

Tài liệu được tổng hợp bởi đội ngũ kỹ thuật của **NPOWER** Bản quyền nội dung thuộc về **Toyox Co., Ltd.**  
**www.npower.com.vn** Powered by **NAVITECH** | [www.navitech.co](http://www.navitech.co)



# Safety Data Sheet

【 Producer information 】

Company name : TOYOX CO., LTD.  
Address : 4371 Maezawa Kurobe-city, Toyama-pref. Japan 938-8585  
Responsible department : R&D HQ.  
Contact : Tel : 0765-52-3131 : Fax : 0765-52-4245  
Document number : TYX-00062-4  
Created/Revised : June 1, 2022

【 Product name 】

HYBRID TOYOSILICONE HOSE      φ12 ~ φ38

【 Physical characteristics 】

Chemical characterization : Mixed  
Chemical name : Silicon compound, Polyethylene terephthalate, Polyethylene naphthalate  
Content : —  
Chemical formula : —  
CAS NO. : All components have CAS numbers.  
Serial number in official government gazette : All components have numbers under the Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances.

【 Dangerous substance classification 】

Name of classification : Does not correspond to classification standards.  
Danger level : Stable and non-reactive under normal handling conditions.

【 Emergency treatment 】

In the eyes : Wash thoroughly in clean running water right away.  
On the skin : First aid not required.  
If inhaled : First aid not required.  
In case of ingestion : Receive medical treatment from a doctor.  
Notes : Treat in accordance with symptoms.

【 Firefighting measures 】

Specific fire fighting : In the event of a major fire involving chemical materials, heat-proof protective suits with independent oxygen supply must be worn. Institute evacuation procedures immediately in accordance with local emergency plans and keep people well away from the fire. Containers exposed to the fire should be cooled by spraying with water.  
Extinguishing media : In the event of a major fire, use powdered fire retardant or water spray to contain the fire. Small fires can be controlled using carbon dioxide powder or water spray. Water spray can be used to cool containers exposed to the fire.  
Unsuitable extinguishing media : None established  
Hazardous decomposition products : Carbon oxides, traces of non-combusted carbon compounds, silicon dioxide. The incineration may generate toxic gases.

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**【 Disclaimer 】**

- HYBRID TOYOSILICONE HOSE should be used appropriately according to its usage conditions. Please read our catalogs and instructions and contact us if there is anything unclear.
- Expel contents of hose after use.
- Store hose in a well-ventilated location away from direct sunlight.
- Do not hang the hose on a nail pegged on the wall. Avoid storing in a manner that causes excessive bending, twisting or folding of the hose.
- Keep the hose in its box and store at a low humidity and well-ventilated place away from direct sunlight. Storing the hose out of its box encourages build-up of electric charge, attracting dirt and dust to the hose surface. This can cause the hose to become dirty and unhygienic.
- Do not store the hose out of its box and near rubber products. Even if it is not touching directly, the rubber can cause discoloration of the hose.

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**【 Physical and chemical properties 】**

Appearance	: transparence
Specific gravity	: 1.2
Odor	: Odorless
Solubility	: Non soluble in water.
Boiling point / vapor pressure / melting point / initial boiling point / volatility	: non data

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**【 Danger information 】**

Flash point	: > 100 °C (Seta closed cup)
Burning point	: non data
Reactivity with water	: none
Self-reactivity, explosiveness	: none
Safety/reactivity	: Stable and non-reactive under normal handling conditions.

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**【 Acute toxicity】**

Acute toxicity	: This product does not contain hazardous substances that are listed in regulations and our company control criterion.
Carcinogenicity	: non data
Teratogenicity	: non data
Mutagenicity	: non data
Reproductive toxicity	: non data
Sensitization	: non data

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**【 Ecological information 】**

Persistence and degradability water	: Solid material, insoluble in water.
Environmental effects	: No adverse effects on aquatic organisms are predicted.
Bioaccumulation	: No bioaccumulation potential.
Fate and effects at waste treatment plants	: No adverse effects on bacteria are predicted.

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**【 Disposal 】**

Disposal may also be handled by disposal contractors with appropriate accreditation from the prefectural authorities.

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**【 Transportation 】**

Avoid rough or careless handling that could damage the product.

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**【 Applicable laws and regulations 】**

Law concerning examination  
and regulation of manufacture,  
etc. of chemical substances : Not applicable.

Industrial safety and health law : Not applicable.

High pressure gas safe law : Not applicable.

Fire service law : Designated flammable substances: Synthetic resin and others (3,000kg)

Poisonous and deleterious  
substance control law : Not applicable.

PRTR Law : As described in **【Physical characteristics】**

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**【 About this document 】**

This document is based on materials, documents and other information as available at the time of writing. No guarantee is provided as to the accuracy thereof. The information provided in this document is predicated on the assumption of normal usage of the product under normal conditions. Special care is required when using or handling the product in a way that is special or different to normal.

# TECHNICAL DATA SHEET

No. 27-074

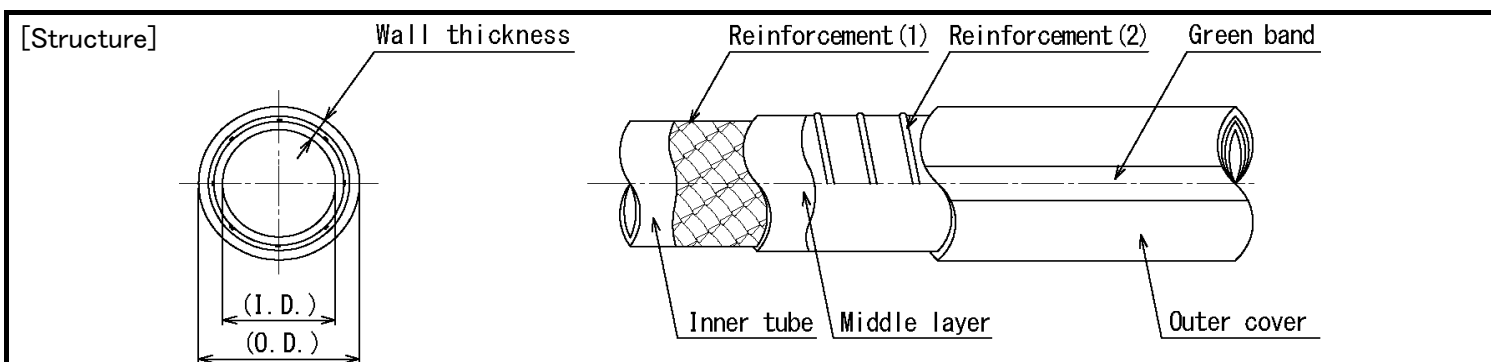
June 1, 2021

TOYOX CO., LTD.

*C. Hagihara*

Product Name	HYBRID TOYOSILICONE HOSE	Product Number	HTSI-12
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Chihiro Hagihara  
R&D HQ.



( Product Standards )				( Operating Condition )	
1	Size (I.D. × O.D.)	12.7 × 19.5 mm	8	Operating fluid	<b>Note 1.</b> Drinking water, Food, etc.
2	Inner Diameter	12.7 ± 0.7 mm	9	Working temperature	-30 °C ~ 130 °C
3	Outer Diameter	19.5 ± 0.7 mm	10	Burst pressure (23 °C)	2.5 MPa or higher
4	Wall Thickness	3.4 ± 0.6 mm	11	Working pressure	-0.05 ~ 0.5 MPa (-400 mmHg)
5	Reinforcement (1)	High strength polyester cord	12	Minimum Bending Radius (23 °C)	<b>Note 2.</b> 80 mm or bigger
6	Reinforcement (2)	Special heat-resistant plastic wire	13		
7	Hose Material (Color)	Inner Silicone rubber (Milky transparent)	14		
		Middle Silicone rubber (Milky transparent)	15		
		Outer Silicone rubber (Milky transparent)	16		

**Note 1.** This information is presented as a guide for selecting the correct hose type for your application.

Correct selection is important for prolonging the life of the hose and preventing associated safety issues.

If unsure, contact the Customer Service Center for advice.

**Note 2.** The minimum bending radius applies at normal room temperature (as determined in tests conducted by Toyox).

Do not subject the hose to excessive bending or flattening.

- This product conforms to the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.380, 2020. (Old the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.595, 2012.)
- This product complies with the extraction test method according to CFR21(FDA) 177.2600 standard.
- Be careful not to damage the silicone rubber hose, as it is easier to cut.
- Never use silicone rubber hoses to convey nonpolar organic solvents, halogenated hydrocarbon, strong acid, strong alkali, mineral oil, steam for long periods of time, or animal or vegetable oil of 70 °C or higher.
- Do not use for high temperature water above 100 °C.
- The hose should be disposed of in accordance with the requirements of the local region.
- TOYOX products have been developed and manufactured for general industrial applications.
- Never use for implant or injection application or other applications where there is a possibility of the product partially remaining in the body.
- For applications that required safety, confirm in advance.

•Please be sure to keep it about an important document.

•Please do not forget to let us know Technical Data Sheet No. when you inquiry.

•Please give us an inquiry to each nearby branch or office.

Revision ① September 24, 2015

② April 20, 2020

# TECHNICAL DATA SHEET

No. 27-075

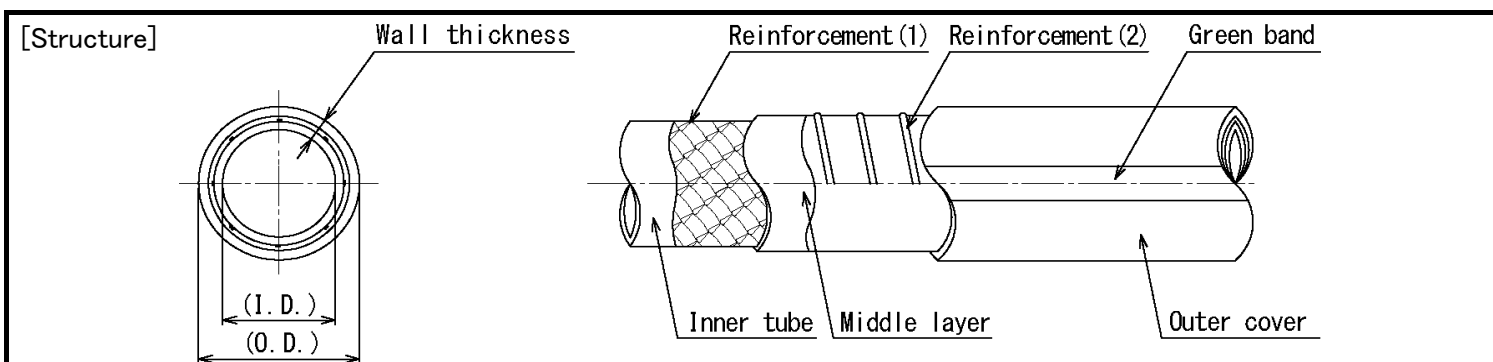
TOYOX CO., LTD.

June 1, 2021

*C. Hagihara*

Product Name	HYBRID TOYOSILICONE HOSE	Product Number	HTSI-15
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Chihiro Hagihara  
R&D HQ.



( Product Standards )

( Operating Condition )

1	Size (I.D. × O.D.)	15.9 × 24.0 mm	8	Operating fluid	<b>Note 1.</b> Drinking water, Food, etc.
2	Inner Diameter	15.9 ± 0.8 mm	9	Working temperature	-30 °C ~ 130 °C
3	Outer Diameter	24.0 ± 0.8 mm	10	Burst pressure (23 °C)	2.5 MPa or higher
4	Wall Thickness	4.05 ± 0.7 mm	11	Working pressure	-0.05 ~ 0.5 MPa (-400 mmHg)
5	Reinforcement (1)	High strength polyester cord	12	Minimum Bending Radius (23 °C)	<b>Note 2.</b> 105 mm or bigger
6	Reinforcement (2)	Special heat-resistant plastic wire	13		
7	Hose Material (Color)	Inner Silicone rubber (Milky transparent)	14		
		Middle Silicone rubber (Milky transparent)	15		
		Outer Silicone rubber (Milky transparent)	16		

**Note 1.** This information is presented as a guide for selecting the correct hose type for your application.

Correct selection is important for prolonging the life of the hose and preventing associated safety issues.

If unsure, contact the Customer Service Center for advice.

**Note 2.** The minimum bending radius applies at normal room temperature (as determined in tests conducted by Toyox).

Do not subject the hose to excessive bending or flattening.

- This product conforms to the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.380, 2020. (Old the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.595, 2012.)
- This product complies with the extraction test method according to CFR21(FDA) 177.2600 standard.
- Be careful not to damage the silicone rubber hose, as it is easier to cut.
- Never use silicone rubber hoses to convey nonpolar organic solvents, halogenated hydrocarbon, strong acid, strong alkali, mineral oil, steam for long periods of time, or animal or vegetable oil of 70 °C or higher.
- Do not use for high temperature water above 100 °C.
- The hose should be disposed of in accordance with the requirements of the local region.
- TOYOX products have been developed and manufactured for general industrial applications.
- Never use for implant or injection application or other applications where there is a possibility of the product partially remaining in the body.
- For applications that required safety, confirm in advance.

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# TECHNICAL DATA SHEET

No. 27-050

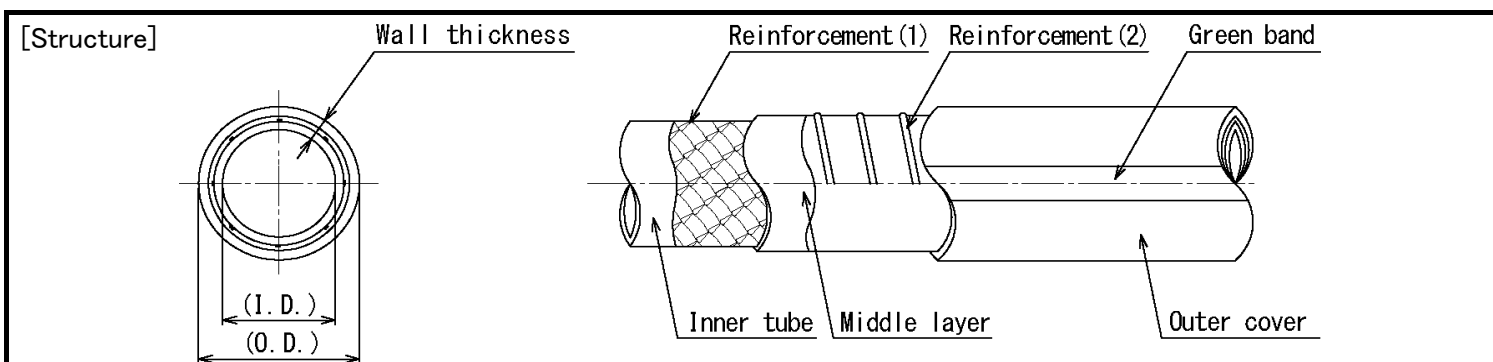
TOYOX CO., LTD.

June 1, 2021

*C. Hagihara*

Product Name	HYBRID TOYOSILICONE HOSE	Product Number	HTSI-19
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Chihiro Hagihara  
R&D HQ.



( Product Standards )				( Operating Condition )	
1	Size (I.D. × O.D.)	19.5 × 28.5 mm	8	Operating fluid	<b>Note 1.</b> Drinking water, Food, etc.
2	Inner Diameter	19.5 ± 0.9 mm	9	Working temperature	-30 °C ~ 130 °C
3	Outer Diameter	28.5 ± 0.9 mm	10	Burst pressure (23 °C)	2.5 MPa or higher
4	Wall Thickness	4.5 ± 0.8 mm	11	Working pressure	-0.05 ~ 0.5 MPa (-400 mmHg)
5	Reinforcement (1)	High strength polyester cord	12	Minimum Bending Radius (23 °C)	<b>Note 2.</b> 140 mm or bigger
6	Reinforcement (2)	Special heat-resistant plastic wire	13		
7	Hose Material (Color)	Inner Silicone rubber (Milky transparent)	14		
		Middle Silicone rubber (Milky transparent)	15		
		Outer Silicone rubber (Milky transparent)	16		

**Note 1.** This information is presented as a guide for selecting the correct hose type for your application.

Correct selection is important for prolonging the life of the hose and preventing associated safety issues.

If unsure, contact the Customer Service Center for advice.

**Note 2.** The minimum bending radius applies at normal room temperature (as determined in tests conducted by Toyox).

Do not subject the hose to excessive bending or flattening.

- This product conforms to the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.380, 2020. (Old the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.595, 2012.)
- This product complies with the extraction test method according to CFR21(FDA) 177.2600 standard.
- Be careful not to damage the silicone rubber hose, as it is easier to cut.
- Never use silicone rubber hoses to convey nonpolar organic solvents, halogenated hydrocarbon, strong acid, strong alkali, mineral oil, steam for long periods of time, or animal or vegetable oil of 70 °C or higher.
- Do not use for high temperature water above 100 °C.
- The hose should be disposed of in accordance with the requirements of the local region.
- TOYOX products have been developed and manufactured for general industrial applications.
- Never use for implant or injection application or other applications where there is a possibility of the product partially remaining in the body.
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② December 11, 2013

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# TECHNICAL DATA SHEET

No. 27-051

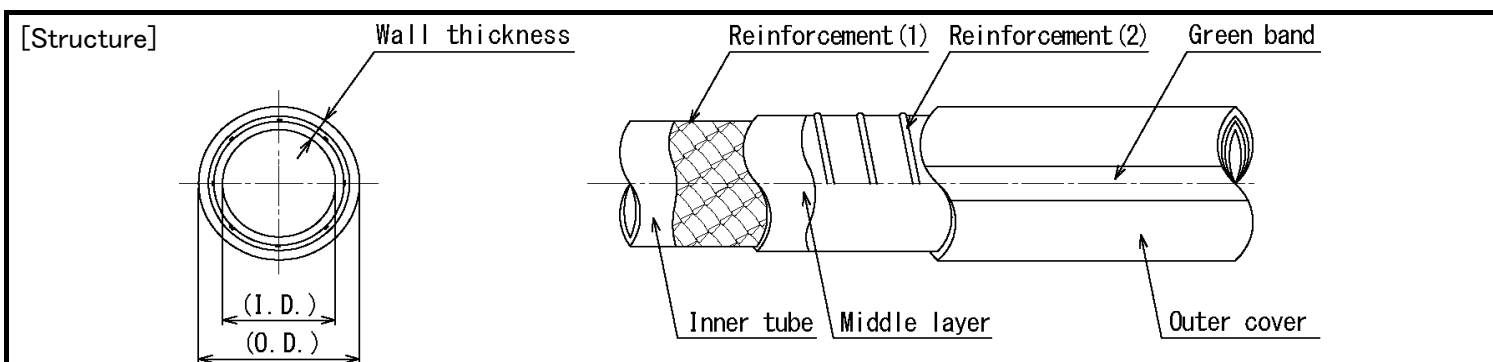
TOYOX CO., LTD.

June 1, 2021

*C. Hagihara*

Product Name	HYBRID TOYOSILICONE HOSE	Product Number	HTSI-25
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Chihiro Hagihara  
R&D HQ.



( Product Standards )

( Operating Condition )

1	Size (I.D. × O.D.)	25.4 × 35.5 mm	8	Operating fluid	<b>Note 1.</b> Drinking water, Food, etc.
2	Inner Diameter	25.4 ± 1.1 mm	9	Working temperature	-30 °C ~ 130 °C
3	Outer Diameter	35.5 ± 1.1 mm	10	Burst pressure (23 °C)	2.0 MPa or higher
4	Wall Thickness	5.05 ± 1.0 mm	11	Working pressure	-0.05 ~ 0.5 MPa (-400 mmHg)
5	Reinforcement (1)	High strength polyester cord	12	Minimum Bending Radius (23 °C)	<b>Note 2.</b> 190 mm or bigger
6	Reinforcement (2)	Special heat-resistant plastic wire	13		
7	Hose Material (Color)	Inner Silicone rubber (Milky transparent)	14		
		Middle Silicone rubber (Milky transparent)	15		
		Outer Silicone rubber (Milky transparent)	16		

**Note 1.** This information is presented as a guide for selecting the correct hose type for your application.

Correct selection is important for prolonging the life of the hose and preventing associated safety issues.

If unsure, contact the Customer Service Center for advice.

**Note 2.** The minimum bending radius applies at normal room temperature (as determined in tests conducted by Toyox).

Do not subject the hose to excessive bending or flattening.

- This product conforms to the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.380, 2020. (Old the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.595, 2012.)
- This product complies with the extraction test method according to CFR21(FDA) 177.2600 standard.
- Be careful not to damage the silicone rubber hose, as it is easier to cut.
- Never use silicone rubber hoses to convey nonpolar organic solvents, halogenated hydrocarbon, strong acid, strong alkali, mineral oil, steam for long periods of time, or animal or vegetable oil of 70 °C or higher.
- Do not use for high temperature water above 100 °C.
- The hose should be disposed of in accordance with the requirements of the local region.
- TOYOX products have been developed and manufactured for general industrial applications.
- Never use for implant or injection application or other applications where there is a possibility of the product partially remaining in the body.
- For applications that required safety, confirm in advance.

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# TECHNICAL DATA SHEET

No. 27-076

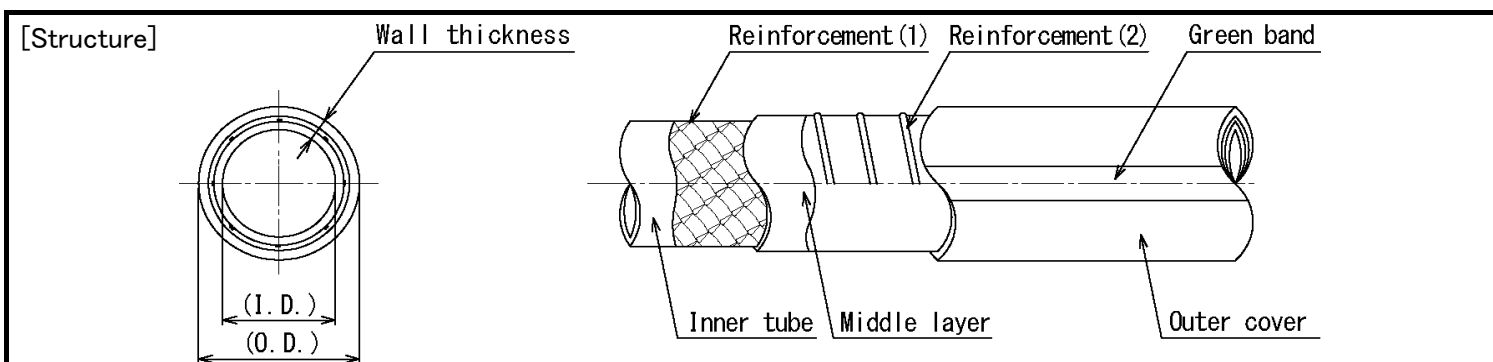
TOYOX CO., LTD.

June 1, 2021

*C. Hagihara*

Product Name	HYBRID TOYOSILICONE HOSE	Product Number	HTSI-32
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Chihiro Hagihara  
R&D HQ.



( Product Standards )

( Operating Condition )

1	Size (I.D. × O.D.)	32.0 × 43.5 mm	8	Operating fluid	<b>Note 1.</b> Drinking water, Food, etc.
2	Inner Diameter	32.0 ± 1.4 mm	9	Working temperature	-30 °C ~ 130 °C
3	Outer Diameter	43.5 ± 1.4 mm	10	Burst pressure (23 °C)	2.5 MPa or higher
4	Wall Thickness	5.75 ± 1.2 mm	11	Working pressure	-0.05 ~ 0.5 MPa (-400 mmHg)
5	Reinforcement (1)	High strength polyester cord	12	Minimum Bending Radius (23 °C)	<b>Note 2.</b> 240 mm or bigger
6	Reinforcement (2)	Special heat-resistant plastic wire	13		
7	Hose Material (Color)	Inner Silicone rubber (Milky transparent)	14		
		Middle Silicone rubber (Milky transparent)	15		
		Outer Silicone rubber (Milky transparent)	16		

**Note 1.** This information is presented as a guide for selecting the correct hose type for your application.

Correct selection is important for prolonging the life of the hose and preventing associated safety issues.

If unsure, contact the Customer Service Center for advice.

**Note 2.** The minimum bending radius applies at normal room temperature (as determined in tests conducted by Toyox).

Do not subject the hose to excessive bending or flattening.

- This product conforms to the standards of the Ministry of Health ,Labor and Welfare of Japan Notification No.380, 2020. (Old the standards of the Ministry of Health, Labor and Welfare of Japan Notification No.595, 2012.)
- This product complies with the extraction test method according to CFR21(FDA) 177.2600 standard.
- Be careful not to damage the silicone rubber hose, as it is easier to cut.
- Never use silicone rubber hoses to convey nonpolar organic solvents, halogenated hydrocarbon, strong acid, strong alkali, mineral oil, steam for long periods of time, or animal or vegetable oil of 70 °C or higher.
- Do not use for high temperature water above 100 °C.
- The hose should be disposed of in accordance with the requirements of the local region.
- TOYOX products have been developed and manufactured for general industrial applications.
- Never use for implant or injection application or other applications where there is a possibility of the product partially remaining in the body.
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# TECHNICAL DATA SHEET

No. 27-052

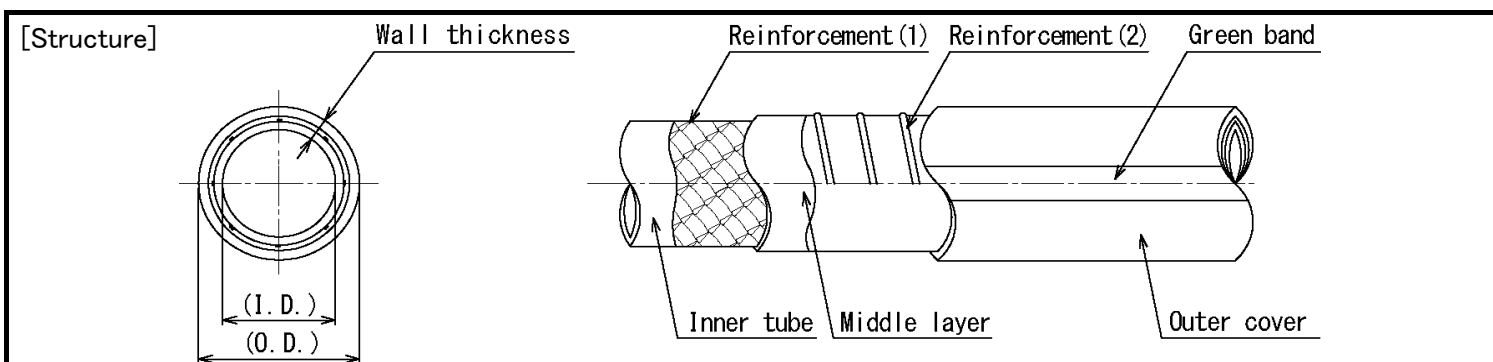
TOYOX CO., LTD.

June 1, 2021

*C. Hagihara*

Product Name	HYBRID TOYOSILICONE HOSE	Product Number	HTSI-38
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Chihiro Hagihara  
R&D HQ.



( Product Standards )

( Operating Condition )

1	Size (I.D. × O.D.)	38.1 × 50.5 mm	8	Operating fluid	<b>Note 1.</b> Drinking water, Food, etc.
2	Inner Diameter	38.1 ± 1.6 mm	9	Working temperature	-30 °C ~ 130 °C
3	Outer Diameter	50.5 ± 1.6 mm	10	Burst pressure (23 °C)	1.8 MPa or higher
4	Wall Thickness	6.2 ± 1.4 mm	11	Working pressure	-0.05 ~ 0.5 MPa (-400 mmHg)
5	Reinforcement (1)	High strength polyester cord	12	Minimum Bending Radius (23 °C)	<b>Note 2.</b> 290 mm or bigger
6	Reinforcement (2)	Special heat-resistant plastic wire	13		
7	Hose Material (Color)	Inner Silicone rubber (Milky transparent)	14		
		Middle Silicone rubber (Milky transparent)	15		
		Outer Silicone rubber (Milky transparent)	16		

**Note 1.** This information is presented as a guide for selecting the correct hose type for your application.

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- Be careful not to damage the silicone rubber hose, as it is easier to cut.
- Never use silicone rubber hoses to convey nonpolar organic solvents, halogenated hydrocarbon, strong acid, strong alkali, mineral oil, steam for long periods of time, or animal or vegetable oil of 70 °C or higher.
- Do not use for high temperature water above 100 °C.
- The hose should be disposed of in accordance with the requirements of the local region.
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Revision ① May 29, 2013

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