



PROCESS LABELING

Pipe Markers and Tapes

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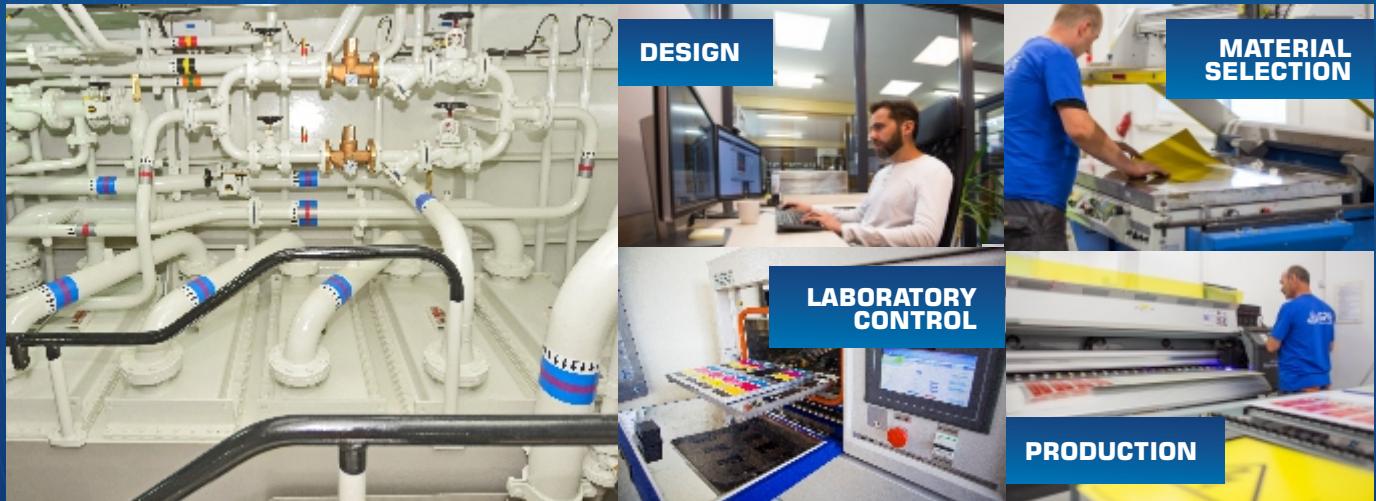
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ABOUT US

A-SPE is the European manufacturer of the high quality tapes and markers which provides clear identification of the contents of the piping system, identifies location of the particular elements and inform about the hazard conditions in plant operations area. Properly installed markers serve for many years and improve the level of safety, helping to reduce the amount of downtimes and accidents.

All our tapes and markers are produced in ISO 9001 approved facility with use of the highest quality materials. A-SPE providers comprehensive service which allows to supply customized products and cooperative with the customers from the first graphic designs to the final production steps.



PIPE MARKERS AND TAPES

Comparasion



A-SPE tapes and markers are available in three main versions designed for particular environments and conditions of use:

AS-10 Vinyl Tapes and Markers

Dedicated for indoor and outdoor use in areas with limited exposure to direct sunlight and difficult weather conditions. It offers fair durability, good flexibility and limited temperature resistance. Equipped with pressure sensitive acrylic adhesive and protective release liner. Recommended for newly installed pipes. It is the most economical solution for pipeline identification.



AS-11 High-Temperature Tapes and Markers

High temperature resistant tapes and markers recommended for indoor and outdoor applications. Suitable for use in harsh weather conditions and exposition to sunlight. Suitable for applications in marine and offshore environments. Equipped with pressure sensitive acrylic adhesive and protective release linear-requires limited surface preparation.



AS-12 Dura Markers

High performance material with excellent resistance in indoor and outdoor conditions. Recommended in environments which are highly exposed to sunlight, difficult weather conditions and chemicals. Suitable for applications in marine and offshore environments, as well as for food processing, chemicals and pharmaceutical industry. Does not require surface preparation and can be reused after removing.

Technical details	AS-10	AS-11	AS-12
Service temperature	-40°C to +80°C	-40°C to +130°C	-40°C to +130°C
Surface preparation	Yes	Yes	No
Mounting method	Self-adhesive	Self-adhesive	Pre-coiled, self-bonding
UV resistance	Good	Excellent	Excellent
Weather resistance	Very good	Excellent	Excellent
Chemical resistance	Good	Very good	Excellent
Sea water resistance	Yes	Yes	Yes
Reuse after removing	No	No	Yes
Service lifetime*	3-8 years	5-10 years	5-10 years

* The actual lifetime of the markers depends on the particular conditions of use. Please contact our specialists for more information.

AS-10 VINYL TAPES & MARKERS

Economical solution for indoor and outdoor installations.

Dedicated for indoor and outdoor use in areas with limited exposure to direct sunlight and difficult weather conditions. It offers fair durability, good flexibility and limited temperature resistance. Equipped with pressure sensitive acrylic adhesive and protective release liner. Recommended for newly installed pipes. It is our most economical solution for pipeline identification.

Service temperature: -40°C to +80°C

Service lifetime: 3-8 years

Features

- fair resistance to weather conditions and UV rays
- economic and easy to use
- no minimum quantity
- custom production with any texts and graphics high quality acrylic adhesive

Availability



rolls



markers



Technical details

Service temperature -40°C to +80°C

Surface preparation Yes

Mounting method Self-adhesive

UV resistance Good

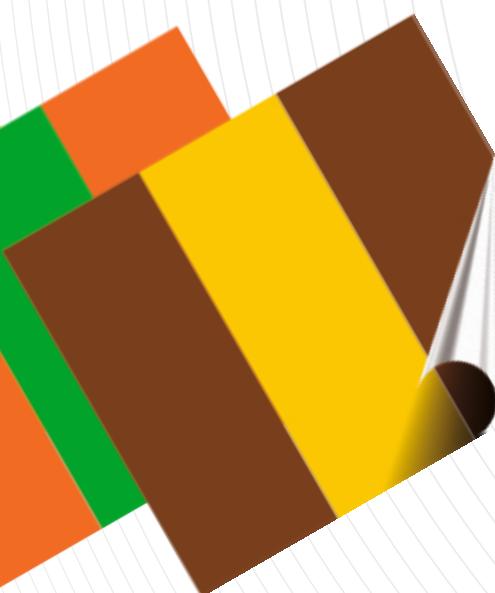
Weather resistance Very good

Chemical resistance Good

Sea water resistance Yes

Resue after removing No

Service lifetime* 3-8 years



* The actual lifetime of the markers depends on the particular conditions of use. Please contact our specialists for more information.

AS-11 HIGH-TEMPERATURE TAPES & MARKERS

High temperature resistance and excellent durability

High temperature resistant tapes and markers recommended for indoor and outdoor applications. Suitable for use in harsh weather conditions and exposition to sunlight. Suitable for applications in marine and offshore environments. Equipped with pressure sensitive acrylic adhesive and protective release liner - requires limited surface preparation.

Service temperature: -40°C to +130°C

Service lifetime: 5-10 years

Features

- high temperature resistance up to 125C
- excellent resistance to harsh weather conditions and UV rays
- good chemical resistance
- no minimum quantity
- custom production with any texts and graphics
- high quality acrylic adhesive



Availability



rolls



markers



Technical details

Service temperature	-40°C to +130°C
Surface preparation	Yes
Mounting method	Self-adhesive
UV resistance	Excellent
Weather resistance	Excellent
Chemical resistance	Very good
Sea water resistance	Yes
Resue after removing	No
Service lifetime*	5-10 years

* The actual lifetime of the markers depends on the particular conditions of use. Please contact our specialists for more information.

AS-12 DURA MARKERS

Highest durability and easy installation

High performance material with excellent resistance in indoor and outdoor conditions. Recommended in environments which are highly exposed to sunlight, difficult weather conditions and chemicals. Suitable for applications in marine and offshore environments, as well as for food processing, chemicals and pharmaceutical industry. Does not require surface preparation and can be reused after removing.

Service temperature: -40°C to +130°C

Service lifetime: 5-10 years

Features

- excellent durability and long service life
- precoiled for easier installation
- no surface preparation required
- can be reused
- no minimum quantity
- custom production with any texts and graphics

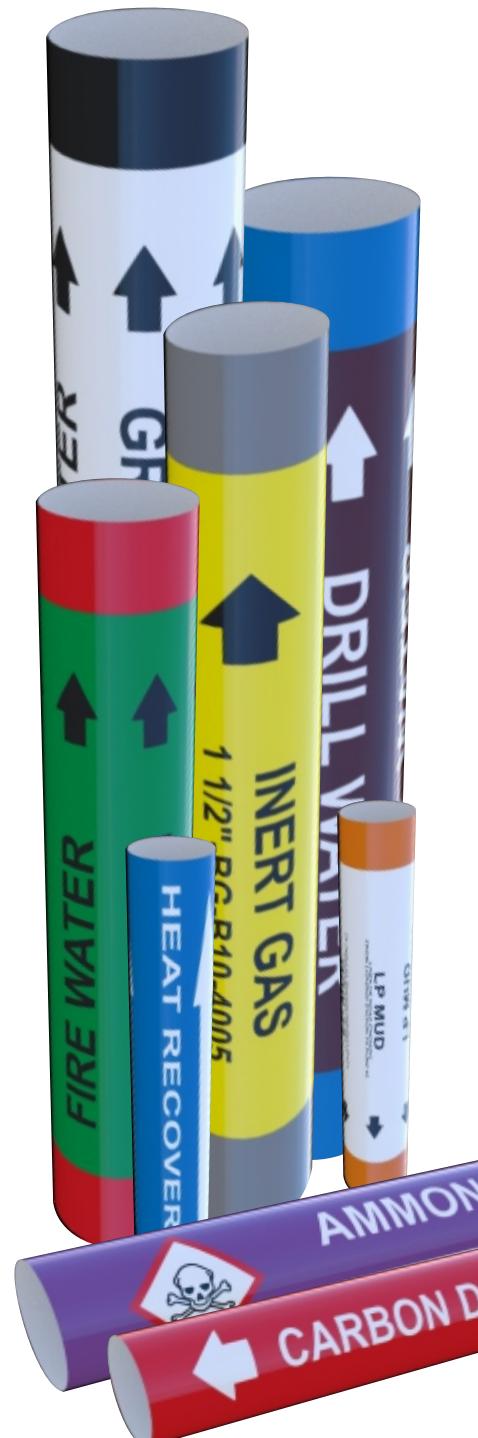
Availability



precoiled markers

Technical details

Service temperature	-40°C to +130°C
Surface preparation	No
Mounting method	Pre-coiled, self-bonding
UV resistance	Excellent
Weather resistance	Excellent
Chemical resistance	Excellent
Sea water resistance	Yes
Reuse after removing	Yes
Service lifetime*	5-10 years



* The actual lifetime of the markers depends on the particular conditions of use. Please contact our specialists for more information.

Color coding according to ISO 14726



The **ISO 14726** standard (International Standard Organization), specifies the principle colours for the identification of medium in the pipes.

The **ISO 14726-2** specifies additional colour codes which gives more detailed identification about the substance.

BASIC IDENTIFICATION TAPES

ACC TO ISO14726-1

Type	Description	Ordering code	ISSA ref. no.
Black	Waste media	SC40	47.521.40
Blue	Fresh water	SC41	47.521.45
Brown	Fuel	SC42	47.521.42
Green	Sea Water	SC43	47.521.44
Grey	Non-flammable Gases	SC44	47.521.47
Maroon/Copper	Masses	SC45	47.521.43
Orange	Oil other than fuel	SC46	47.521.41
Silver	Steam	SC47	47.521.49
Red	Fire fighting	SC48	47.521.48
Violet	Acids & Alkalies	SC49	47.521.46
White	Air in ventilation systems	SC50	47.521.51
Yellow-ochre	Flammable gases	SC51	47.521.50
	Flow direction marking	SC30	47.521.30

MULTI-COLOUR PERMUTATIONS

ACC TO ISO14726-2

Description	Colour identification	Ordering code	
		Multi-colour	Single-colour
Waste media		SC40	SC40
Black water		MC40-41	SC40+SC41+SC40
Waste oil / Used oil		MC40-42	SC40+SC42+SC40
Bilge water		MC40-43	SC40+SC43+SC40
Exhaust gas		MC40-44	SC40+SC44+SC40
Grey water		MC40-50	SC40+SC50+SC40
Sewage - contaminated		MC40-51	SC40+SC51+SC40
Fresh water		SC41	SC41
Fresh water; sanitary		MC41-42	SC41+SC42+SC41
Potable water		MC41-43	SC41+SC43+SC41
Distillate		MC41-44	SC41+SC44+SC41
Gas turbine wash water		MC41-46	SC41+SC46+SC41
Feed water		MC41-47	SC41+SC47+SC41
Cooling fresh water		MC41-49	SC41+SC49+SC41
Chilled water		MC41-50	SC41+SC50+SC41
Condensate		MC41-51	SC41+SC51+SC41
Sea water		SC43	SC43
Decontamination water		MC43-41	SC43+SC41+SC43
Sanitary sea water		MC43-42	SC43+SC42+SC43
Ballast water		MC43-49	SC43+SC49+SC43
Cooling sea water		MC43-51	SC43+SC51+SC43
Fuel		SC42	SC42
HFO (Heavy fuel oil)		MC42-40	SC42+SC40+SC42
Aviation fuel		MC42-41	SC42+SC41+SC42
Biological fuel		MC42-49	SC42+SC49+SC42
Gas-turbine fuel		MC42-50	SC42+SC50+SC42
MDO (Marine diesel fuel)		MC42-51	SC42+SC51+SC42

MULTI-COLOUR PERMUTATIONS

ACC TO ISO14726-2

continuation

Description	Colour identification	Ordering code	
		Multi-colour	Single-colour
Non-Flammable gases		SC44	SC44
Oxygen		MC44-41	SC44+SC41+SC44
Inert gas		MC44-42	SC44+SC42+SC44
Nitrogen		MC44-43	SC44+SC43+SC44
Refrigerant		MC44-45	SC44+SC45+SC44
Compressed air LP		MC44-46	SC44+SC46+SC44
Compressed air HP		MC44-48	SC44+SC48+SC44
Control air / Regulating air		MC44-49	SC44+SC49+SC44
Breathing air*		MC44-50	SC44+SC50+SC44
Breathing gas*		MC44-51	SC44+SC51+SC44
Masses		SC45	SC45
Oil other than fuel		SC46	SC46
Thermal fluid		MC46-41	SC46+SC41+SC46
Lubrication oil for gas turbines		MC46-43	SC46+SC43+SC46
Hydraulic fluid		MC46-44	SC46+SC44+SC46
Lubrication oil for steam turbines		MC46-47	SC46+SC47+SC46
Lubrication oil for gears		MC46-49	SC46+SC49+SC46
Lub. Oil for int. combustion engines		MC46-51	SC46+SC51+SC46
Steam		SC47	SC47
Steam for heating purposes		MC47-40	SC47+SC40+SC47
Exhaust steam		MC47-50	SC47+SC50+SC47
Supply steam		MC47-51	SC47+SC51+SC47
Acids & Alkalis		SC49	SC49
Air in ventilation systems		SC50	SC50
Discharge air		MC50-40	SC50+SC40+SC50
Mechanical supply air - cold		MC50-41	SC50+SC41+SC50
Mechanical supply air		MC50-42	SC50+SC42+SC50
Atmospheric air		MC50-43	SC50+SC43+SC50
Mechanical exhaust air		MC50-44	SC50+SC44+SC50
Decontaminated supply air		MC50-45	SC50+SC45+SC50
Mechanical recirculated air		MC50-46	SC50+SC46+SC50
Mechanical supply air - warm		MC50-47	SC50+SC47+SC50
Smoke clearance		MC50-48	SC50+SC48+SC50
Conditioned supply air		MC50-49	SC50+SC49+SC50
Natural supply air		MC50-51	SC50+SC51+SC50
Fire fighting / Fire protection		SC48	SC48
Fire-fighting water		MC48-43	SC48+SC43+SC48
Fire-fighting gas		MC48-44	SC48+SC44+SC48
Sprinkler water		MC48-46	SC48+SC46+SC48
Spray water		MC48-49	SC48+SC49+SC48
Fire-fighting powder		MC48-50	SC48+SC50+SC48
Fire-fighting foam		MC48-51	SC48+SC51+SC48
Flammable gases		SC51	SC51
Hydrogen		SC51-41	SC51+SC41+SC51
Acetylene		SC51-44	SC51+SC44+SC51
Liquid gas		SC51-49	SC51+SC49+SC51

* Intended for use in submarines for distribution systems used for breathing air from cylinders.

Design and dimensions

A-SPE Pipemarking Tapes and Markers can be produced in accordance to the particular requirements of our customers. According to the request they can be designed to comply with one of the following regulations:

- **ISO 14726:2008**
- **BS-1710 / BS-4800**
- **ASME A13-1**
- **TRGS-201**

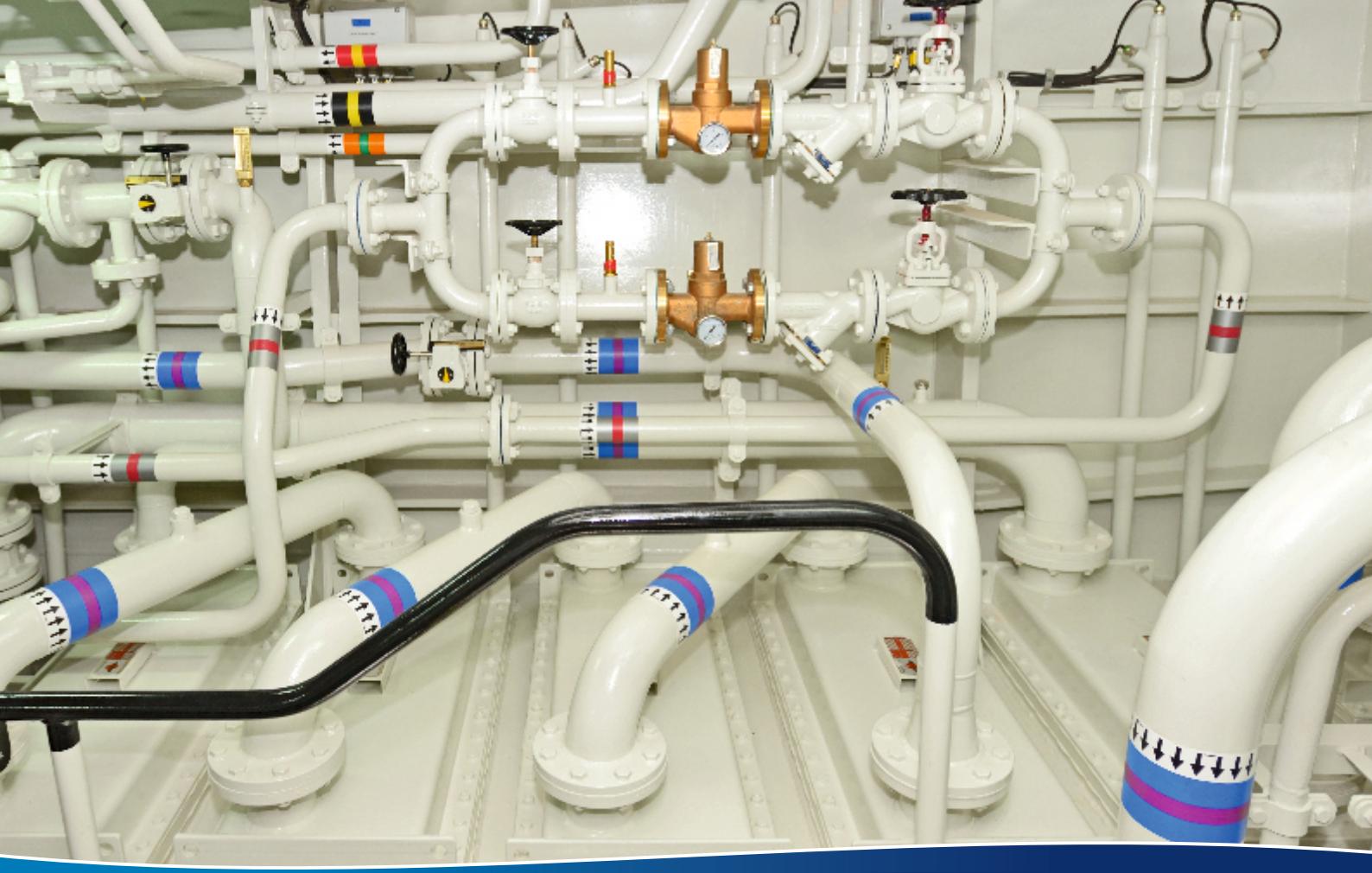


A-SPE Tapes and Markers can be printed in any language based on the translation provided by the customer.

Each pipe marker is dedicated for particular pipe diameter. Below table shows recommended markers dimensions for most popular nominal pipe sizes. Adjusted marker length is always followed by suitable font and arrow size.

Below sizes consider minimum 30mm overlap, however they do not consider any additional pipe coatings like insulations etc. The information about insulation thickness or other coating should be provided with other details necessary for the quotation.

DN - Nominal Pipe Diameter	Pipe Diameter (inch)	Length of the marker (mm)	Letter height (mm)	Arrow height (mm)
DN15	0,5"	100	6,5	16
DN20	0,75"	115	13	16
DN25	1"	135	13	16
DN32	1,25"	165	19	19
DN40	1,5"	190	19	19
DN50	2"	230	19	19
DN65	2,5"	270	32	32
DN80	3"	320	32	32
DN100	4"	395	32	32
DN150	6"	530	32	32
DN200	8"	760	32	32
DN250	10"	945	32	32
DN300	12"	1120	32	32
DN400	16"	1400	32	32
DN450	18"	1580	32	32
DN500	20"	1750	32	32
DN750	28"	2800	32	32



Installation tips

IMPORTANT: During application the tape should overlap 2-4 cm.

According to the ISO 14726 regulation the pipelines shall be marked as follows:

- Once in each room, at least;
- At each penetration point in bulkheads, walls and decks;
- Close to each valve;
- Within a distance of 3m to 5m of the length of the pipeline, whereby the local conditions may require a more frequent marking due to pipe bends or the close proximity of pipes for different services.



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