



# PIPE MARKING OFFSHORE & MARINE

**T-SS**  
Safety Suppliers



# About T-ISS Safety Suppliers



**T-ISS is a leading company that has been active in the offshore and marine sectors for 20 years. Our product portfolio includes a wide range of Pipe Marking, SOLAS safety products and IMO safety signage.**

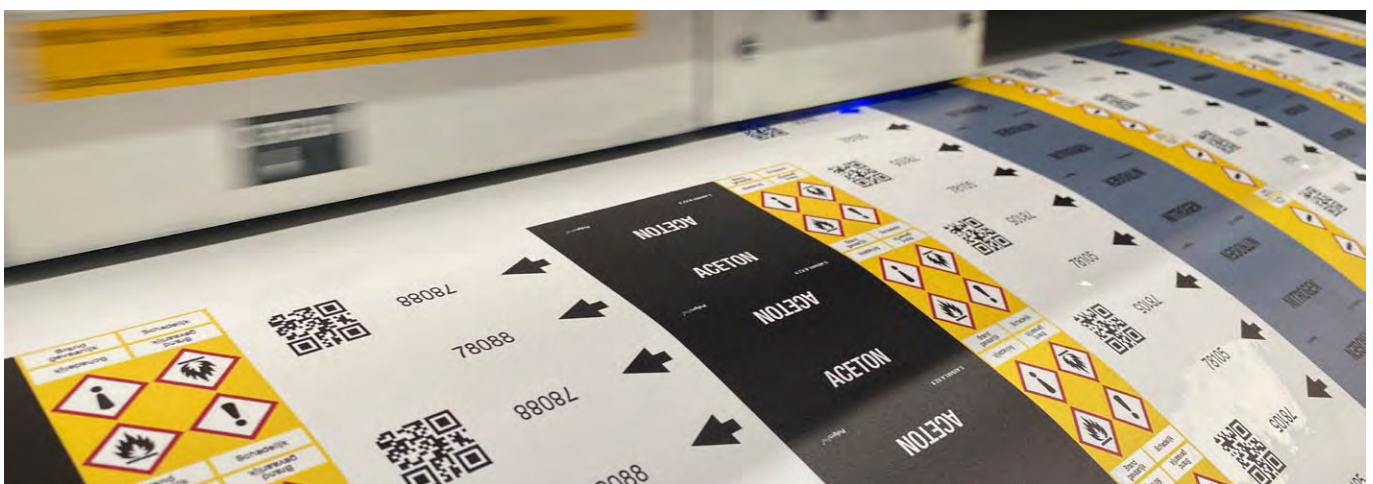
Our services include projects for the implementation of safety signage and Low Location Lighting (LLL) on board ships and offshore installations from engineering and the installation inclusive measurement of LLL.

T-ISS is an ISO 9001:2015 approved company and is part of a larger group of companies that has over 40 years of experience in safety signage and pipe marking.

We boasts five sites, with three in Holland, one in Denmark and one in Germany, hosting a total staff complement of 110.

## Some of our key facts:

- In-house digital production facilities
- Worldwide network of agents and dealers
- Active participation in ISO committees, where our CEO/Owner Mr. Heijboer was project leader for the development of the global ISO20560 pipe marking standard
- We manufacture and supply pipe marking according to ISO20560 and ISO14726 but also standards such as Norsok, DIN 2401, BSI 1710, ASME A13.1, ANSI and other.
- We provide a full range of various quality levels of pipe marking for every possibility or requirement





# Polyespro® Pipe marking

T-ISS is supplier of the specially developed PolyesPro® pipe markings. This product is the highest available quality pipe marking and has a better temperature resistance, therefore a longer service life and improved colourfastness. The tape comes with all the usual 3M™ guarantees. PolyesPro® pipeline markings are made out of two layers; a PVC free polyester base material with the image, finished with a protective laminate. As a result, the material is suitable for insulated pipes, painted pipes and stainless steel pipes.

## BENEFITS OF POLYESPRO®:

- UV-resistant
- Scratch-resistant
- Usable in extreme weather condition
- Withstand chemicals
- Strong adhesive
- Greater thickness
- Temperature resistance -40 °C up to +130 °C



## PreCoiled pipe markers – Removable Polyespro® pipe marking

Removable PolyesPro® Pipe Marking film is a high performance non-PVC polyester sandwich, manufactured according to 3M™ production specifications, for the marking of pipes and pipeline systems. With a 3M™ base polyester material printed with LED UV Inkjet on a 3M™ Configured Printer and a 3M™ Protective Laminate, this Pipe Marking product can be used in demanding environments, and with a long expected lifetime. Legends can include warning signs, GHS symbol, pipe origin and destination, line number, QR and bar codes in addition to pipe contents.

The PreCoiled pipe markers allow for very quick installation aboard ships, platforms and industrial plants.

This product features a high-quality adhesive strip for fast and effective wrapper attachment.

## BENEFITS OF PRECOILED PIPE MARKERS

- Easy and fast installation
- Developed for general purpose pipe identification harsh conditions for application in maritime, offshore, petrochemical & refinery industry
- Can be used on dirty, oily, greasy or rough surfaced piping systems
- Precoiled PolyesPro® pipe markers are UV resistant, durable and can be replaced and reused.



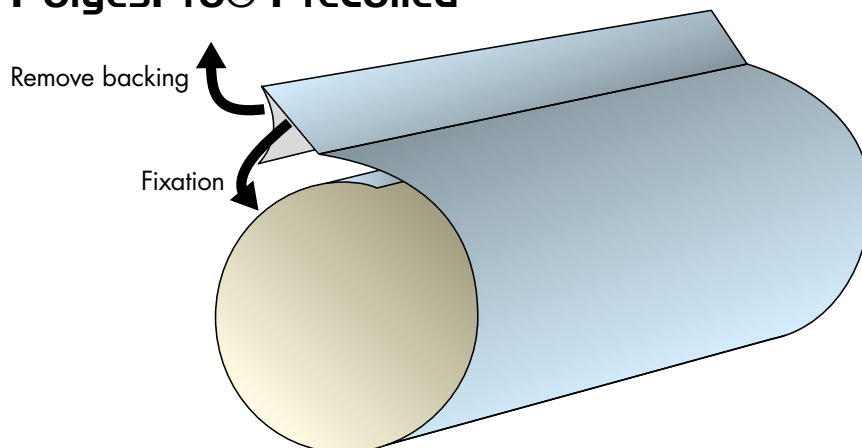
# PolyesPro® Premium Pipe marking products

## PolyesPro® top-quality pipe marking solutions

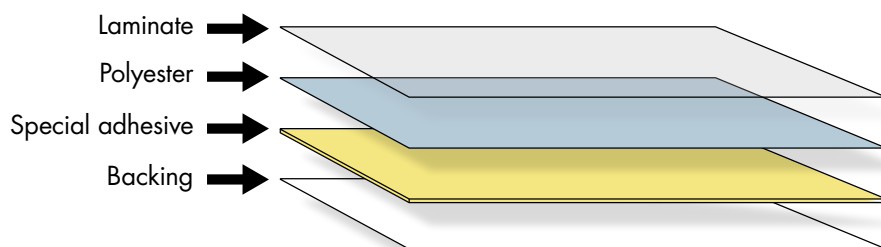
- **SELF-ADHESIVE PIPE MARKINGS**
  - Rolls
  - Sheets
  - The highest available quality pipe marking on the market today
  - Highest temperature resistance and colourfastness
  - UV and chemical resistance
  - Non-shrink
  - Strong adhesive, also for older piping systems
- **PRECOILED PIPE MARKINGS**
  - Reusable
  - For applications on dirty, oily, greasy or rough surfaces
  - Meets various standards
  - UV resistant
  - Easy to install
  - To order sizes on request
- **NON-ADHESIVE SHEETS PIPE MARKINGS**
  - Including self-adhesive fixation strip
  - Available in various sizes upon request



## PolyesPro® Precoiled



## PolyesPro® Adhesive Structure layers





# Economy pipe marking solutions

## VINYL LAMINATED (BASIC-LINE)



This pipe marking tape is a standard performance vinyl sandwich manufactured according to 3M™ MCS™ (Matched Component System™) production specifications.

This tape comes with a gloss laminated finish and can be used outdoor and indoor in various types of environments.

## VINYL UNLAMINATED (ECONOMY-LINE)



This pipe marking tape is an economic, unlined vinyl. The recommended use of this tape is indoors, and can be used outdoors with a shorter lifespan compared to PolyesPro® and BASIC-LINE.

## ARROW MARKERS



- Economic solutions
- Big sizes for huge pipe diameters possible
- For single flow direction, cut the non relevant arrow point



# ISO 20560-1; the new worldwide standard for Pipe marking











The ISO 20560-1 combines technical information about the contents and identification of pipes with safety information, aiming to have one global safety language for all workers at installations, both on land and maritime.

## Key facts ISO 20560-1

- Display content name and flowdirection
- Yellow safety colour for recognition pipe-content is hazardous
- Warning symbols for hazards according to Safety Data Sheet and other process related risks
- Other safety related information, such as pressure, temperature, speed, etc.
- Technical process information, such as pipe numbers, from-to information, classification code, etc.

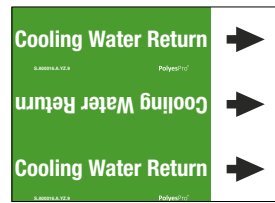
## Basic identification colours according to ISO 20560-1

	CONTENT OF A PIPE	COLOUR	
Safety colour	Hazardous substances	Yellow	
	Gases in either gaseous or liquefied condition	Grey	
Basic identification colour	Liquids and fixed materials (powder, granulates)	Black	
	Acids	Orange	
	Alkalis (leaches)	Violet	
	Firefighting medium	Red	
	Water	Green	
	Air	Blue	

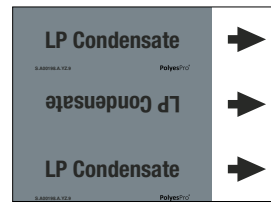
## Examples according to ISO 20560-1



Alkali with hazards



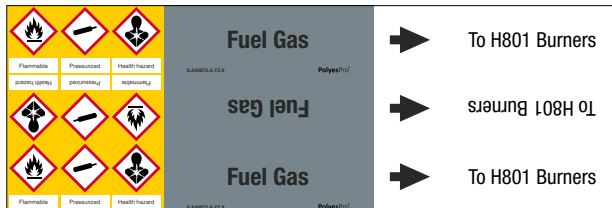
Water, no hazards



Gas, no hazards



Firefighting gas (steam) with supplementary identification colours



Gas with hazards and technical information



Liquid with hazards, also process and technical information

## Supplementary identification colours according to ISO 20560-1

If a content of a pipe needs further specification, (fire fighting, water service, maritime and offshore installations, etc.), supplementary colours can be used. Additional to the basic identification colours this can be white, maroon, brown and a bright yellow.

This offers the possibility to have an identical system as the ISO 14726, but now inclusive all other safety and technical information. The supplementary colour shall be placed on both sides of the basic identification colour.

FIRE FIGHTING SYSTEMS	
	Firefighting carbon dioxide (CO2) and nitrogen
	Firefighting foam
	Firefighting gas other than CO2 or nitrogen
	Firefighting powder
	Firefighting water
	Sprinkler water
	Spray water

WATER SYSTEMS ONBOARD SHIPS	
	Potable water
	Salt water and sea water
	Fresh water
	Distillate and condensate
	Decontamination sea water
	Feed water
	Cooling fresh water
	Cooling sea water
	Chilled water
	Ballast water

LIQUID SYSTEMS ONBOARD SHIPS	
	Black water
	Bilge water
	Grey water
	Sewage, contaminated
	Thermal fluid
	Heavy fuel oil (HFO)
	Fuel
	Lubrication oil
	Hydraulic fluid
	Waste oil/used oil

GAS SYSTEMS ONBOARD SHIPS	
	Oxygen
	Nitrogen/inert gas
	Refrigerant
	Steam
	Hydrogen
	Acetylene
	Liquid gas

VENTILATION AIR SYSTEMS ONBOARD SHIPS	
	Discharge air
	Mechanical supply air, cold
	Mechanical supply air, hot
	Natural exhaust air
	Atmospheric air
	Mechanical exhaust air
	Decontaminated supply air
	Mechanical recirculated air
	Smoke clearance
	Conditioned air supply
	Natural supply air



# ISO 14726;

standard from 2008, only for identification colours of marine and ships piping systems

The ISO 14726 has main colours for groups of media and advises for additional colours displayed in the center of the pipe marker. Arrows for direction of flow and text for the content name is recommended.

In the ISO 14726 is safety information not adopted.

T-ISS advises the use of the recent developed ISO 20560-1 because of one safe language for safety and technical information.

T-ISS offers pipemarkers for both of the ISO standards, as well as DIN 2403, Norsok, BS 1710, ANSI/ASME A13.1, and company standards on request.



## Main colours according to ISO 14726

COLOR	DESCRIPTION
	Waste media
	Fresh water
	Fuel
	Sea water
	Non-flammable gases
	Masses (dry and wet)
	Oil other than fuel
	Steam
	Fire fighting
	Air in vent. systems
	Flammable gases
	Acids and alkalis
	Flow direction

### WASTE MEDIA

	Black water
	Waste oil
	Bilge Water
	Exhaust gas
	Grey water
	Sewage contaminated

### FRESH WATER

	Fresh water, sanitary
	Potable water
	Distillate
	Gas-turbine wash water
	Feed water
	Cooling fresh water
	Chilled water
	Condensate

### FIRE-FIGHTING/FIRE PROTECTION

	Fire-fighting water
	Fire-fighting gas
	Sprinkler water
	Spray water
	Fire-fighting powder
	Fire-fighting foam

### FUEL

	Heavy fuel oil (HFO)
	Aviation fuel
	Biological fuel
	Gas-turbine fuel
	Marine diesel oil (MDO)

### SEA WATER

	Decontamination water
	Sea water, sanitary
	Ballast water
	Cooling sea water

### VENTILATION AIR

	Discharge air
	Mechanical supply air, cold
	Natural exhaust air
	Atmospheric air
	Mechanical exhaust air
	Decontaminated supply air
	Mechanical recirculated air
	Mechanical supply air warm
	Smoke clearance
	Conditioned supply air
	Natural supply air

### NON-FLAMMABLE GASSES

	Oxygen
	Inert gas
	Nitrogen
	Refrigerant
	Compressed air (LP) Low Pressure
	Compressed air (HP) High Pressure
	Control air / regulating air
	Breathing air (used in submarines)
	Breathing gas (used in submarines)

### OILS OTHER THAN FUEL

	Thermal fluid
	Lubrication oil for gas turbines
	Hydraulic fluid
	Lubrication oil for steam turbines
	Lubrication oil for gears
	Lubr. oil for internal combustion engines

### FLAMMABLE GASSES

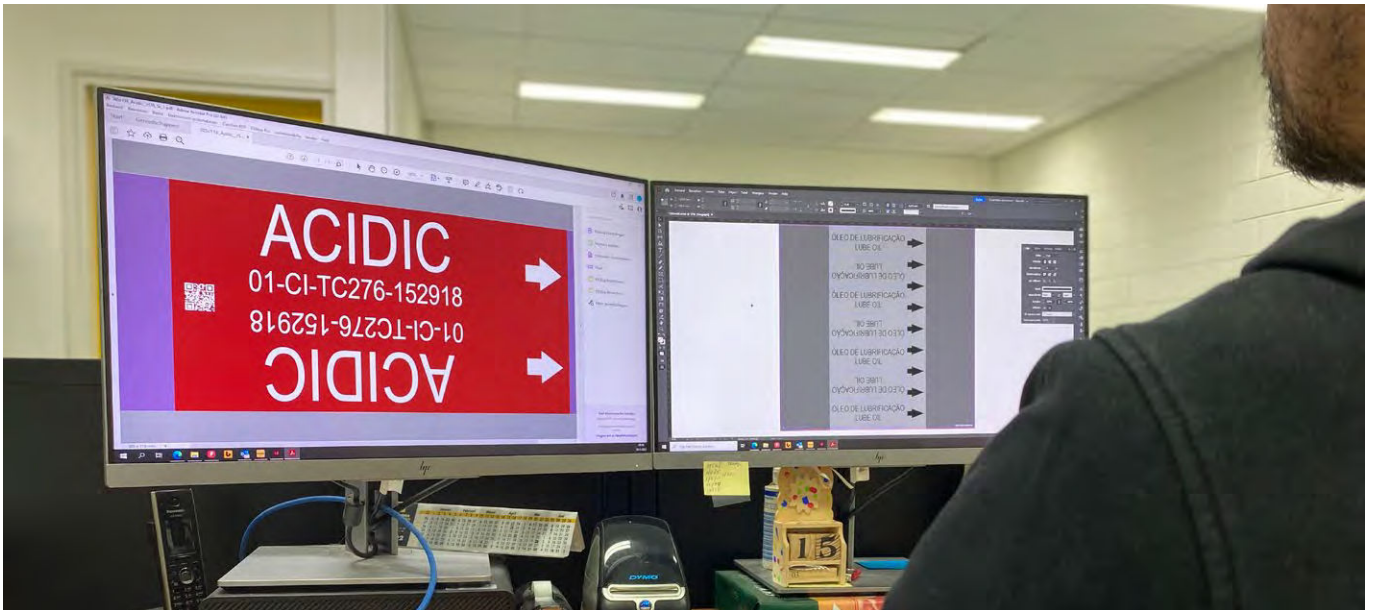
	Hydrogen
	Acetylene
	Liquid gas

### STEAM

	Steam for heating purposes
	Driving steam
	Exhaust system
	Supply steam



# Tailor-made layouts





# Installation positions

Pipemarkers must be installed at locations where it needs to be observed considering:

- Operational aspects
- Approach routes
- Working platforms
- Expected access positions

At key locations such as

- Near valves
- Both sides of connection points of major equipment parts
- At each branching point
- Either side of walls, bulkheads, floors and other separation points
- Adjacent to stairs and platforms
- Start and end of pipe racks
- Positions with traffic crossing under pipe racks
- Inlet and outlet of a process train

# Installation services

Because of our long experience managing and executing pipe marking projects in the industry, oil & gas, offshore and marine sectors, and our extensive knowledge of regulations and standards, we can assist you in the process of the development of piping identification processes.





# The story of T-ISS: four decades of safety



The people behind the company have decades of experience in the Marine Industry. We perfectly understand the importance of reliable, accessible and price quality ratio products, services and turn-key solutions. Therefore, we primarily deal with the Safety, Marine and offshore Industry and can provide the fastest and most comprehensive offers on Solas Safety Products, Fire Isolator EV car fire containment, IMO safety signage products and implementation projects, Low Location Lighting, Solas Tapes and Pipe Marking Tapes.

The impact of incidents can be devastating on human and marine life as well as on expensive property. Also, the effect of an incident on community and economic prosperity can be extensive, for many years after the actual incident. In some cases, also the environment is at risk. By providing the maximum level of safety using our safety products and signage, we provide a proactive and positive influence on the environment.

We are extremely proud to be one of the leading players in the Marine Industry and we are dedicated to achieve much higher goals. Our long tradition of thinking in terms of solutions and our strategic and innovative approach of working, helps us in our ambition to be the market leader.



See also our catalogus for other safety signage, maritime safety products and tapes.

## T-ISS Safety Suppliers

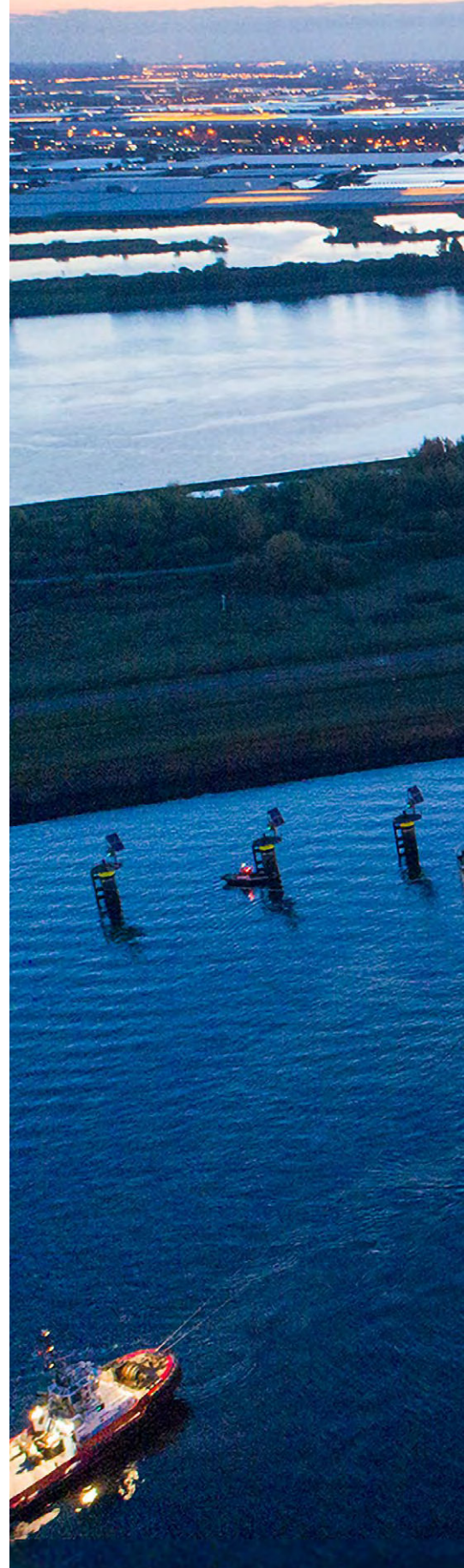
Helmkamp 32 - 34  
7091 HR Dinxperlo  
The Netherlands

T +31 (0) 315 65 60 60

F +31 (0) 315 65 60 63

E sales@t-iss.com

I www.t-iss.com



PolyesPro®



Visit our website:  
**T-ISS.COM**

© COPYRIGHT T-ISS B.V. - all rights reserved

**T-ISS**  
Safety Suppliers