarding construction

1. To avoid tension, allow enough room for the hose length. Apply positive (negative) pressure and check before use.

Toyox hose assemblies change in length or twist significantly when positive (negative) pressure is applied, so if there is not enough room for the hose length, tension may occur and the hose may rupture or the coupling may become disconnected.

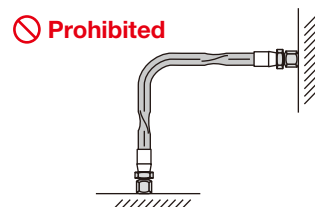
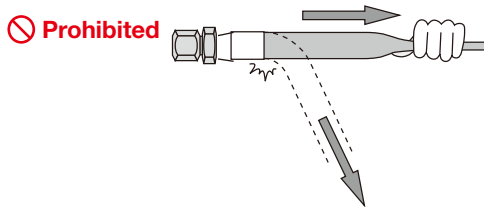


Change in length of each hose

	Positive pressure	Negative pressure		Positive pressure	Negative pressure
TOYOSILICONE	ø9 to 12, 32, 50: Contraction ø15 to 25, 38: Elongation	-	TOYOFOODS	ø25 to 50: Elongation	-
HYBRID TOYOSILICONE	Elongation	Contraction	TOYOFOODS-S	Elongation	Contraction
TOYOSILICONE-S	Elongation	Contraction	HYBRID TOYOFOODS	ø25: Elongation	-
TOYOSILICONE-S2	Elongation	Contraction	ECORON	ø25 to 50: Elongation	-
TOYOSILICONE-P	Elongation	Contraction	ECORON-S	Elongation	Contraction
TOYOSILICONE THERMO	ø6, 9, 12: Contraction ø19, 25: Elongation	-	TOYORING-F	Elongation	Contraction
TOYOSILICONE STEAM	ø9, 12: Contraction ø19, 25: Elongation	-	TOYOFUSSO	ø19 to 50: Elongation	-
			TOYOFUSSO-E	ø19, 25: Elongation	-
			TOYOFUSSO-S	ø19 to 50: Elongation	Contraction
			TOYOFUSSO SOFT	ø19, 25: Elongation	-
			TOYOFUSSO SOFT-S	ø19 to 50: Elongation	Contraction
			FUSSOTHERMO-S100°C	ø12 to 25: Elongation	Contraction

2. Remove all foreign substances such as dust adhering to the coupling connection. Failure to do so may cause fluid leakage.

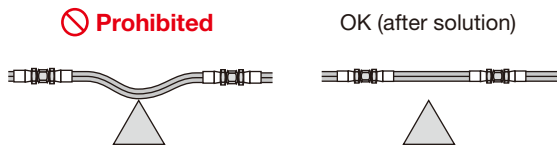
3. Do not pull on Toyox hose assemblies intentionally or pipe or use them in a twisted state.



4. Protect Toyox hose assemblies from external scratches. If the Toyox hose assembly may come into contact with other objects (machinery, equipment, etc.), it may cause damage to the hose due to external scratches or damage to the couplings.

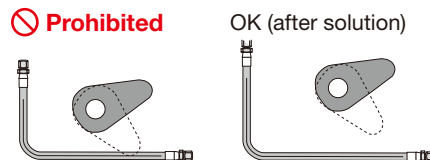
Example 1) When the hose contacts a sharp object.

Solution: Shorten the clamping interval to prevent contact.



Example 2) When the hose contacts the moving part of a machine.

Solution: Change the path of the hose so that it will not contact the machine.



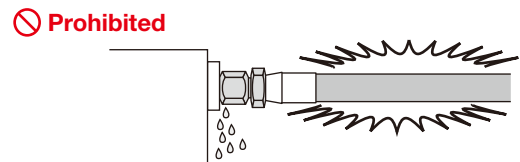
5. Perform piping and use hoses so as to avoid applying force to the base parts of the couplings.

2 Precautions regarding use

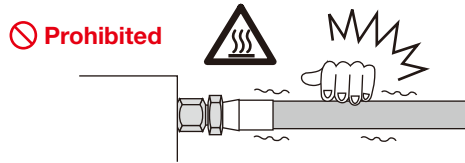
1. Refer to the specifications for each hose for the operating temperature and pressure ranges.

2. Do not use hoses for applications where shock pressure is applied to solenoid valve piping, etc.

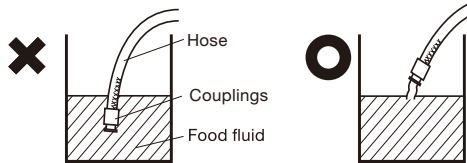
Doing so may cause fluid leakage, hose disconnection, or hose rupture.



3. **⚠ Warning** Do not energize. Doing so may result in rupture of the hose or electric shock.
4. Do not use in places where vibrations or shocks occur. Doing so may damage the coupling or cause hose disconnection.
5. Do not touch the hose or couplings under positive (negative) pressure. If you approach or touch them carelessly, when the hose or coupling damaged, fluid will spray out and it will be dangerous. In addition, if the fluid is hot, there is a risk of burns.



6. **⚠ Warning** Do not allow fluid (food, etc.) to contact any part other than the inner surface of the hose and coupling. Doing so may cause the fluid to penetrate the hose reinforcement layer, remain in the coupling, encourage bacteria (adhesion), and cause hose deterioration. In addition, contamination of dust, hose fragments (reinforcement material), and printed ink on the outer surface may occur.



③ Other precautions

1. **⚠ Warning** Do not rework, repair, or modify (excluding replacement of specified parts). Toyox hose assemblies that have been reworked, repaired, or modified do not have the performance described in the catalog, and may cause hose rupture or coupling disconnection.

