



GASSOFLEX

**Customize, polivalent
and flexible hoses**



COMERCIAL GASSÓ

**Hidrocarburos, productos químicos, marinas, recuperación
de vapores y a medida para otras aplicaciones.**
**Hydrocarbons, chemical products, marine use, vapour
recovery and other applications.**

MANUFACTURED USING GASSÓ TECHNOLOGY



Fabricada por Gassó

Gassó le presenta su manguera polivalente fabricada enteramente en su planta de Sant Boi (Barcelona) preparada para la fabricación de manguera GASSOFLEX de 25 a 200 mm de diámetro y rollos de hasta 35 m de longitud, con una capacidad anual de producción de 160.000 metros.

Fabricación con tecnología exclusiva GASSÓ y con una calidad superior a los productos existentes en el mercado.

GASSOFLEX es una manguera para el trasvase de productos camión a tanque o tanque a tanque mediante manguera.

Las características principales de GASSOFLEX son:

- **POLIVALENTE:** puede ser utilizada para hidrocarburos y productos químicos, porque su revestimiento interior es personalizable y resistente.

- FLEXIBLE: dos espirales, interior y exterior, aseguran robustez y radios de curvatura mínimos para adaptarse todo tipo de operaciones de carga y trasvase: instalaciones en tierra, brazos de carga y aplicaciones marinas.

- LIGERA pero RESISTENTE a la presión: porque en su construcción el grosor de sus paredes se establece a medida de la presión especificada.

- PERSONALIZABLE en sus tres componentes básicos: recubrimiento interior (para ser resistente a cualquier tipo de producto) y personalizable también en las calidades de sus dos espirales (inox, hierro galvanizado, PP, PTFE).

Calidad internacional

GASSOFLEX es conforme a las normativas más exigentes: ISO 9001:2000, EN 13765, BS 5842, BS 3491, PED 97/23/CE, IMO CODES.

Manufactured by Gassó

Gassó introduces a new multi-use hose manufactured entirely at the Sant Boi (Barcelona) plant which has an annual production capacity of 160,000 meters of GASSOFLEX hoses ranging from 25 to 200mm in diameter and available in rolls of up to 35m long. The production uses exclusive GASSÓ technology ensuring the highest quality existing in the market.

GASSOFLEX is designed for the transfer of products from truck to tank or tank to tank using a hose. The main characteristics of GASSOFLEX are:

- MULTI-USE: because of its resistant interior lining it can be used with hydrocarbons and chemical products.

- FLEXIBLE: two wire spirals, inner and outer provide added strength and minimum curves of radius to adapt to all types of loading and transferring operations: on-land installations, loading arms and marine applications.

- LIGHT yet RESISTANT to pressure: the thickness of the walls are pre-determined according to the pressure the hose must withstand.

- **PERSONALIZED:** the three basic components (inner and outer wire spirals and lining) can be selected according to customers' specific needs (SS, Galvanized steel, PP, PTFE).

International Quality

GASSOFLEX meets the requirements of the
ISO 9001:2000, EN 13765, BS 5842, BS 3491,
PED 97/23/CE, IMO CODES.



Fabricación. *Production Line.*



Montaje. Assembly..

FÁCIL DE PEDIR

3 letras son suficientes

GASSÓ 

GASSOFLEX, EASY TO ORDER WITH JUST 3 LETTERS

Letras esenciales para 3 componentes esenciales.

Nombrar una manguera GASSOFLEX es muy fácil. Basta con especificar 3 de sus componentes constructivos mediante 3 letras:

1ª letra para la espiral interior:

"G" si es de acero galvanizado, "E" si es de polipropileno, "S" si es de acero inoxidable y "A" si es de aluminio.

2ª letra para la espiral exterior:

"G" si es de acero galvanizado, "E" si es de polipropileno, "S" si es de acero inoxidable y "A" si es de aluminio.

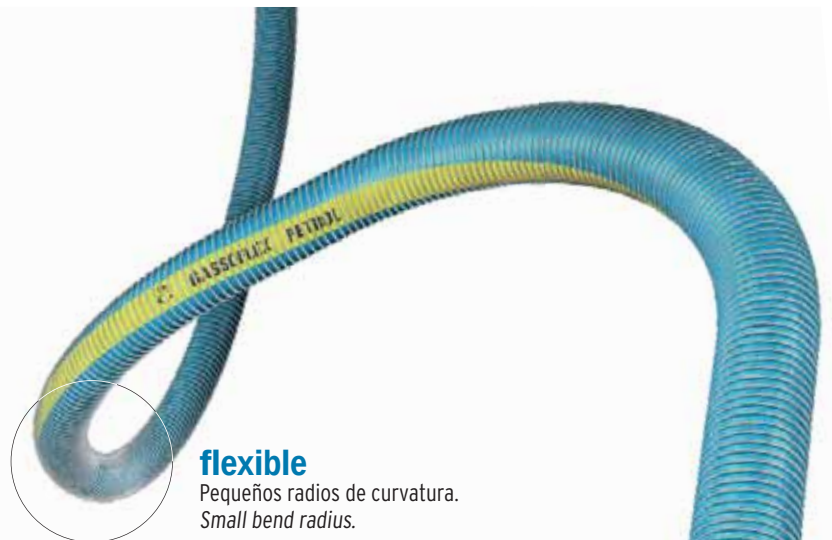
3ª letra para el forro interior:

"E" si es de polipropileno y "T" si es de PTFE.

Ejemplo para una manguera de hidrocarburos con la espiral interior y exterior de acero galvanizado (G) y con forro interior de polipropileno (E), para trabajar a 7 bares y 100 °C: 7100 **GGE**.

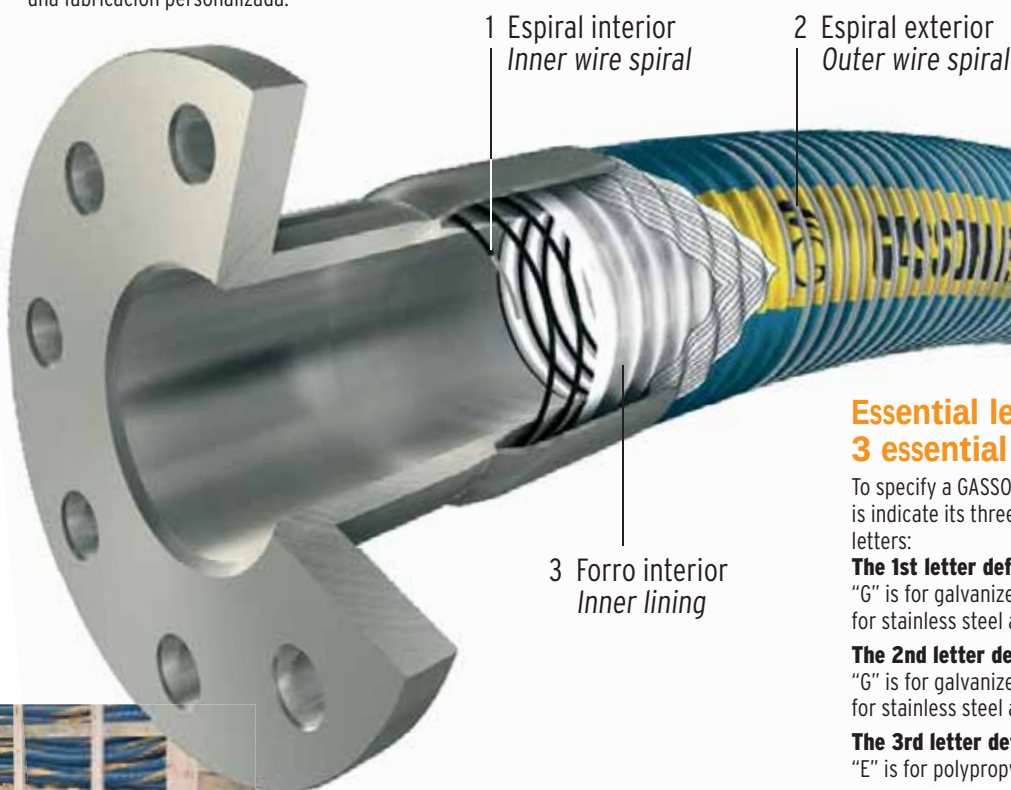
Gama y personalización

Existe una GASSOFLEX para cada tipo de aplicación, y dentro de cada una de ellas usted puede elegir también una fabricación personalizada.



flexible

Pequeños radios de curvatura.
Small bend radius.



Essential letters for 3 essential components.

To specify a GASSOFLEX hose is easy. All you have to do is indicate its three constructive components with three letters:

The 1st letter defines the inner wire spiral:

"G" is for galvanized steel, "E" is for polypropylene, "S" is for stainless steel and "A" is for aluminium.

The 2nd letter defines the outer wire spiral:

"G" is for galvanized steel, "E" is for polypropylene, "S" is for stainless steel and "A" is for aluminium.

The 3rd letter defines the inner lining:

"E" is for polypropylene and "T" is for PTFE.

For example, 7100 **GGE** represents an order for a hose with the inner and outer wire spirals made of galvanized steel (G) and the inner lining polypropylene (E), to work at 7 bars and 100°C.

Range and customize

There is a GASSOFLEX for every kind of application and within each you can choose personalized manufacturing according to your needs.



Stock

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GAMA COMPLETA EN PRODUCTOS Y APLICACIONES

GASSOFLEX INDEX, WIDE RANGE IN PRODUCTS AND APPLICATIONS.

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Brazos de carga
Loading arms



Marinas. Marine



**Torres de carga
Hosetower**



**Techos flotantes
Tank roof**

ALGUNAS APLICACIONES SOME APPLICATIONS



**Camiones cisterna
Tank trucks**



**Fábricas
Plants**

GASSOFLEX GGE



Aplicaciones

Gassoflex GGE es recomendada para la impulsión y/o aspiración de carburantes, aceites y lubricantes tanto en camiones cisternas, vagones o en planta

GGE

Serie Ligera: 7100
Serie Standard: 10100
Serie Pesada: 14100

Construcción:

- Espiral Interior: Acero Galvanizado (G)
- Espiral Exterior: Acero Galvanizado (G)
- Forro Interior: Polipropileno (E)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo está basada en un factor de seguridad 5:1

Applications

Gassoflex GGE is recommended for use in delivery and/or suction of fuels, oils and lubricants in cistern trucks, railcars or fixed deposits.

GGE

Light Series: 7100
Standard Series: 10100
Heavy Series: 14100

Construction:

- Inner Wire spiral: Galvanized Steel (G)
- Outer Wire spiral: Galvanized Steel (G)
- Inner Lining: Polypropylene (E)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
	(bar)	(PSI)				

GASSOFLEX 7100 GGE

—	7	100	2	180	1,81	35
—	7	100	3	270	3,06	35
—	7	100	4	305	5,35	35

GASSOFLEX 10100 GGE

AIA125	10	150	1	68	0,75	35
—	10	150	1 1/4	74	0,97	35
AIA140	10	150	1 1/2	105	1,30	35
AIA179	10	150	2	190	2,01	35
AIA165	10	150	2 1/2	225	2,90	35
AIA180	10	150	3	290	3,40	35
AIA200	10	150	4	320	5,95	35

GASSOFLEX 14100 GGE

—	14	210	1	68	0,75	35
—	14	210	1 1/4	74	0,97	35
—	14	210	1 1/2	105	1,30	35
AIA1794	14	210	2	190	2,01	35
AIA1652	14	210	2 1/2	225	2,90	35
AIA1801	14	210	3	290	3,40	35
AIA205	14	210	4	320	5,95	35

CUSTOMIZE



Consultar otra configuración posible

Other configurations on request:
AGE, GAE, SGE, ...



GASSOFLEX AAE



Aplicaciones

Gassoflex AAE es recomendada para la impulsión y/o aspiración de carburantes, aceites y lubricantes tanto en camiones cisternas, vagones o en planta, pero gracias a sus espirales en aluminio es significativamente más ligera haciendo su manejo más fácil especialmente en grandes diámetros.

AAE

Serie Standard: 10100

Serie Pesada: 14100

Construcción:

- Espiral Interior: Aluminio (A)
- Espiral Exterior: Aluminio (A)
- Forro Interior: Polipropileno (E)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo está basada en un factor de seguridad 5:1

Applications

Gassoflex AAE is recommended for the delivery and/or suction of fuels, oils and lubricants in cistern trucks, railcars or fixed deposits. However, due to its aluminium wire spiral it is significantly lighter and easier to handle especially in large diameters.

AAE

Standard Series: 10100

Heavy Series: 14100

Construction:

- Inner Wire spiral: Aluminium (A)
- Outer Wire spiral: Aluminium (A)
- Inner Lining: Polypropylene (E)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
	(bar)	(PSI)				

GASSOFLEX 10100 AAE

—	10	150	1	51	0,37	35
—	10	150	1 1/4	55	0,48	35
—	10	150	1 1/2	78	0,65	35
AIA7501	10	150	2	142	1,00	35
AIA7651	10	150	2 1/2	170	1,45	35
AIA1010	10	150	3	218	1,70	35
AIA101	10	150	4	240	2,97	35

GASSOFLEX 14100 AAE

—	14	210	1	51	0,37	35
—	14	210	1 1/4	55	0,48	35
—	14	210	1 1/2	78	0,65	35
—	14	210	2	142	1,00	35
—	14	210	2 1/2	170	1,45	35
—	14	210	3	218	1,70	35
—	14	210	4	240	2,97	35

CUSTOMIZE



Consultar otra configuración posible

Other configurations on request:
AGE, GAE, SGE, ...



GASSOFLEX EGE



Aplicaciones

Gassoflex EGE es recomendada para la impulsión y/o aspiración de una gran variedad de productos químicos compatibles con el polipropileno en camiones cisternas, vagones o en planta.

EGE

Serie Standard: 10100

Serie Pesada: 14100

Construcción:

- Espiral Interior: Polipropileno (E)
- Espiral Exterior: Acero Galvanizado (G)
- Forro Interior: Polipropileno (E)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo está basada en un factor de seguridad 5:1

Applications

Gassoflex EGE is recommended for the delivery and/or suction of a wide range of chemical products compatible with polypropylene in cistern trucks, railcars or fixed deposits.

EGE

Standard Series: 10100

Heavy Series: 14100

Construction:

- Inner Wire spiral: Polypropylene (E)
- Outer Wire spiral: Galvanized Steel (G)
- Inner Lining: Polypropylene (E)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
	(bar)	(PSI)				

GASSOFLEX 10100 EGE

—	10	150	1	68	0,75	35
AIA032	10	150	1 1/4	74	0,97	35
AIA040	10	150	1 1/2	105	1,30	35
AIA050	10	150	2	190	2,01	35
AIA065	10	150	2 1/2	225	2,90	35
AIA080	10	150	3	290	3,40	35
AIA100	10	150	4	320	5,95	35

GASSOFLEX 14100 EGE

AIA025	14	210	1	68	0,75	35
—	14	210	1 1/4	74	0,97	35
AIA042	14	210	1 1/2	105	1,30	35
AIA0501	14	210	2	190	2,01	35
AIA043	14	210	2 1/2	225	2,90	35
AIA0991	14	210	3	290	3,40	35
AIA099	14	210	4	320	5,95	35

CUSTOMIZE



Consultar otra configuración posible

Other configurations on request:
EEE, ESE, ...



GASSOFLEX SSE



Aplicaciones

Gassoflex SSE es recomendada para la impulsión y/o aspiración de una gran variedad de productos químicos compatibles con el polipropileno y el inoxidable y que tengan contacto con la manguera tanto interior como exteriormente, en camiones cisternas, vagones o en planta.

SSE

Serie Standard: 10100

Serie Pesada: 14100

Construcción:

- Espiral Interior: Acero inoxidable 316 (S)
- Espiral Exterior: Acero inoxidable 316 (S)
- Forro Interior: Polipropileno (E)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo está basada en un factor de seguridad 5:1

Applications

Gassoflex SSE is recommended for the delivery and/or suction of a wide range of chemical products compatible with any polypropylene and stainless steel which may come in contact with the hose both internally or externally in tank trucks, railcars or fixed deposits.

SSE

Standard Series: 10100

Heavy Series: 14100

Construction:

- Inner Wire spiral: Stainless Steel 316 (S)
- Outer Wire spiral: Stainless Steel 316 (S)
- Inner Lining: Polypropylene (E)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
	(bar)	(PSI)				

GASSOFLEX 10100 SSE

AIA325	10	150	1	68	0,85	35
AIA332	10	150	1 1/4	74	1,07	35
AIA340	10	150	1 1/2	105	1,50	35
AIA350	10	150	2	190	2,00	35
AIA351	10	150	2 1/2	225	3,05	35
AIA375	10	150	3	290	3,55	35
AIA400	10	150	4	320	6,40	35

GASSOFLEX 14100 SSE

—	14	210	1	68	0,85	35
—	14	210	1 1/4	74	1,07	35
—	14	210	1 1/2	105	1,50	35
—	14	210	2	190	2,00	35
—	14	210	2 1/2	225	3,05	35
—	14	210	3	290	3,55	35
AIA4000	14	210	4	320	6,40	35

CUSTOMIZE



Consultar otra configuración posible

Other configurations on request:

EEE, ESE, ...



GASSOFLEX SST



Aplicaciones

Gassoflex SST es recomendada para la impulsión y/o aspiración de una gran variedad de productos químicos altamente agresivos y es normalmente utilizada en aquellas aplicaciones en las que el polipropileno no es adecuado. Su forro interior en PTFE y sus espirales en Inoxidable la hacen ideal para el uso en camiones cisternas, vagones o en planta.

SST

Serie Standard: 10100

Serie Pesada: 14100

Construcción:

- Espiral Interior: Acero inoxidable 316 (S)
- Espiral Exterior: Acero inoxidable 316 (S)
- Forro Interior: P.T.F.E. (T)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo está basada en un factor de seguridad 5:1

Applications

Gassoflex SST is recommended for the delivery and/or suction of a wide range of highly aggressive chemical products and is used in applications where polypropylene is not appropriate. Its inner lining of PTFE and the stainless steel wire spirals make it ideal in use with cistern trucks, railcars or fixed deposits.

SST

Standard Series: 10100

Heavy Series: 14100

Construction:

- Inner Wire spiral: Stainless Steel 316 (S)
- Outer Wire spiral: Stainless Steel 316 (S)
- Inner Lining: P.T.F.E. (T)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
	(bar)	(PSI)				

GASSOFLEX 10100 SST

AIA625	10	150	1	68	0,85	35
—	10	150	1 1/4	74	1,07	35
AIA640	10	150	1 1/2	105	1,50	35
AIA650	10	150	2	190	2,00	35
AIA665	10	150	2 1/2	225	3,05	35
AIA680	10	150	3	290	3,55	35
AIA685	10	150	4	320	6,40	35

GASSOFLEX 14100 SST

—	14	210	1	68	0,85	35
—	14	210	1 1/4	74	1,07	35
—	14	210	1 1/2	105	1,50	35
—	14	210	2	190	2,00	35
—	14	210	2 1/2	225	3,05	35
—	14	210	3	290	3,55	35
—	14	210	4	320	6,40	35

CUSTOMIZE



Consultar otra configuración posible

Other configurations on request:

EEE, ESE, ...

GASSOFLEX SGT



Aplicaciones

Gassoflex SGT es recomendada para la impulsión y/o aspiración de una gran variedad de productos químicos altamente agresivos gracias a su forro interior en P.T.F.E. y es normalmente utilizada en aquellas aplicaciones en las que el espiral exterior en acero galvanizado no tiene contacto con el producto. Siendo una mejor opción económica. Es utilizada en camiones cisternas, vagones o en planta.

SGT

Serie Standard: 10100

Serie Pesada: 14100

Construcción:

- Espiral Interior: Acero inoxidable 316 (S)
- Espiral Exterior: Acero galvanizado (G)
- Forro Interior: P.T.F.E. (T)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo está basada en un factor de seguridad 5:1

Applications

Gassoflex SGT is recommended for the delivery and/or suction of a wide range of highly aggressive chemical products due to its inner lining of P.T.F.E. and is normally used in applications where the external wire spiral of galvanized steel does not come in contact with the product, being a cheaper alternative. It is used in cistern trucks, railcars and fixed deposits.

SGT

Standard Series: 10100

Heavy Series: 14100

Construction:

- Inner Wire spiral: Stainless Steel (S)
- Outer Wire spiral: Galvanized Steel (G)
- Inner Lining: P.T.F.E. (T)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
	(bar)	(PSI)				

GASSOFLEX 10100 SGT

AIA425	10	150	1	68	0,85	35
—	10	150	1 1/4	74	1,07	35
AIA440	10	150	1 1/2	105	1,50	35
AIA450	10	150	2	190	2,00	35
AIA4501	10	150	2 1/2	225	3,05	35
AIA475	10	150	3	290	3,55	35
—	10	150	4	320	6,40	35

GASSOFLEX 14100 SGT

—	14	210	1	68	0,85	35
—	14	210	1 1/4	74	1,07	35
—	14	210	1 1/2	105	1,50	35
—	14	210	2	190	2,00	35
—	14	210	2 1/2	225	3,05	35
—	14	210	3	290	3,55	35
AIA1072	14	210	4	320	6,40	35



GASSOFLEX SGE



Aplicaciones

Gassoflex SGE es recomendada para la impulsión y/o aspiración de una gran variedad de productos químicos compatibles con el polipropileno y el inoxidable y que no tengan contacto con la manguera exteriormente, en camiones cisternas, vagones o en planta.

SGE

Serie Standard: 10100

Serie Pesada: 14100

Construcción:

- Espiral Interior: Acero inoxidable 316 (S)
- Espiral Exterior: Acero galvanizado (G)
- Forro Interior: Polipropileno (E)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo está basada en un factor de seguridad 5:1

Applications

Gassoflex SGE is recommended for the delivery and/or suction of a wide range of chemical products compatible with any polypropylene or stainless steel which may not come in contact with the external part of the hose. It is used in cistern trucks, railcars and fixed deposits.

SGE

Serie Standard: 10100

Serie Pesada: 14100

Construction:

- Inner Wire spiral: Stainless Steel 316 (S)
- Outer Wire spiral: Galvanized Steel (G)
- Inner Lining: Polypropylene (E)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
	(bar)	(PSI)				

GASSOFLEX 10100 SGE

AIA2321	10	150	1	68	0,85	35
AIA232	10	150	1 1/4	74	1,07	35
AIA240	10	150	1 1/2	105	1,50	35
AIA250	10	150	2	190	2,00	35
AIA265	10	150	2 1/2	225	3,05	35
AIA275	10	150	3	290	3,55	35
AIA276	10	150	4	320	6,40	35

GASSOFLEX 14100 SGE

—	14	210	1	68	0,85	35
—	14	210	1 1/4	74	1,07	35
—	14	210	1 1/2	105	1,50	35
—	14	210	2	190	2,00	35
—	14	210	2 1/2	225	3,05	35
—	14	210	3	290	3,55	35
AIA4000	14	210	4	320	6,40	35

CUSTOMIZE



Consultar otra configuración posible
Other configurations on request:
EEE, ESE, ...



GASSOFLEX MARINE HEAVY DUTY



Aplicaciones

Gassoflex MARINE HEAVY DUTY son utilizadas en la carga/descarga de barcos en aplicaciones marinas de gran robustez. Dependiendo del producto a transvasar podemos elegir entre las diferentes configuraciones de forro interior y espirales la mas adecuada para la aplicacion.

EGE/ GGE/SSE/SST

Serie Standard: 14100

Construcción:

- Espiral Interior: Acero galvanizado (G) o acero inoxidable 316 (S)
- Espiral Exterior: Acero galvanizado (G) o acero inoxidable 316 (S)
- Forro Interior: Polipropileno (E) o P.T.F.E. (T)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo esta basada en un fator de seguridad 5:1

Applications

Gassoflex MARINE HEAVY DUTY is used in the loading/unloading of boats in marine applications which require a more robust hose. The product to be transferred will pre-determine the most adequate configuration of the inner lining and inner and outer wire spirals. Various possibilities exist.

EGE/ GGE/SSE/SST

Standard Series: 14100

Construction:

- Inner Wire spiral: Galvanized Steel (G) or Stainless Steel 316 (S)
- Outer Wire spiral: Galvanized Steel (G) or Stainless Steel 316 (S)
- Inner Lining: Polypropylene (E) or P.T.F.E. (T)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Tipo Type	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
		(bar)	(PSI)				

GASSOFLEX MARINE HEAVY DUTY 14100

AIA1051	EGE	14	210	6	497	12	20
AIA111	EGE	14	210	8	740	22	20
AIA115	EGE	14	210	10	920	30	20
AIA202	GGE	14	210	6	497	12	20
AIA112	GGE	14	210	8	740	22	20
AIA113	GGE	14	210	10	920	30	20
AIA4004	SSE	14	210	6	497	12	20
AIA4006	SSE	14	210	8	740	22	20
AIA106	SST	14	210	6	497	12	20
AIA1061	SST	14	210	8	740	22	20

CUSTOMIZE



Consultar otra configuración posible

Other configurations on request:
EEE, ESE, ...



GASSOFLEX MARINE LIGHT



Aplicaciones

Gassoflex MARINE EXTRA LIGHT son utilizadas en la carga/descarga de barcos en aplicaciones marinas donde se requiera una gran flexibilidad y ligereza: Dependiendo del producto a transvasar podemos elegir entre las diferentes configuraciones de forro interior y espirales la mas adecuada para la aplicacion.

EGE/ GGE/SSE/SST

Serie Standard: 14100

Construcción:

- Espiral Interior: Acero galvanizado (G) o acero inoxidable 316 (S)
- Espiral Exterior: Acero galvanizado (G) o acero inoxidable 316 (S)
- Forro Interior: Polipropileno (E) o P.T.F.E. (T)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo esta basada en un factor de seguridad 5:1

Applications

Gassoflex MARINE EXTRA LIGHT is used in the loading/unloading of boats in marine applications which require a great flexibility and lightness of weight. The product to be transferred will pre-determine the most adequate configuration of the inner lining and inner and outer wire spirals. Various possibilities exist.

EGE/ GGE/SSE/SST

Standard Series: 14100

Construction:

- Inner Wire spiral: Galvanized Steel (G) or Stainless Steel 316 (S)
- Outer Wire spiral: Galvanized Steel (G) or Stainless Steel 316 (S)
- Inner Lining: Polypropylene (E) or P.T.F.E. (T)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Tipo Type	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lenghts
		(bar)	(PSI)				

GASSOFLEX MARINE LIGHT 14100

—	EGE	14	210	6	448	8,40	20
—	EGE	14	210	8	665	15,50	20
—	EGE	14	210	10	830	21,00	20
—	GGE	14	210	6	448	8,40	20
—	GGE	14	210	8	665	15,50	20
—	GGE	14	210	10	830	21,00	20
—	SSE	14	210	6	448	8,40	20
—	SSE	14	210	8	665	15,50	20
—	SST	14	210	6	448	8,40	20
—	SST	14	210	8	665	15,50	20

CUSTOMIZE



Consultar otra configuración posible
Other configurations on request:
EEE, ESE, ...



GASSOFLEX LOADING ARM

**Aplicaciones**

Gassoflex GGE-901/LOADING ARM es recomendada para la utilización en brazos de carga inferior. Gracias a su diseño tiene una gran resistencia al elongamiento que la hacen ideal para esta aplicación en cargaderos de carburantes

GGE-901 Loading Arm

Serie Standard: 14100

Construcción:

- Espiral Interior: Acero galvanizado (G)
- Espiral Exterior: Acero galvanizado (G)
- Forro Interior: Polipropileno (E)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presión de trabajo esta basada en un factor de seguridad 5:1

Applications

Gassoflex GGE-901/LOADING ARM is recommended for use with bottom loading arms. Its design provides great resistance to stretching making it ideal for loading fuels.

GGE-901 Loading Arm

Standard Series: 14100

Construction:

- Inner Wire spiral: Galvanized Steel (G)
- Outer Wire spiral: Galvanized Steel (G)
- Inner Lining: Polypropylene (E)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lengths
	(bar)	(PSI)				

GASSOFLEX GGE-901

—	14	210	3	280	3,54	35
AIA205	14	210	4	340	6,32	35

CUSTOMIZE

**Consultar otra configuración posible**

Other configurations on request:
EEE, ESE, EGE, ...



GASSOFLEX VR



Aplicaciones

Gassoflex GGE-VR es utilizada en la recuperacion de vapores de carburantes, tanto en cargaderos que dispongan de sistemas de recuperacion como en camiones cisternas o vagones.

GGE-VR

Serie Standard: 7100

Construcción:

- Espiral Interior: Acero galvanizado (G)
- Espiral Exterior: Acero galvanizado (G)
- Forro Interior: Polipropileno (E)
- Cubierta: Polipropileno

Gama de Temperatura: -20°C a +100°C

Factor de Seguridad:

La presion de trabajo esta basada en un fator de seguridad 5:1

Applications

Gassoflex GGE-VE is recommended for vapour recovery of fuels in loading docks with recovery systems as well as cistern trucks and railcars.

GGE-VR

Standard Series: 7100

Construction:

- Inner Wire spiral: Galvanized Steel (G)
- Outer Wire spiral: Galvanized Steel (G)
- Inner Lining: Polypropylene (E)
- Cover: Polypropylene

Temperature range: -20°C a +100°C

Work Safety factor:

The working pressure is based on a safety factor of 5:1

Código Gassó Gassó code	Presión trabajo Working press.		Diámetro Diameter	Radio curvatura Curve radius	Peso Weight	Longitud máx. rollos Max. coil lenghts
	(bar)	(PSI)				

GASSOFLEX GGE-VR

—	7	100	2	180	1,81	35
—	7	100	3	270	3,06	35
—	7	100	4	305	5,35	35



CUSTOMIZE



Consultar otra configuración posible
Other configurations on request:
EEE, ESE, EGE, ...

RACORES/ FITTINGS

Fabricación GASSÓ de racores y terminación de mangueras

Para el acabado de sus mangueras polivalentes GASSOFLEX, Gassó fabrica su propios racores (machos y hembras) y bridas en diferentes materiales de la máxima calidad (acero inox ANSI 316) y precisión.

Racores estándar y accesorios

Gassó le ofrece también racores estándar (Kamlok, Guillemín, Storz, MK, bridas, etc.) para la conexión a sus mangueras. Así mismo también ofrece distintos tipos de accesorios para su uso.

GASSO couplings manufacture and assembly

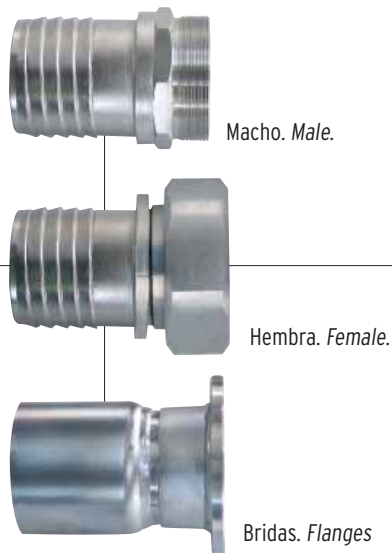
To compliment the multi-use GASSOFLEX hoses, Gassó manufactures its own couplings (male and female) as well as flanges in different materials, all with maximum quality and precision. (stainless steel ANSI 316).

Standard couplings accessories

In addition, Gassó offers standard couplings (Kamlok, Guillemín, Storz, MK, flanges, etc.) for connection with their hoses.

RACORES HOSE FITTINGS

GASSOFLEX RACORES GASSOFLEX RACORES



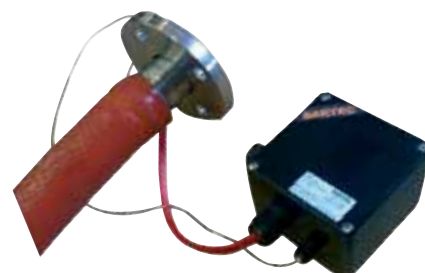
ACCESORIOS GASSOFLEX GASSOFLEX AACCESORIES



Aros de protección antiabrazión.
Anti-abrasion protective rings



Lazo de suspensión "Hosebond"
Hosebond for suspending



Kit calefactor para mangueras
Heating Kit for hoses

MANTENIMIENTO/ MAINTENANCE

INSPECCIÓN, LIMPIEZA Y PRUEBA DE LAS MANGUERAS

INSPECCIÓN

Una manguera fuera de servicio o estropeada puede ser seriamente peligrosa, por consiguiente deben ser inspeccionadas visualmente antes de cualquier operación y deben pasar un examen severo al menos cada seis meses.

La inspección debe atender a:

- Rozaduras
- Desplazamientos de los alambres interiores o exteriores fuera de su lugar
- Corrosión o abrasión del alambre externo
- Desplazamientos de los racores de terminación o aflojamiento
- Otros signos anormales incluyendo desperfectos en los racores
- Ataque químico, deterioro o daños físicos al recubrimiento exterior y carcasa.

Aquellas mangueras con defectos significativos relacionados con los tipos anteriormente descritos deberán ser puestas fuera de servicio. La abrasión moderada de la cubierta exterior podrá aceptarse siempre y cuando las capas inferiores a las de refuerzo están en perfectas condiciones.

LIMPIEZA

Las mangueras deben limpiarse después de su uso, antes de su inspección y antes de almacenarse durante un largo tiempo.

El sistema de limpieza dependerá del tipo de manguera y su ubicación.

Un lavado de arrastre normalmente es suficiente con fluidos como agua limpia, agua caliente, detergentes, disolventes comunes, a temperatura ambiente.

Si se usa agua de mar, deberán aclararse bien para reducir el riesgo de corrosión sobre hierro, racores o alambres interiores de acero galvanizado.

Es extremadamente necesario eliminar antes de la limpieza cualquier residuo de ácidos en el interior para evitar reacciones exotérmicas durante la limpieza.

También es importante eliminar cualquier residuo interior para evitar posibles reacciones químicas cuando la manguera vuelva a entrar en servicio.

Puede usarse una corriente de vaciado con los finales de manguera abiertos y sin superar nunca la temperatura de trabajo, para no estropear la estructura ni su composición.

Puede usarse aire comprimido; también con los finales de manguera abiertos.

Durante la limpieza la manguera debe estar eléctricamente conectada a tierra para evitarse su carga electrostática, especialmente si está próxima a áreas con productos inflamables.

PRUEBA

Al menos una vez al año las mangueras deben pasar una prueba hidráulica de la siguiente forma:

- Vaciado y lavado a fondo de la manguera y prueba de extremo a extremo de la continuidad eléctrica de la manguera.
 - Inspección visual: las mangueras que presenten algún defecto visual ya no deberían ser probadas.
 - Colocar las manguera sobre soportes rodados que permitan examinar el movimiento de la manguera bajo presión
 - Cerrar los extremos y llenar la manguera completamente de agua. Asegurar el purgado del aire estancado.
 - Presurizar la conexión a 1,5 veces la presión de trabajo permitida y mantenerla durante 10 minutos mientras se examinan posibles fugas.
- Aprovechar para comprobar que el valor de continuidad eléctrica es igual al testado inicialmente.

Señalar que las mangueras termoplásticas bajo presión experimentan una elongación a las mangueras de caucho. Esta es una característica propia de las mangueras termoplásticas, y a diferencia de las de caucho, esto no puede usarse como signo de fallo o usarse para establecer el estado de los refuerzos.

PRUEBA CONDUCTIVIDAD ELÉCTRICA

Para prevenir la acumulación de electricidad estática durante el uso, todas las partes metálicas deben quedar enlazadas durante el proceso de fabricación.

Cada 6 meses, como mínimo, las mangueras deben ser así examinadas:

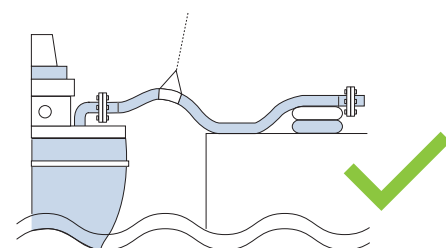
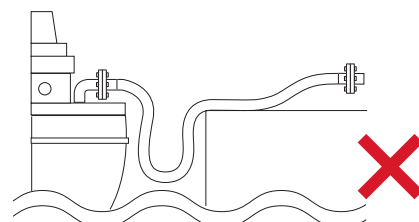
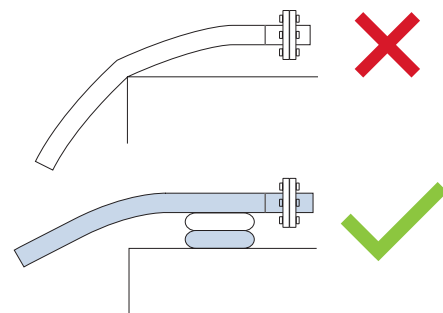
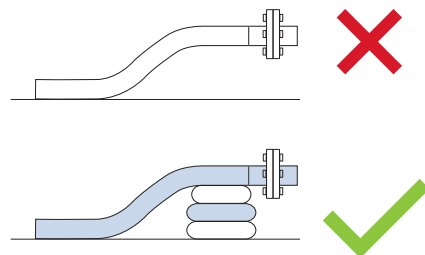
- Colocar las mangueras estiradas sobre el suelo
 - Testar la conductividad eléctrica de extremo a extremo mediante un tester.
- Aquellas mangueras que no sean eléctricamente conductoras deberán ser puestas fuera de servicio.

REPARACIONES

Según cuales sean las condiciones generales de la manguera está podrá repararse.

Las reparaciones en mangueras de polipropileno sólo pueden realizarse por personal especializado.

CONSULTE CON EL DEPARTAMENTO TÉCNICO DE GASSÓ SOBRE CUALQUIER TEMA RELACIONADO CON EL MANTENIMIENTO, INSPECCIÓN, TEST Y REPARACIÓN DE SUS MANGUERAS GASSOFLEX.



INSPECTIONS, CLEANING AND HOSE TESTING.

INSPECTION

A damaged or out of service hose can be extremely dangerous. Consequently, all hoses should be visually inspected before any use and should undergo safety checks every six months.

In the inspection attention should be paid to:

- scratches
- interior or exterior wires out of place
- corrosion or abrasion of the external wire
- looseness or displacement of the coupling endings
- other abnormalities including imperfections in the couplings
- chemical stains, deterioration or damage of the outer hose covering

Any hoses with the above mentioned defects should be put out of service. Moderate abrasions on the outer covering may be acceptable only in the case that the inferior layers are in perfect condition.

CLEANING

The hoses should be cleaned after use, prior to inspection and before storing for extended periods of time. The cleaning system depends on the type of hose and its use.

A flush cleaning is normally sufficient with fluids such as clean water, hot water, detergents and solvents at room temperature. If sea water is used, the hose should be rinsed well to reduce the risk of corrosion on the steel, couplings or inner wires of galvanized steel.

It is extremely important prior to cleaning to eliminate any residue of acids in the inside of the hose to avoid exothermic reactions during cleaning.

It is equally important to eliminate any residue to avoid possible chemical reactions when the hose returns to service.

Cleaning may be with air currents with the hose ends open and with the temperature never higher than the working temperature so as not to damage the structure or composition. Compressed air may be used, again with the hose ends open.

During cleaning the hose must be grounded to avoid static electric build-up, especially when it is in an area near flammable products.

TESTING

At least once a year the hose must pass a hydraulic test in the following way:

- emptying and thorough cleaning of the hose with testing from end to end of electrical continuity.
- Visual inspection: any hose with a visual defect should not be passed
- Hang the hose on round supports which allow examination of movement of the hose under pressure
- Close the ends and fill the hose completely with water. Purge all air from hose.
- Pressurize the connection 1.5 times the working pressure allowed and maintain the pressure during 10 minutes. Examine for leaks
- Check that the value of electrical continuity is the same as the initial test

Note that the composite hoses under pressure elongate, a characteristic of these hoses, different to those of rubber and should not be considered a fault in the hose nor used to establish the state of reinforcements

ELECTRICAL CONTINUITY TEST

To prevent the build-up of static electricity during use, all metal parts should remain connected during manufacture.

At a minimum, every six months the hoses should be examined:

- stretch out the hose on the ground
 - test the electrical conductivity from end to end
- Any hose which does not have electrical continuity should be placed out of service.

REPAIRS

According to its general condition, the hose may or may not be repaired.

Reparation of polypropylene hoses can only be done by specialized personnel.



Prueba de presión. Pressure test.



Conductividad eléctrica. Electrical continuity.



Mantenimiento y reparación. Repairs and maintenance.

CONSULT THE TECHNICAL DEPARTMENT OF GASSÓ FOR ANY QUERY ABOUT MAINTENANCE, INSPECTION, TESTING AND REPAIR OF GASSOFLEX HOSES.

TABLAS DE PRODUCTOS TRASVASABLES/ CO

Leyendas y funcionamiento de las tablas

En estas tablas presentamos a título informativo la idoneidad de cada tipo de acabado de nuestras espirales interiores y racores frente a diversos productos. Para una mayor información y seguridad consulte con nuestro departamento técnico.

Espirales interiores mangueras 1-2-3: **1**, EGE (espiral de PP); **2**, SSE (espiral inox); **3**, GGE (espiral de acero galvanizado). **A**, excelente; **B**, bueno; **C**, moderado o uso esporádico; **D**, no apto.

Racores CS-SS-CA: **CS**, acero carbono; **SS**, inox 316; **CA**, aluminio.

● apto; ● no apto.

Leyendas y funcionamiento de las tablas

These tables show the compatibility of each type of finish of our inner wire spiral and couplings with determined products. For more information consult our technical department.

Inner wire spiral hoses 1-2-3: **1**, EGE (PP wire spiral); **2**, SSE (stainless steel wire spiral); **3**, GGE (galvanized steel wire spiral). **A**, excellent; **B**, good; **C**, moderate or sporadic use; **D**, not suitable

Couplings CS-SS-CA: **CS**, steel carbon; **SS**, stainless steel 316; **CA**, aluminium. ● Fit; ● not fit.

HYDROCARBONS

	Hose			End Fittings		
	1	2	3	CS	SS	CA
Convenyant						
Aviation fuel	C	C	C	●	●	●
Coal tar naphtha	B	B	B	●	●	●
Diesel oil	B	B	B	●	●	●
Fuel oil	B	B	B	●	●	●
Jet fuel	C	C	C	●	●	●
Kerosene	B	B	B	●	●	●
Motor fuel anti-knock compounds (unleaded)	B	B	B	●	●	●
Oils most	B	B	B	●	●	●
Paraffin wax	A	A	A	●	●	●
Petroleum	A	A	A	●	●	●
Petroleum ether	C	C	C	●	●	●
Petroleum naphtha C	C	C	-	●	●	●
Transformer oil	B	B	B	●	●	●
Transmission oil	B	B	B	●	●	●
Turpentine	C	C	C	●	●	●
Vaseline	A	A	A	●	●	●
White spirit	B	B	B	●	●	●

CHEMICALS

	Hose			End Fittings		
	1	2	3	CS	SS	CA
Convenyant						
Acetaldehyde	C	C	D	●	●	●
Acetic acid (<60%)	A	A	D	●	●	●
Acetic acid (Glacial)	B	B	D	●	●	●
Acetic anhydride	B	B	D	●	●	●
Acetoacetic ester	C	C	D	●	●	●
Acetone	A	A	A	●	●	●
Acetone cyanohydrin	B	B	D	●	●	●
Acentonitrile	B	B	B	●	●	●
Acetophenone	B	B	B	●	●	●
Acetylacetone	B	B	B	●	●	●
Acetylchloride	Refer to SST					
Acetylene	Metallic					
Acetylene dichloride	B	B	B	●	●	●
Acetylene tetrachloride	C	C	C	●	●	●
Acrolein (acrylaldehyde)	B	B	B	●	●	●
Acrylic acid	B	B	D	●	●	●
Acrylonitrile	A	A	D	●	●	●
Adipic acid aqueous	A	A	A	●	●	●
Adiponitrile	B	B	B	●	●	●
Allyl alcohol	A	A	A	●	●	●
Allyl bromide	C	C	C	●	●	●
Allyl chloride	C	C	C	●	●	●
Alums aqueous (Saturated)	A	A	A	●	●	●
Aluminium salts excluding halides (Saturated)	A	B	D	●	●	●
Aluminium chloride (Saturated)	A	D	D	●	●	●
Aminoethyl ethanolamine	B	B	D	●	●	●
Ammonia solution	A	A	D	●	●	●
Ammonium salts excluding halides (Saturated)	A	B	D	●	●	●
Ammonium chloride (Saturated)	A	C	D	●	●	●
Amyl acetate	C	C	C	●	●	●
Amyl alcohol	B	B	B	●	●	●
Amyl chloride	C	C	C	●	●	●
Aniline (dedicated hose)	C	B	x	●	●	●
Animal oils	A	A	A	●	●	●
Anisole	C	C	C	●	●	●
Antimony chloride	B	D	D	●	●	●
Aqua regia	C	D	D	●	●	●
Barium salts (Saturated)	A	B	D	●	●	●
Beer	A	A	D	●	●	●

Benzaldehyde	C	C	D	●	●	●
Benzene	C	C	C	●	●	●
Benzene sulphonic acid	C	C	D	●	●	●
Benzoic acid	A	A	D	●	●	●
Benzoyl chloride	C	C	C	●	●	●
Benzyl alcohol	A	A	A	●	●	●
Benzyl butyl phthalate	B	B	B	●	●	●
Benzyl chloride	C	C	C	●	●	●
Bleach (<12.5% Cl)	C	C	D	●	●	●
Borax aqueous	A	A	A	●	●	●
Boric acid aqueous	A	A	D	●	●	●
Brine (Saturated)	A	C	D	●	●	●
Bromine water (Saturated)	Refer to SST					
Butadiene	B	B	B	●	●	●
Butanediol	B	B	B	●	●	●
Butyl alcohol	A	A	A	●	●	●
Butyl acetate	C	C	C	●	●	●
Butyl acrylate	B	B	B	●	●	●
N-Butylamine	B	B	D	●	●	●
Butyl benzene	B	B	B	●	●	●
Butyl benyl phthalate	B	B	B	●	●	●
Butyl bromide	Refer to SST					
Butyl butyrate	B	B	B	●	●	●
Butyl carbitol	A	A	A	●	●	●
Butyl carbitol acetate	C	C	C	●	●	●
Butyl cellosolve	A	A	A	●	●	●
Butyl cellosolve acetate	C	C	C	●	●	●
Butyl chloride	Refer to SST					
Butylene glycol	A	A	A	●	●	●
Butyl ether	B	B	B	●	●	●
Butyl ethyl ether	B	B	B	●	●	●
Butyl methacrylate	C	C	C	●	●	●
Butyl methoxyethyl ether	C	C	C	●	●	●
Butyl phthalate	A	A	A	●	●	●
Butyl stearate	B	B	B	●	●	●
Butyraldehyde	C	C	D	●	●	●
Butyric acid (<20%)	B	B	B	●	●	●
Butyrolactone	C	C	C	●	●	●
Calcium salts excluding halides and hypo-chlorite (Saturated)	A	B	D	●	●	●
Calcium alkyl salicylate solution	A	A	D	●	●	●
Calcium chloride (Saturated)	A	C	D	●	●	●
Calcium hypochlorite (<12.5% Cl)	C	C	D	●	●	●
Camphor oil	C	C	C	●	●	●
Caprylic acid	A	A	A	●	●	●
Carbinols	B	B	B	●	●	●
Carbitols	B	B	B	●	●	●
Carbitol acetate	C	C	C	●	●	●
Carbolic acid	A	A	D	●	●	●
Carbolic oil (middle oil)	C	C	C	●	●	●
Carbon disulphide	C	C	C	●	●	●
Carbon tetrachloride	C	C	C	●	●	●
Carbonic acid	A	A	D	●	●	●
Cashew nut shell oil	B	B	B	●	●	●
Caustic potash (<50%)	A	B	D	●	●	●
Caustic soda (<50%)	A	B	C	●	●	●
Cellosolve	B	B	B	●	●	●
Chloroacetic acid	B	D	D	●	●	●
Chlorine	Refer to SST					
Chlorobenzene	C	C	C	●	●	●
Chlorobutane	C	C	C	●	●	●
Chloroform	C	C	C	●	●	●

Chloroprene	C	C	C	●	●	●
Chloropropionic acid	C	C	D	●	●	●
Chlorosulphonic acid	Metallic / PTFE					
Chlorotoluene	C	C	C	●	●	●
Chrome alum (Saturated)	A	A	D	●	●	●
Chromic acid aqueous (<50%)	C	C	D	●	●	●
Citric acid	A	A	D	●	●	●
Copper salts excluding halides (Saturated)	A	A	D	●	●	●
Copper chloride (Saturated)	A	D	D	Polypropylene		
Creosote (wood or coal tar)	B	B	B	●	●	●
Cresols (<90%)	A	A	A	●	●	●
Crotonaldehyde	C	C	C	●	●	●
Cumene	B	B	B	●	●	●
Cyclohexane	B	B	B	●	●	●
Cyclohexanol	B	B	B	●	●	●
Cyclohexanone	C	C	C	●	●	●
Cyclohexylamine	B	B	D	●	●	●
Cyclopentane	B	B	B	●	●	●
p-Cymene	B	B	B	●	●	●
Decalin	Refer to SST					
Decyl alcohol	B	B	B	●	●	●
Decyl acrylate	B	B	D	●	●	●
Detergents	A	A	A	●	●	●
Dextrin	A	A	A	●	●	●
Diacetone alcohol	B	B	B	●	●	●
Diaminoethylamine	B	B	C	●	●	●
Diamylamine	B	B	C	●	●	●
Dibromoethane	B	B	D	●	●	●
Dibutylamine	B	B	C	●	●	●
Dibutyl ether	C	C	C	●	●	●
Dibutyl phthalate	B	B	B	●	●	●
Dibutyl sebacate	B	B	B	●	●	●
Dichloroacetic acid	C	D	D	Polypropylene		
Dichlorobenzene	C	C	C	●	●	●
Dichlorobutane	C	C	C	●	●	●
Dichloroethane	C	C	C	●	●	●
Dichloroethylene	C	C	C	●	●	●
Dichloroethyl ether	C	C	C	●	●	●
Dichloromethane	C	C	C	●	●	●
Dichloropropane	C	C	C	●	●	●
Dichloropropylene	C	C	C	●	●	●
Dichloropropionic acid	C	C	D	●	●	●
Dicyclopentadiene	D	D	D	●	●	●
Diethanolamine	A	A	D	●	●	●
Diethylamine	B	B	D	●	●	●
Diethylaminoethanol	B	B	C	●	●	●
Diethylbenzene	B	B	B	●	●	●
Diethylene dioxide	B	B	B	●	●	●
Diethylene glycol	A	A	A	●	●	●
Diethylene glycol diethyl ether	B	B	B	●	●	●
Diethylene glycol monobutyl ether	C	C	C	●	●	●
Diethylene glycol monoethyl ether	C	C	C	●	●	●
Diethylene glycol monoethyl ether acetate	C	C	C	●	●	●
Diethylene glycol monomethyl ether	C	C	C	●	●	●
Diethylene glycol monomethyl ether acetate	C	C	C	●	●	●
Diethylenetriamine	B	B	D	●	●	●
Diethyl ethanolamine	B	B	D	●	●	●
Diethyl ether	B	B	B	●	●	●
Diethyl ketone	B	B	B	●	●	●
Diethyl oxalate	B	B	B	●	●	●
Diethyl phthalate	A	A	A	●	●	●
Diethylsebacate	A	A	A	●	●	●
Diethyl sulphate	B	B	D	●	●	●
Diisobutylamine	B	B	B	●	●	●
Diisobutylene	B	B	B	●	●	●
Diisobutyl ketone	B	B	B	●	●	●
Diisobutyl phthalate	B	B	B	●	●	●
Diisooctyl adipate	B	B	B	●	●	●
Diisooctyl phthalate	A	A	A	●	●	●
Diisopropanolamine	B	B	D	●	●	●
Diisopropylamine	B	B	D	●	●	●
Diisopropyl ether	B	B	B	●	●	●
Diisopropyl ketone	B	B	B	●	●	●
Dimethylamine	B	B	D	●	●	●
Dimethyl ethanolamine	B	B	D	●	●	●
Dimethyl formamide	A	A	A	●	●	●
Dimethyl ketone	A	A	A	●	●	●

Dimethyl phthalate	B	B	B	●	●	●
Dimethyl sulphate	B	B	D	●	●	●
Dimethyl sulphide	B	B	B	●	●	●
Dinitrobenzene	C	C	C	●	●	●
Diocetylamine	B	B	D	●	●	●
Diocetyl phthalate	B	B	B	●	●	●
Diocetyl sebacate	B	B	B	●	●	●
Dioxane	C	C	C	●	●	●
Dipentene	B	B	B	●	●	●
Diphenyl ether	B	B	B	●	●	●
Diphenylmethane diisocyanate	B	B	B	●	●	●
Diphenyl phthalate	B	B	B	●	●	●
Dipropylamine	B	B	B	●	●	●
Dipropylene glycol	A	A	A	●	●	●
Dipropylene glycol monomethyl ether	C	C	C	●	●	●
Disulphuric acid	Refer to SST					
Dodecyl alcohol	B	B	B	●	●	●
Dodecyl benzene	B	B	B	●	●	●
Dodecyl benzene sulphonic acid	C	C	D	●	●	●
Dodecyl phenol	B	B	B	●	●	●
Dodecyl methacrylate	D	D	D	●	●	●
Epichlorohydrin	B	B	B	●	●	●
Ethyl alcohol	A	A	A	●	●	●
Ethanolamine	A	A	B	●	●	●
Ethoxy ethanol	C	C	C	●	●	●
Ethoxyethyl acetate	C	C	C	●	●	●
Ethoxy propanol	C	C	C	●	●	●
Ethyl acetate	C	C	C	●	●	●
Ethyl acrylate	B	B	B	●	●	●
Ethyl aluminium dichloride	Refer to SST					
Ethylamine	B	B	C	●	●	●
Ethylbenzene	B	B	B	●	●	●
Ethyl butanol	B	B	B	●	●	●
Ethyl butylamine	B	B	C	●	●	●
Ethyl chloride	C	C	C	●	●	●
Ethyl cyclohexane	C	C	C	●	●	●
Ethyl cyclohexylamine	C	C	C	●	●	●
Ethylene carbonate	B	B	C	●	●	●
Ethylene chloride	C	C	C	●	●	●
Ethylene chlorohydrin	B	B	B	●	●	●
Ethylene cyanohydrin	B	B	B	●	●	●
Ethylene diamine	B	B	B	●	●	●
Ethylene dibromide	B	B	C	●	●	●
Ethylene dichloride	C	C	C	●	●	●
Ethylene glycol	A	A	A	●	●	●
Ethylene glycol monobutyl ether	A	A	A	●	●	●
Ethylene glycol methyl butyl ether	B	B	B	●	●	●
Ethylene glycol monobutyl ether acetate	B	B	B	●	●	●
Ethylene glycol monoethyl ether	A	A	A	●	●	●
Ethylene glycol monomethyl ether	B	B	B	●	●	●
Ethyl ether	B	B	B	●	●	●
Ethyl formate	B	B	D	●	●	●
Ethylene oxide (dedicated hose)	B	B	D	●	●	●
Ethylene glycol monomethyl ether acetate	B	B	B	●	●	●
Ethyl hexanoic acid	B	B	D	●	●	●
Ethyl hexyl alcohol	A	A	A	●	●	●
Ethylene glycol monophenyl ether	B	B	B	●	●	●
Ethyl hexyl acrylate	B	B	C	●	●	●
2-Ethyl hexylamine	B	B	C	●	●	●
Ethyl iodide	C	C	C	●	●	●
Ethyl isobutyl ether	B	B	D	●	●	●
Ethyl methacrylate	C	C	C	●	●	●
2-Ethyl-3-propylacrolein	C	C	C	●	●	●
Ethyl propyl ether	B	B	B	●	●	●
Ethyl propyl ketone	C	C	C	●	●	●
Ethyl silicate	A	A	A	●	●	●
Ethyl sulphate	B	B	B	●	●	●
Ethyl vinyl ether	B	B	B	●	●	●
Fatty acids	A	A	D	●	●	●
Fatty alcohols	A	A	A	●	●	●
Ferrous, ferric salts excluding halides	A	B	D	●	●	●
Fluorine	PTFE					
Fluosilicic acid	A	A	D	●	●	●
Formaldehyde solution (<45%)	A	A	A	●	●	●
Formamide	A	B	D	●	●	●
Formic acid	A	A	D	●	●	●
Fruit juices	A	A	D	●	●	●

TABLAS DE PRODUCTOS TRASVASABLES/ CO

Fructose	A	A	A	●	●	●
Furfural	B	B	B	●	●	●
Furfuryl alcohol	B	B	B	●	●	●
Gallic acid solution	A	A	C	●	●	●
Gasoline	B	B	B	●	●	●
Gelatine aqueous	A	A	A	●	●	●
Gluconic acid	A	A	C	●	●	●
Glucose aqueous	A	A	A	●	●	●
Glycerine	A	A	A	●	●	●
Green sulphate liquor	B	B	D	●	●	●
Glycols aqueous	A	A	A	●	●	●
Glycolic acid aqueous (<37%)	A	A	D	●	●	●
Heptane	B	B	B	●	●	●
Hepatic acid	B	B	D	●	●	●
Heptanol	A	A	A	●	●	●
Heptanone	B	B	B	●	●	●
Heptene	A	A	A	●	●	●
Hexamethylene diamine	B	B	C	●	●	●
Hexane	B	B	B	●	●	●
Hexanol	A	A	A	●	●	●
Hexylamine	B	B	D	●	●	●
Hexene	A	A	A	●	●	●
Hexylene glycol	A	A	A	●	●	●
Hydrazine hydrate	B	B	D	●	●	●
Hydrobromic acid (<50%)	A	D	D	●	●	●
Hydrochloric acid (<37%)	C	D	D	●	●	●
Hydrofluoric acid (<50%)	C	D	D	●	●	●
Hydrofluosilicic acid	A	A	D	●	●	●
Hydrogen peroxide (<50%)	B	B	D	●	●	●
Hydrogen sulphide aqueous (Saturated)	A	D	D	●	●	●
Hexamethylene diamine	B	B	D	●	●	●
Hexamethylene tetramine	B	B	D	●	●	●
Hydroquinone	A	A	A	●	●	●
Iodine solution	B	D	D	●	●	●
Iron salts excluding halides (Saturated)	A	B	D	●	●	●
Iron halides	A	D	D	●	●	●
Isoamyl acetate	B	B	B	●	●	●
Isoamyl alcohol	B	B	B	●	●	●
Isoamyl bromide	B	D	D	●	●	●
Isoamyl butyrate	B	B	B	●	●	●
Isoamyl chloride	C	C	D	●	●	●
Isoamyl ether	B	B	B	●	●	●
Isobutyl alcohol	A	A	A	●	●	●
Isobutyl acetate	B	B	B	●	●	●
Isobutyl acrylate	B	B	B	●	●	●
Isobutylamine	B	B	D	●	●	●
Isobutyl bromide	B	D	D	●	●	●
Isobutyl chloride	B	D	D	●	●	●
Isobutyl formate	C	C	C	●	●	●
Isobutyl methyl ketone	B	B	B	●	●	●
Isobutyraldehyde	B	B	D	●	●	●
Isobutyl ether	C	C	C	●	●	●
Isocetane	C	C	C	●	●	●
Isodecyl alcohol	A	A	A	●	●	●
Isopentane	C	C	C	●	●	●
Isopentene	C	C	C	●	●	●
Isophorone	B	B	B	●	●	●
Isoprene	B	B	B	●	●	●
Isopropyl alcohol	A	A	A	●	●	●
Isopropanolamine	B	B	D	●	●	●
Isopropyl acetate	C	C	C	●	●	●
Isopropylamine	B	B	D	●	●	●
Isopropylbenzene	B	B	B	●	●	●
Isopropyl chloride	B	D	D	●	●	●
Isopropyl ether	C	C	C	●	●	●
Isopropyl toluene	B	B	B	●	●	●
Jams	A	A	B	●	●	●
Ketones	B	B	B	●	●	●
Lactic acid (<20%)	A	B	D	●	●	●
Lanolin	A	A	A	●	●	●
Lard	A	A	A	●	●	●
Latex (Low viscosity)	A	A	A	●	●	●
Lauryl alcohol	B	B	B	●	●	●
Lead salts (Saturated)	A	B	D	●	●	●
Ligroin	C	C	C	●	●	●
Limone	B	B	B	●	●	●
Linseed oil	A	A	A	●	●	●

Lubricating oil	B	B	B	●	●	●
Magnesium salts (Saturated)	A	B	D	●	●	●
Maleic acid in solution	A	B	D	●	●	●
Maleic anhydride in solution	B	B	D	●	●	●
Maleic acid in solution	B	B	D	●	●	●
Manganese salts (Saturated)	A	B	D	●	●	●
Mercuric chloride (Saturated)	A	D	D	●	●	●
Mesityl oxide	A	A	B	●	●	●
Methacrylic acid	B	B	D	●	●	●
Methyl alcohol	A	A	A	●	●	●
Methyl acetate	C	C	C	●	●	●
Methyl aceto acetate	C	C	D	●	●	●
Methyl acetone	B	B	B	●	●	●
Methyl acrylate	B	B	B	●	●	●
Methylamine	B	B	C	●	●	●
Methylamyl acetate	C	C	C	●	●	●
Methylamyl alcohol	B	B	B	●	●	●
Methyl amylketone	B	B	B	●	●	●
Methyl tert-butyl ether	C	C	C	●	●	●
Methyl butyl ketone	B	B	B	●	●	●
Methyl butyraldehyde	Refer to SST			●	●	●
Methyl cellosolve	B	B	B	●	●	●
Methyl cellosolve acetate	C	C	C	●	●	●
Methyl chloride	Refer to SST			●	●	●
Methyl cyanide	B	B	B	●	●	●
Methyl cyclohexane	B	B	B	●	●	●
2-methyl pentene	C	C	C	●	●	●
Methylene bromide	C	C	D	●	●	●
Methylene chloride	C	C	C	●	●	●
Methyl ethyl ketone	C	C	C	●	●	●
Methyl ethylpyridine	C	C	C	●	●	●
Methyl formate	C	C	C	●	●	●
Methyl isobutyl ketone	C	C	C	●	●	●
Methyl methacrylate	C	C	C	●	●	●
Methyl nitrobenzene	B	B	B	●	●	●
Methyl pentene	B	B	B	●	●	●
Methyl pyridene	B	B	B	●	●	●
Methylstyrene	B	B	B	●	●	●
Mineral jelly	A	A	A	●	●	●
Mineral oil	B	B	B	●	●	●
Mineral spirits	B	B	B	●	●	●
Mineral wax	D	D	D	●	●	●
Molasses	A	A	A	●	●	●
Monoethanolamine	A	A	B	●	●	●
Monoethylamine	B	B	C	●	●	●
Monoisopropanolamine	B	B	D	●	●	●
Mononitrobenzene	B	B	B	●	●	●
Morpholine	B	B	C	●	●	●
Naphtha	B	B	B	●	●	●
Naphtha solvent	C	C	C	●	●	●
Naphthalene (in solution)	A	A	A	●	●	●
Naphthalene molten	D	D	D	●	●	●
Neohexane	B	B	B	●	●	●
Nickel chloride (Saturated)	A	D	D	●	●	●
Nickel salts, excluding chloride (Saturated)	A	B	D	●	●	●
Nitric acid (<10%)	A	A	D	●	●	●
Nitric acid (10-60%)	C	C	D	●	●	●
Nitric acid (>60%)	Refer to SST			●	●	●
Nitrobenzene	B	B	B	●	●	●
O-nitrophenol (soln)	A	A	D	●	●	●
Nitropropane	B	B	B	●	●	●
Nitrotoluene	B	B	B	●	●	●
Nonane	B	B	B	●	●	●
Nonyl alcohol	B	B	B	●	●	●
Nonylphenol	B	B	C	●	●	●
Octane	B	B	B	●	●	●
Octanol	B	B	B	●	●	●
Octyl acetate	C	C	C	●	●	●
Octyl acrylate	B	B	B	●	●	●
Oleic acid	B	B	D	●	●	●
Oleum	Refer to SST			●	●	●
Oxalic acid (<50%)	B	B	D	●	●	●
Palm oil	B	B	B	●	●	●
Paraldehyde	C	C	C	●	●	●
Pentachloroethane	C	C	C	●	●	●
1,3-pentadiene	C	C	C	●	●	●
Pentane	B	B	B	●	●	●

NVEYANTS TABLES

Pentanol	A	A	A	●	●	●
Pentanone	B	B	B	●	●	●
Pentene	B	B	B	●	●	●
Perchloric acid (<50%)	B	D	D	●	●	●
Perchloroethylene	C	C	C	●	●	●
Petrolatum	A	A	A	●	●	●
Phenol	A	A	B	●	●	●
Phenoxyethanol	C	C	C	●	●	●
Phenylhydrazine	C	C	D	●	●	●
Phosphoric acid (<95%)	A	A	D	●	●	●
Phosphorus oxychloride	C	D	D	Polypropylene		
Phosphorus pentoxide	A	B	D	●	●	●
Phosphorus trichloride	B	D	D	●	●	●
Phosphorus	D	D	D	●	●	●
Phthalic acid (<50%)	B	B	D	●	●	●
Phthalic anhydride	D	D	D	●	●	●
Picric acid (1%)	B	B	D	●	●	●
Pinene	B	B	B	●	●	●
Pine oil	B	B	B	●	●	●
Plasticisers most commercial	B	B	B	●	●	●
Polyethylene glycol	B	B	B	●	●	●
Polypropylene glycol	B	B	B	●	●	●
Polymethylene polyphenyl isocyanate	B	B	B	●	●	●
Potassium salts excluding halides (Saturated)	A	B	D	●	●	●
Potassium halides	A	D	D			
Propyl alcohol	A	A	A	●	●	●
Propenoic acid	B	B	D	●	●	●
Propiolactone	C	C	C	●	●	●
Propionaldehyde	C	C	C	●	●	●
Propionic acid	B	B	D	●	●	●
Propionic anhydride	C	C	D	●	●	●
Propyl acetate	C	C	C	●	●	●
Propylamine	B	B	D	●	●	●
Propylene glycol	A	A	A	●	●	●
Propylene glycol monomethyl ether	B	B	B	●	●	●
Propylene glycol monoethyl ether	B	B	B	●	●	●
Propylene oxide (dedicated hose)	B	B	D	●	●	●
Propylene (tetramer & trimer)	C	C	C	●	●	●
Prussic acid	A	A	D	●	●	●
Pyridine	B	B	D	●	●	●
Pyrosulphuric acid	Refer to SST			●	●	●
Salt solutions excluding halides	A	B	D	●	●	●
Sea water	A	D	D	●	●	●
Sewage	B	B	D	●	●	●
Silicon oil	A	A	A	●	●	●
Silver salts excluding halides (Saturated)	A	B	D	●	●	●
Silver halides (Saturated)	A	D	D	Polypropylene		
Soap solutions	A	A	B	●	●	●
Sodium salts excluding halides (Saturated)	A	B	D	●	●	●
Sodium chlorate (solution of 50% or less)	A	A	D	●	●	●
Sodium chloride (Saturated)	A	B	D	●	●	●
Sodium chromate	B	B	B	●	●	●
Sodium hydrosulphide	A	B	D	●	●	●
Sodium hypochlorite (<15%)	C	C	D	●	●	●
Sodium hydroxide solution	A	A	C	●	●	●
Stannous, stannic saltss excluding halides	A	B	D	●	●	●
Starch aqueous	A	A	B	●	●	●
Styrene monomer	B	B	B	●	●	●
Sugar syrup	A	A	A	●	●	●
Sulphamic acid	A	A	D	●	●	●
Sulpholane	D	D	D	●	●	●
Sulphonyl chloride	Metallic / PTFE					
Sulphur chloride						
Sulphur dioxide	C	C	D	●	●	●
Sulphuric acid (<20%)	B	B	D	●	●	●
Sulphuric acid (20-85%)	B	D	D	Polypropylene		
Sulphuric acid (<85%)	C	C	D	●	●	●
Sulphurous acid	B	B	D	●	●	●
Sulphuryl chloride	D	D	D	●	●	●
Tall oil	A	A	A	●	●	●
Tallow	A	A	A	●	●	●
Tannic acid (<10%)	A	A	D	●	●	●
Tartaric acid	A	B	D	●	●	●
Tetrachloroethane	C	C	C	●	●	●
Tetrachloroethylene	C	C	C	●	●	●
Tetraethylene glycol	B	B	B	●	●	●

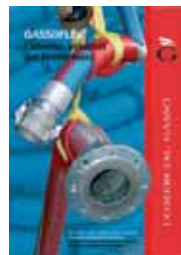
Tetrahydrofuran	C	C	C	●	●	●
Thionyl chloride	Metallic / PTFE					
Tin saltsexcluding halides (Saturated)	A	B	D	●	●	●
Tin halides	A	D	D	Polypropylene		
Titanium tetrachloride	C	D	D	Polypropylene		
Toluene	C	C	C	●	●	●
Toluene diisocyanate	B	B	B	●	●	●
o-Toluidine	B	B	C	●	●	●
Tributylamine	B	B	B	●	●	●
Tributyl phosphate	B	B	B	●	●	●
Trichloroacetic acid (<10%)	A	B	D	Polypropylene		
Trichlorobenzene	C	C	C	●	●	●
Trichloroethane	C	C	C	●	●	●
Trichloroethylene	C	C	C	●	●	●
Trichloropropane	C	C	C	●	●	●
Tricresyl phosphate	B	B	B	●	●	●
Tridecanol	B	B	B	●	●	●
Triethanolamine	B	B	D	●	●	●
Triethylamine	B	B	D	●	●	●
Triethylbenzene	B	B	B	●	●	●
Triethylene glycol	A	A	A	●	●	●
Triethylene tetramine	B	B	D	●	●	●
Triisopropanolamine	B	B	D	●	●	●
Trimethyl acetic acid	A	A	D	●	●	●
Trimethylbenzene	B	B	B	●	●	●
Trioctyl phosphate	B	B	B	●	●	●
Tripropylene glycol	A	A	A	●	●	●
Tripropylene glycol monomethyl ether	C	C	C	●	●	●
Tritolyl phosphate	B	B	B	●	●	●
Trixylenyl phosphate	B	B	B	●	●	●
Urea aqueous	A	B	B	●	●	●
Urea / ammonium salt solns	A	B	B	●	●	●
Urea / ammonia solution	A	B	B	●	●	●
Valeraldehyde	C	C	C	●	●	●
Varsol	A	A	A	●	●	●
Vegetable oils	A	A	A	●	●	●
Vinegar	A	A	D	●	●	●
Vinyl acetate	B	B	C	●	●	●
Vinyl chloride	Refer to SST					
Vinyl ethyl ether	C	C	C	●	●	●
Vinylidene chloride	C	C	C	●	●	●
Vinyl toluene	B	B	C	●	●	●
Water	A	A	A	●	●	●
Wine	B	B	D	●	●	●
Xylene	C	C	C	●	●	●
Xylenols	B	B	B	●	●	●
Yeast aqueous	A	A	D	●	●	●
Zinc salts aqueous excluding halides	A	B	D	●	●	●
Zinc halides	A	D	D	Polypropylene		



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