

PE COIL SAFE HANDLING

PRODUCT INFORMATION GUIDE



Our **Culture** and **Values** are what drives us:
We want **our people** to **come to work** and
enjoy what they do, **be proud** of our brand,
look out for each other, and **go home safe**
everyday to their friends and family.





IPLEX PE COILS SAFE HANDLING CONTENTS

CONTENTS	PAGE
Section 1 – Planning & Preparation	
Overview	1
Planning and Preparation	3
Personal Protective Equipment (PPE)	3
Important Delivery Conditions	4
Safe Areas to Unload	4
Lifting Equipment	5
Product Tags	6
Definitions	6
Pre Delivery Checklist	7
Section 2 – Small Free Standing Coils	
Small Free Standing Coil Image	9
Unloading Small Free Standing Coils From Truck	10
Storage on Site	10
Removing Strapping & Releasing Small Free Standing Coils	11
Weights – Small Free Standing Coils	12
Product Types	13
Section 3 – Large Free Standing Coils	
Large Free Standing Coil Image	15
Unloading Large Free Standing Coils from Truck	16
Weights - Large Free Standing Coils	17
Removing Coils from the Transport Stand – On the Ground	18
Storage on Site	19
Removing Strapping & Releasing Large Free Standing Coils	20
Transporting & Dispensing Large Free Standing Coils	21
Section 4 – Drum Coils	
Drum Coil Image	23
Unloading Drum Coils from Truck	24
Storage on Site	25
Removing Strapping & Releasing Drum Coils	26
Coil Sizes & Weights – Drum Coils	27

IPLEX PE COILS SAFE HANDLING OVERVIEW

OVERVIEW

This guide is intended to assist with the safe planning, delivery, unloading and uncoiling of polyethylene (PE) pipes when coiled on drums or stands (subsequently fitted to reels/frames).

By incorporating these best practice precautions into local/site procedures; suppliers, hauliers and customers may reduce risk of incidents, near misses and injuries to employees, contractors and members of the public.

All Persons Conducting a Business or Undertaking (PCBU – Refer to HAS 2015) should undertake their risk assessments to establish all of the measures that should be implemented which may be over and above to the points stated above.

This document covers the different phases from delivery to uncoiling to ensure all related parties understand risks and can minimise them.

Types of Iplex PE Coils covered.

- Small Free Standing PE Coils
- Large Free Standing PE Coils
- Drum Coils



Small Free Standing Coils



Large Free Standing Coils



Drum Coils

PLANNING & PREPARATION

IPLEX PE COILS SAFE HANDLING

SECTION 1 – PLANNING & PREPARATION

PLANNING & PREPARATION

The company or organisation (PCBU) receiving the PE pipe coils is in the best position to ensure delivery and unloading can be performed safely and risks are minimised so far as reasonably practicable.

The following items should be considered and allowed for:

- Access and egress to site and specific delivery instructions (e.g. low bridges, narrow roads, roadways, work sites)
- Safe Working Load (SWL) of vehicles, slings and proposed method (if in doubt request a Hiab).
- Vehicle traffic and pedestrian traffic management.
- Overhead obstructions and height restrictions (route and at unloading)
- Offloading area is suitable for delivery vehicle access and large enough for outriggers and unloading activities by vehicles e.g. telehandlers. 6m for Hiab's.
- Timing requirements e.g. peak traffic, school times
- Lighting provision
- Adverse Weather
- Specific arrival instructions and requirements e.g. PPE, contact details (name, phone, email)
- Multi drop requirements – e.g. for stringing out pipe lengths.

PPE

PPE specified by the delivery address must be worn. Hi-Visibility clothing reduces the risk of accidents and fatalities in busy environments where there is vehicular traffic. In addition to this the PPE that should be considered when handling/processing PE pipe is as follows:

- Safety eyewear from ejected pipe/tools when cutting or other tasks.
- Safety shoes due to some stored energy and impact around cutting straps and recoil of pipe.
- Gloves to provide protection during cutting operations and sharp edges as well as hot surfaces if pipe has been left in sun.
- Other PPE to be worn as workplace and task risk assessments completed by end users require.



IPLEX PE COILS SAFE HANDLING

SECTION 1 – PLANNING & PREPARATION

IMPORTANT DELIVERY CONDITIONS

Weather

In adverse weather conditions, it may be necessary for a Lifting Assistant to stabilise the product that is being off-loaded, using a guide rope(s). This is only permitted if the operation can be carried out safely. The person(s) holding the guide rope(s) must always maintain a safe distance from the pipe that is being stabilised.

Unmanned Sites

Deliveries must have someone on site to receive the PE Coils.

Returning Coil Stands or Drums

The same principles apply for returning empty coil stands or dispensing drums back to Iplex/Suppliers.

Important Notes

In severe conditions, delivery may be aborted.

Deliveries will not be made to unmanned sites.

SAFE AREAS TO UNLOAD

Access to the unloading site must have ease of ingress/egress and be free of overhead hazards. The truck must be parked on level, firm ground. The parking brake (hand brake) should be set and the wheels chocked. It is preferred that the truck be shut off and left in gear. The location of the driver should be known at all times.

- The staging area must be clear of obstacles (around the truck and overhead) and must provide the operator with a clear line-of-sight. The size of the staging area will depend on the length of pipes being unloaded, the quantity to be unloaded and the size of the truck, trailers and lifting equipment including outriggers.
- The staging area needs to be marked off to alert other workers that lifting equipment is being used. This can be done by the use of orange pylons or orange stakes.
- Access to the area should be restricted.
- Particular attention may be required on roadsides where traffic is close and/or with members of the public and pedestrians.
- Safe systems of work must be followed, for example to avoid the need for employees to enter danger areas or to reach between unstable or poorly supported materials to attach slings etc.
- A safe place of work must be provided. For example, anyone attaching lifting accessories to pipe coils (slinging) must be able to do so in safety and must be in a safe position when the load is lifted.
- Banding wire or straps should never be used for lifting pipe coils.
- Any person using lifting equipment must be competent (refer definition page 6).
- Cranes should only be used for vertical lifting and not to pull or drag coils or frames.
- The height at which loads are raised should be kept to a minimum.
- Loads should never be carried or suspended over personnel.
- All persons (operators and other people) should be in a position of safety where they are not at risk of being struck by the lifting equipment, the load being lifted or by falling material in the event of equipment or load failure.

IPLEX PE COILS SAFE HANDLING

SECTION 1 – PLANNING & PREPARATION

LIFTING EQUIPMENT

- Lifting equipment must be suitable for the task.
- Adequate information should be obtained from the equipment manufacturer and provided to the user so they know how to use and maintain the equipment safely.
- Safe working loads must not be exceeded and suitable lifting eyes/ports must be utilised.



Image 1. Iplex Large Free Standing Coils on truck ready for deliver.



Image 2. Iplex Drum Coils on truck ready for deliver.

IPLEX PE COILS SAFE HANDLING

SECTION 1 – PLANNING & PREPARATION

PRODUCT TAGS

Product Tags

Each PE coil has a product tag attached. The product tag contains the following information:

- Product Name
- Specification Rating
- Product Code
- OD Size & Length of Coil
- Works Order
- Coil Number
- Estimated Weight
- Max Forklift Load
- Storage Method
- Max Storage Quantity

Important Notes

The product tags should be checked at time of delivery to verify weights for unloading & handling.



DEFINITIONS

Competent Person

Any person using lifting equipment must be competent, A competent person is deemed to be a person who has the relevant knowledge, experience and skill to carry out a particular task, or has a relevant qualification, or there is evidence demonstrating that the person has the required knowledge, experience and skill.

IPLEX PE COILS SAFE HANDLING

SECTION 1 – PLANNING & PREPARATION

PRE DELIVERY CHECK LIST

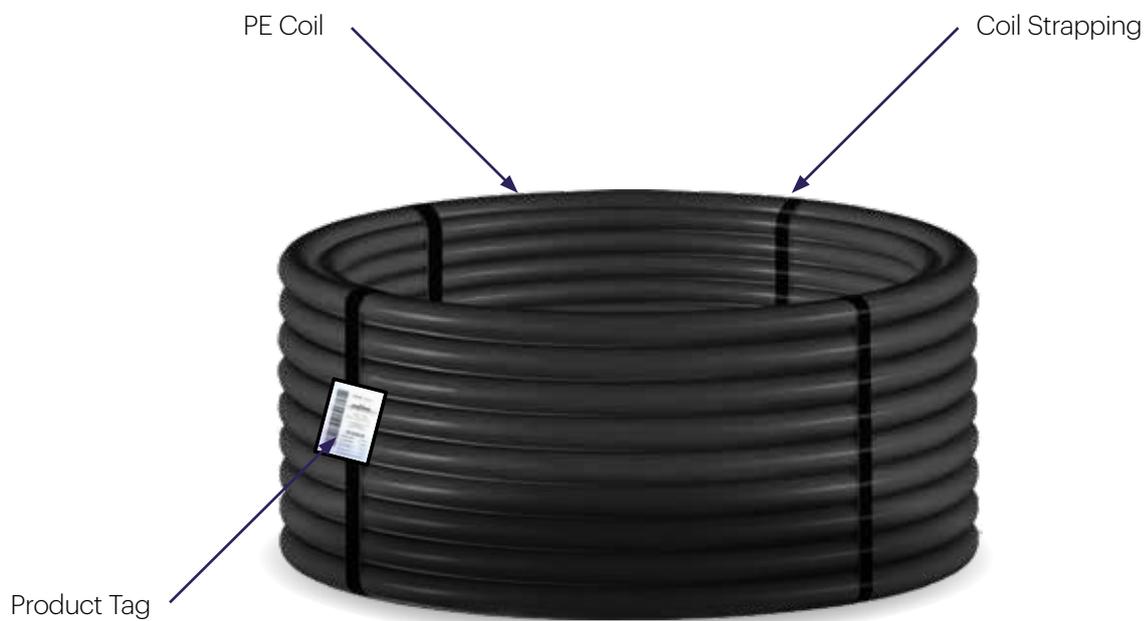
It is strongly recommended that the Pre-delivery check list is completed 24hrs prior to the delivery.

Date		Name	
Company		Order Reference	
DELIVERY ADDRESS AND CONTACT INFORMATION			
Main Company Name		Site Contact Name	
Receiving Company Name		Phone Number	
Street		Alternate Contact	
Suburb		Map provided where full address not available	
Town/City			
Postcode			
ACCESS AND EGRESS		PRODUCT HANDLING AND OFFLOADING – All pipe product is to be mechanically offloaded	
Delivery by truck & trailer, licence plate:			
Adequate access to site (consider narrow roads, road type)	Circle one: Y / N	Suitably rated equipment to offload pipe with competent operators? (Refer to weights table)	Circle one: Y / N
Are there overhead hazards/low height (refer to heights table)?	Circle one: Y / N	Is Hiab lifting required?	Circle one: Y / N
Is there space to accommodate a truck and trailer/coils of this size?	Circle one: Y / N	Is there sufficient space?	Circle one: Y / N
GENERAL – Deliveries cannot be made to unmanned sites			
Time/access restrictions?	Circle one: Y / N If yes, please describe:	Someone will be on site?	Circle one: Y / N
Access or Egress restraints?	Circle one: Y / N If yes, please describe:	Key hazards (lighting, overhead hazards, public)	Please list:
Booking in details/restrictions?	Circle one: Y / N If yes, please describe:	PPE requirements?	Circle one: Y / N If yes, please list:
Provide any other detail to aide a safe and efficient delivery			

SMALL FREE STANDING COILS

IPLEX PE COILS SAFE HANDLING

SECTION 2 – SMALL FREE STANDING COILS



Small Free Standing Coil

IPLEX PE COILS SAFE HANDLING

SECTION 2 – SMALL FREE STANDING COILS

UNLOADING SMALL FREE STANDING COILS FROM TRUCK

Truck Access

Under no circumstances is it acceptable for any person to be on the bed of the vehicle when loading/unloading operations are in progress.

Manual Unloading & Handling

Unloading & handling of small free standing coils may be carried out manually by the user, dependant on the individuals capabilities. Refer to tables 1- 5 for a guide on PE coil weights and sizes. It is recommended that mechanical lifting equipment be used wherever possible to prevent coil damage & personal injury.

Important Notes

The driver of the truck is the only person allowed to access the truck or trailer.

PE Coils should always be unloaded in a controlled manner; under no circumstances should pipes be pushed or rolled from the vehicle bed.

STORAGE ON SITE

Small free standing coils may be stacked either horizontally or vertically. The coils should be stored on non abrasive surfaces such as timber dunnage, grass, or sand (not gravel or other sharp surfaces).

The PE coils should be kept free from damage by passing vehicles.

It is strongly recommended that PE coils not be rolled along the ground to minimise risk of damage.



Image 3. Iplex Small Free Standing Coils.

IPLEX PE COILS SAFE HANDLING

SECTION 2 – SMALL FREE STANDING COIL SIZES & WEIGHTS

REMOVING STRAPPING & RELEASING SMALL FREE STANDING COILS

Key Risks

- Impact from released coil due to uncontrolled uncoiling / recoiling and stored energy.
- Trip hazards from moving or snaking pipe.
- Crush from heavy coils on feet or hands.

Key risks should be managed by:

- If a dispensing unit/ reel trailer is being used; ensure the PE coil is installed securely before releasing.
- Care is required cutting the strapping that restrain the coil to prevent impact injuries from uncontrolled uncoiling. Cut away from head/ face e.g. foot level – consider hard hats & ensure leading edges are restrained when not being dispensed.
- Ensure the dispensing unit/ reel trailer is secured so that it cannot be pulled over as the coil is being dispensed.
- Stand clear of the dispensing unit/ reel trailer while the PE coil is being dispensed.
- Ensure the locking mechanism or brake is engaged to the dispensing unit / reel trailer to prevent rotation from stored energy when not in use.
- Always uncoil slowly from dispensing unit/ reel trailer.
- Only utilise equipment fit for purpose and use as per the user instructions.
- Otherwise – actions should be taken to keep risks minimised based on end user workplace and task risk assessments completed by end users.



Image 4. Small Free Standing Coil on a reel dispensing trailer.

IPLEX PE COILS SAFE HANDLING

SECTION 2 – SMALL FREE STANDING COIL

WEIGHTS – SMALL FREE STANDING COILS

Table 1 shows indicative weights and lengths for a range of PN16 Iplex small free standing coils. PN16 has been used due to it being heavier and provides a more conservative average. This is a guide only to allow those on site to prepare suitable lifting equipment for the weights.

Each PE coil has a product tag attached showing the size & weight & specifications of the coil. These should be checked before unloading.

For additional sizes and weights call Iplex Customer Services **0800 800 262**.

Table 1

IPLEX BLACKLINE	OD (MM)	SDR	PN	LENGTH (METRES)	WEIGHT (KGS)
	25	11	16	25	4
				50	9
				100	17
				200	34
	32	11	16	25	8
				50	14
				100	28
				200	56
	40	11	16	25	11
				50	22
				100	43
				200	86
50	11	16	25	17	
			50	34	
			100	67	
			200	134	
63	11	16	25	27	
			50	53	
			100	106	
75	11	16	50	74	
			100	148	
90	11	16	50	108	
			100	216	
110	11	16	50	159	
			100	318	

IPLEX PE COILS SAFE HANDLING

SECTION 2 – SMALL FREE STANDING COIL SIZES & WEIGHTS

PRODUCT TYPES

The product types shown below represent some of the more common small free standing coils.



**Iplex PE Flexible
Electrical Duct**



Iplex Greenline™



**Iplex Poligas
PE Gas Pipe**



Iplex Redline™



**Iplex
Communications
Duct**



Iplex Blackline HP



Iplex Blueline™



**Iplex Blackline™
with Blue Stripe**



**Lilac Communications
Duct**



Iplex Alkathene™

LARGE FREE STANDING COILS

IPLEX PE COILS SAFE HANDLING

SECTION 3 – LARGE FREE STANDING COILS



Large Free Standing Coil

IPLEX PE COILS SAFE HANDLING

SECTION 3 – LARGE FREE STANDING COILS

UNLOADING LARGE FREE STANDING COILS FROM TRUCK

Truck Access

Under no circumstances is it acceptable for any person to be on the bed of the vehicle when loading/unloading operations are in progress.

Mechanical Unloading

Unloading & handling of large free standing coils must be carried out using mechanical lifting equipment. Refer to table 6 for a guide on the large free standing coil sizes & weights.

Lifting PE Coils Off Truck

Large free standing coils may be delivered loose or attached to a transport stand. If attached to a transport stand, they must remain attached to the stand while being lifted from the truck. There are two dedicated lifting rails that must be used to lift the transport stand to the ground. Only when safely on the ground may the PE coils be released from the transport stand.

Important Notes

The driver of the truck is the only person allowed to access the truck or trailer.

Large free standing coils must be unloaded using mechanical lifting equipment operated by a competent person. Refer to definitions on page 6.

DO NOT remove any coil strapping at this stage.



Image 5. Large Free Standing Coils on truck.



Image 6. Large Free Standing Coils on transport stand.

IPLEX PE COILS SAFE HANDLING

SECTION 3 – LARGE FREE STANDING COILS

WEIGHTS - LARGE FREE STANDING COILS

The following table shows the indicative sizes & weights for the Iplex range of large free standing coils.

This is a guide only to allow those on site to prepare suitable mechanical lifting equipment for the weights & sizes of PE coils.

For additional sizes and weights call Iplex Customer Services **0800 800 262**.

Each large free standing coil has a product tag attached showing the size, weight & specification.

These should be checked before unloading.

Table 2



LARGE FREE STANDING COILS	OD (MM)	SDR	PN	LENGTH (METRES)	WEIGHT (KG)
	32	11	16	100	28
		11	16	200	56
		11	16	500	140
		11	16	1000	280
	40	11	16	100	43
		11	16	200	86
	50	11	16	100	67
		11	16	200	134
	63	11	16	100	106
		11	16	150	159
	90	11	16	50	108
		11	16	100	216
	110	11	16	50	159
		11	16	100	318
	125	11	16	100	414
	140	17	10	100	350
	160	17	10	100	457

IPLEX PE COILS SAFE HANDLING

SECTION 3 – LARGE FREE STANDING COILS

REMOVING COILS FROM THE TRANSPORT STAND - ON THE GROUND

Large free standing coils must only be removed from the transport stand on the ground.

Lift and position the transport stand onto solid and stable ground. The PE coils may then be removed individually using the following methods:

Lifting Forks

Align and insert the lifting forks inside the top of the first PE coil. Ensure the forks are inserted deep enough so that the coil cannot come free and roll uncontrolled. Restrain the first coil back to the lifting equipment.

Hiab

Safely attach a lifting strap around the top of the first PE coil.

When the first PE coil is securely restrained against the hiab lifting equipment, it is then safe to remove the transport stand strapping, securing the the first PE coil to the transport stand as shown in image 7 (note -the strapping colour may vary). Do not cut the strapping binding the coil at this stage. Move the PE coil to the storage area or into the dispensing unit/ reel trailer.



Image 7. Large free standing coils attached to the transport stand.

STORAGE ON SITE

Large free standing coils should be stored in a horizontal position to reduce the risk of falling. The coils should be stored in a fenced off restricted area to prevent unsafe handling by the public.

The coils should be stored on a non abrasive surface such as timber dunnage, grass, or sand (not gravel or other sharp surfaces).

Large free standing coils must be kept free from damage by passing vehicles.

It is strongly recommended that PE coils not be rolled along the ground to minimise risk of damage and toppling.

IPLEX PE COILS SAFE HANDLING

SECTION 3 – LARGE FREE STANDING COILS



Image 8. Large Free Standing Coils attached to the transport stand.

IPLEX PE COILS SAFE HANDLING

SECTION 3 – LARGE FREE STANDING COILS

REMOVING STRAPPING & RELEASING LARGE FREE STANDING COILS

Key Risks

- Finger pinch
- Impact from released coil due to uncontrolled uncoiling, recoiling and stored energy.
- Being drawn in on moving dispensing unit or reel trailer as operators guide coil into position.
- Trip hazards from moving or snaking pipe.
- Crush from heavy coils (including transport stand) being pulled over.

Key Risks should be managed by:

- Only utilise equipment that is fit for purpose and use as per the user instructions.
- If a dispensing unit/reel trailer is being used; ensure the PE coil is fully installed and contained securely before cutting any straps and releasing.
- Ensure the dispensing unit/reel trailer is secured so that it cannot be pulled over as the coil is being dispensed.
- Care is required cutting the straps that restrain the coil to prevent impact injuries from uncontrolled uncoiling.
- Always cut away from head/face e.g. foot level consider hard hats & ensure leading edges are restrained when not being dispensed.
- Always maintain segregation of people from the dispensing unit and the travelling pipe (including members of the public)
- Stand clear of the dispensing unit/reel trailer while the PE coil is being dispensed.
- Always uncoil slowly from dispensing unit/ reel trailer and maintain clear line of site and communication e.g. radio/mobile phone - between the coil and any powered equipment drawing pipe e.g. tractor driver.
- Ensure the locking mechanism or brake is engaged on the dispensing unit/ reel trailer when dispensing is finished or not in use to prevent uncontrolled rotation from stored energy.
- Otherwise – actions should be taken to keep risks minimised based on end user workplace and task risk assessments completed by end users.

Important Notes

Ensure all equipment is fit for purpose.

Care must be taken cutting the straps.

Always cut away from head/face.

Isolate the moving drum & pipe from people.

Stand clear while coil is being dispensed.

Always uncoil slowly & maintain communication between both ends of the coil line.

Always use the brake when not in use.

Dispensing unit/ reel trailer must be on solid & stable ground

TRANSPORTING & DISPENSING LARGE FREE STANDING COILS

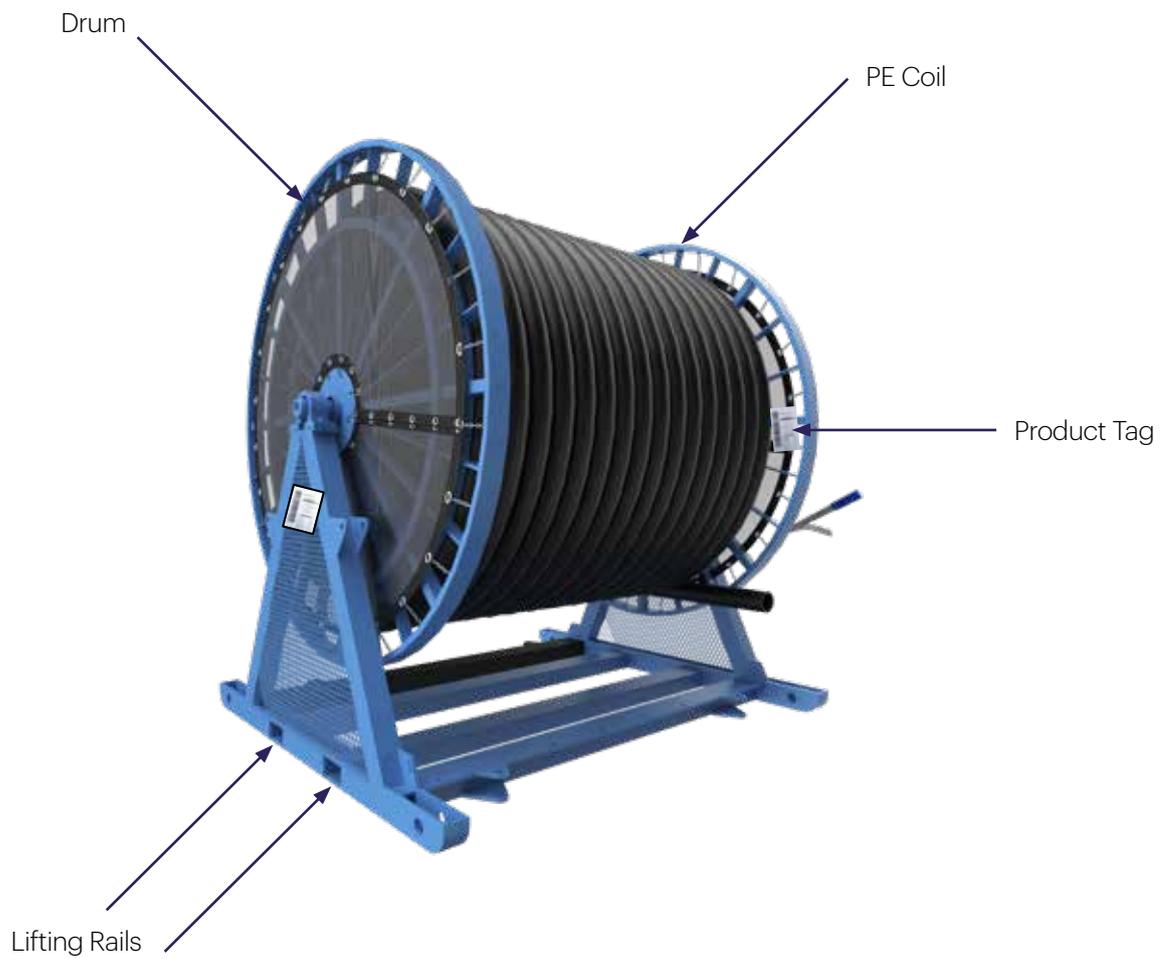


Image 9. Large free standing electrical duct coils on a frame style dispensing trailer.

DRUM COILS

IPLEX PE COILS SAFE HANDLING

SECTION 4 – DRUM COILS



Drum Coil

IPLEX PE COILS SAFE HANDLING

SECTION 4 – DRUM COILS

UNLOADING DRUM COILS FROM TRUCK

Truck Access

Under no circumstances is it acceptable for any person to be on the bed of the vehicle when loading/unloading operations are in progress.

Mechanical Unloading

Unloading & handling of drum coils must be carried out using mechanical lifting equipment. Refer to table 3 for a guide on the PE coil sizes and weights.

Lifting Drum Coils Off Truck

Drum coils must be lifted from the truck using the two dedicated lifting rails at the base. Only when safely on the ground and ready to be dispensed may the PE coil be released from the drum.

Important Notes

The driver of the truck is the only person allowed to access the truck or trailer.

Drum Coils must be unloaded using mechanical lifting equipment operated by a competent person. Refer to definitions on page 6.

DO NOT remove any coil strapping at this stage.



Image 10. Iplex Drum Coils on truck ready for delivery.

IPEX PE COILS SAFE HANDLING

SECTION 4 – DRUM COILS

STORAGE ON SITE

Drum Coils should be stored in a fenced off restricted area to prevent unsafe handling by the public.

The drum coils should be stored on solid & level ground.

Drum coils must be kept free from damage by passing vehicles.

Important Notes

Ensure fenced off areas are secure at the end of the day or when not in use.



Image 11. Drum Coils safely stored on site in a fenced off restricted area.

IPLEX PE COILS SAFE HANDLING

SECTION 4 – DRUM COILS

REMOVING STRAPPING & RELEASING DRUM COILS

Key Risks:

- Finger pinch
- Impact from released coil due to uncontrolled uncoiling, recoiling and stored energy.
- Being drawn in on moving drum coil as operators guide coil into position.
- Trip hazards from moving or snaking pipe.
- Crush from drum dispenser or coil (including frame) being pulled over.

Key Risks should be managed by:

- Only utilise equipment that is fit for purpose and use as per the user instructions.
- Ensure the drum is positioned on solid & stable ground before cutting any coil straps and releasing.
- Care is required cutting the straps that restrain the coil to prevent impact injuries from uncontrolled uncoiling.
- Always cut away from head/face e.g. foot level consider hard hats & ensure leading edges are restrained when not being dispensed.
- Always maintain segregation of people from the drum and the travelling pipe (including members of the public)
- Stand clear of the drum at all times while the PE coil is being dispensed.
- Always uncoil slowly from the drum and maintain clear line of site and communication e.g. radio/mobile phone - between the coil and any powered equipment drawing pipe e.g. tractor driver.
- Ensure the locking mechanism or brake on the drum is engaged when dispensing has finished or not in use to prevent uncontrolled rotation from stored energy.
- Otherwise – actions should be taken to keep risks minimised based on end user workplace and task risk assessments completed by end users.

Important Notes

Ensure all equipment is fit for purpose.

Drum must be on solid & stable ground.

Care must be taken cutting the straps.

Always cut away from head/ face.

Isolate the moving drum & pipe from people.

Stand clear while coil is being dispensed.

Always uncoil slowly & maintain communication between both ends of the coil line.

Always use the brake when not in use.

IPLEX PE COILS SAFE HANDLING

SECTION 4 – DRUM COILS

COIL SIZES & WEIGHTS – DRUM COILS

The following table shows the indicative weights and sizes for the Iplex range of drum coils

This is a guide only to allow those on site to prepare suitable mechanical lifting equipment for the weights & sizes.

For additional sizes and weights call Iplex Customer Services **0800 800 262**.

Each drum coil has a product tag attached showing the size & weight of the coil. These should be checked before unloading.

Weights shown include weight of drum and PE coil.

Table 3

DRUM COILS	OD (MM)	SDR	PN	LENGTH (METRE)	WEIGHT (KG) DRUM + COIL
	50	17	10	2000	2142
		17	10	800	1589
	110	13.6	12.5	600	2967
		17	10	300	1876
	140	17	10	340	2412

Approx Drum Weight 1220 kg



Image 12. Drum Coils on truck showing strapping – DO NOT remove strapping until ready to be dispensed.

IPLEX PIPELINES NZ LIMITED

0800 800 262

AUCKLAND: PRIVATE BAG 92 114, 810 GREAT SOUTH ROAD, PENROSE

PALMERSTON NORTH: PRIVATE BAG 11019, 67 MALDEN STREET

CHRISTCHURCH: PO BOX 16225, 22 BRAEBURN DRIVE, SOCKBURN

ASHBURTON: 13 ASHFORD AVENUE, NEWLANDS

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