



Railway hoses

venAir

HIGH PERFORMANCE RAILWAY HOSES

ACCORDING EN-45545-2

WWW.VENAIR.COM

EN 45545-2 FLEXIBLE HOSES



ENSURING SAFETY

The railway industry needs to make rail trip as safety, efficient and comfortable as possible.

For this reason, railway manufacturers and engineers must find ways to reduce downtime, increase efficiency and enhance safety and security to drive profitability and make the industry reliable and sustainable.

Venair understands this need and has been developing solutions to meet the most demanding requirements. Helping our customers build better and safer trains is our priority.

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Upgrade to railway hoses that meet the highest standards of safety





Choose the right
hose for each fluid
line

CUSTOM SOLUTIONS FOR MAXIMUM EFFICIENCY

With technical expertise and maintenance advice capabilities, Venair engineering solutions can help you provide the maximum reliability in your infrastructures.

Our engineers are focus on energy efficiency and safety, providing a while range of custom solutions under customer demand.



Railway Standard For Fire Safety

EN-45545-2 is the standard of reference for fire and fumes behavior regulation of the railway components, adopted by all the EU nations.

Venair railway hose conforms to the EN-45545-2 standard and is available for use a extensive variety of railway applications.

The EN-45545-2 hose categories

All the materials used in rail vehicles must have the EN-45545-2 standard in order to achieve the highest level of safety possible in the event of a fire.

The classification has three levels, the hazard levels:

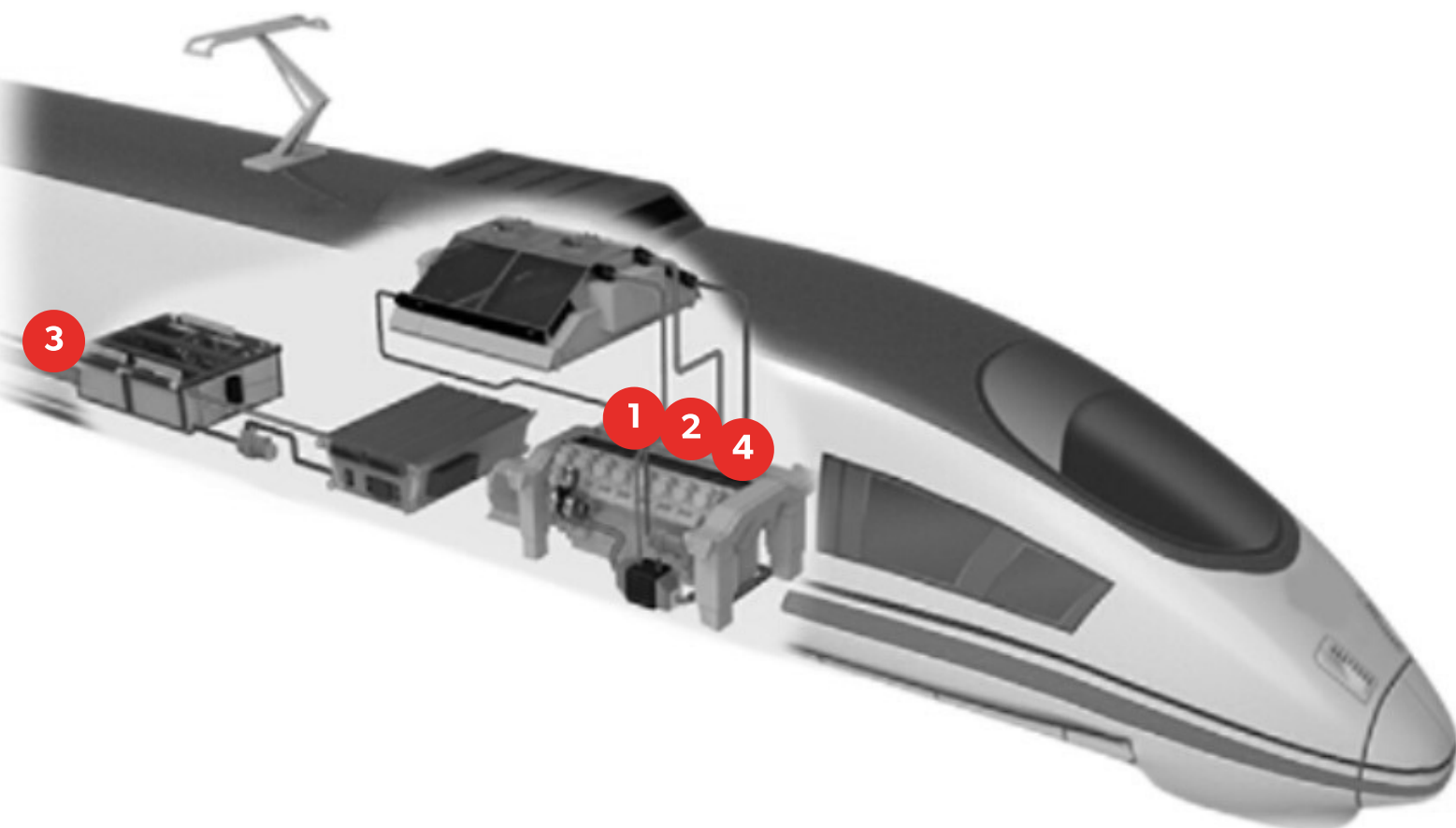
- HL1
- HL2
- HL3 (Being the highest)

For R22 the limits are more strict than R23.

Any hazard level can be required, depending on 2 main factors:

- Type of vehicle
- Operation category

Railway applications



	PRODUCT	APPLICATION	CLASSIFICATION	
			R22	R23
1	VENA SIL FR-HL	Cooling	HL2	HL2
2	TURBOLOADER FR-HL	Turbo-Intercooler	HL1	HL2
3	VENA SIL FOOD FR-HL	Drinking and toilet water	HL1	HL2
4	VENA MTD ECO	Ventilation	HL3	HL3

VENA SIL FR-HL



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PROPERTIES	DESCRIPTION
Outer layer	Special VMQ silicone
Reinforcement	Several fabrics
Inner layer	Special FVMQ fluorsilicone
Temperature	-55°C/+200°C (-67°F/+392°F)
EN 45545-2 Class	R22 HL2 / R23 HL2

TURBOLOADER FR-HL



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PROPERTIES	DESCRIPTION
Outer layer	Special VMQ silicone
Reinforcement	Several fabrics
Inner layer	Special FVMQ fluorsilicone
Temperature	-55°C/+200°C (-67°F/+392°F)
EN 45545-2 Class	R22 HL1/ R23 HL2

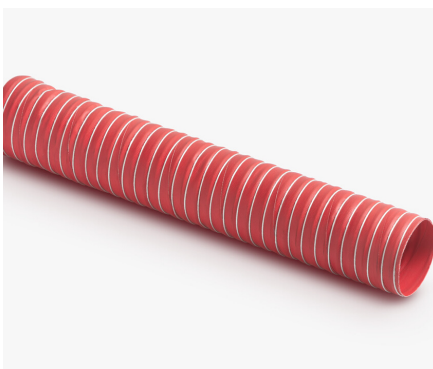
VENA SIL FOOD FR-HL



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PROPERTIES	DESCRIPTION
Outer layer	Food grade FDA silicone
Reinforcement	Several fabrics
Inner layer	Food grade FDA silicone
Temperature	-55°C/+200°C (-67°F/+392°F)
EN 45545-2 Class	R22 HL1/ R23 HL2

VENA MTD ECO



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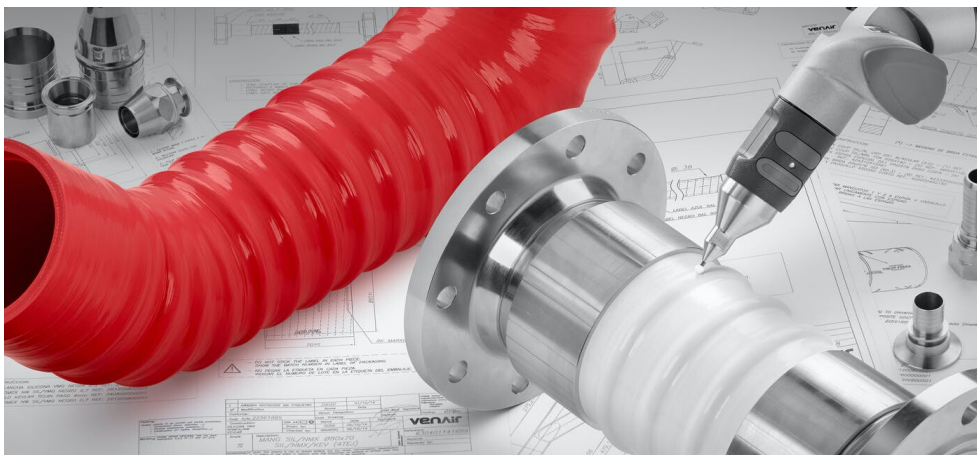
PROPERTIES	DESCRIPTION
Outer layer	Corrugated pink neoprene
Reinforcement	Fiberglass and steel wire spiral
Inner layer	Corrugated pink neoprene
Temperature	-55°C/+125°C (-67°F/+257°F)
EN 45545-2 Class	R22 HL3 / R23 HL3

Developing custom solutions since 1986

Our technical & engineering team is responsible for safeguarding the interests of our clients in designing the optimal product for each application.

Together with the inventions that come out from our R&D department, we have developed and patented a wide range of products and we have more than 70 registered trademarks that support our innovative activity.

We can produce different hoses and ducting solutions made of silicone and other materials such as other elastomer, thermoplastics and composites to fulfill every demand.



CUSTOMIZATION IS OUR ADDED VALUE

Venair is an international group leader in engineering and manufacturing silicone hoses for the most demanding industries such as fuel cells, railway, defense, biotechnological, food, and pharmaceutical.

Throughout its 30 years of history, Venair has created an extensive international direct network that has led to three manufacturing centers in Spain, Vietnam and Romania and 30 delegations distributed in Europe, America, Asia and Africa.

Priorizing quality

We are committed to provide the highest quality in our products through state of the art facilities and third- party audits.

International presence

Our products are present in over 70 countries. We have an extensive network of 30 offices in 21 countries.

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