

WL Plastics Corp

WL111A – Handling WL Plastics Reeled Pipe

HANDLING WL PLASTICS REELED PIPE

1. Scope

1.1. This document provides WL Plastics' recommendations for customer handling of WL Plastics pipe that is packaged on reels and shipped by commercial carrier. Included is information on product identification, reel identification, truckload shipment, receiving inspection, unloading and storage.

2. Product Identification

2.1. Per Table 1, WL Plastics manufactures pipe that is coiled onto reels at its Crossfield, AB facility.

Table 1 Reeled Pipe Data

IPS Pipe Size	DR	Pipe Length (m)	Pipe Length (ft)	Pipe & Reel Weight, lbs	Reel Type	Reel OD	Reels per Truckload
2"	17	1,600	5,250	2,631	1 or 2	10'10"	10
2"	13.5	1,600	5,250	3,162	1 or 2	10'10"	10
2"	11	1,600	5,250	3,729	1 or 2	10'10"	10
2"	9	1,350	4,429	3,757	1 or 2	10'10"	10
2"	7.3	1,130	3,707	3,759	1 or 2	10'10"	10
2"	6.3	1,000	3,281	3,760	1 or 2	10'10"	10
2"	5	800	2,625	3,621	1 or 2	10'10"	10
2 1/2"	9	750	2,460	3,128	1 or 2	10'10"	10
3"	17	690	2,264	2,490	1 or 2	10'10"	10
3"	13.5	690	2,264	2,983	1 or 2	10'10"	10
3"	11	690	2,264	3,515	1 or 2	10'10"	10
3"	9	625	2,050	3,774	1 or 2	10'10"	10
3"	7.3	525	1,722	3,789	1 or 2	10'10"	10
3"	6.3	465	1,525	3,795	1 or 2	10'10"	10
3"	5	350	1,148	3,459	1 or 2	10'10"	10
4"	17	400	1,312	2,402	2	10'10"	10
4"	13.5	350	1,148	2,566	2	10'10"	10
4"	11	350	1,148	3,012	2	10'10"	10
4"	9	350	1,148	3,523	2	10'10"	10
4"	7.3	320	1,050	3,816	2	10'10"	10
4"	6.3	280	919	3,778	2	10'10"	10
4"	5	235	771	3,797	2	10'10"	10
5"	17	250	820	2,309	2	10'10"	10
5"	13.5	250	820	2,767	2	10'10"	10
5"	11	250	820	3,253	2	10'10"	10
5"	9	240	787	3,670	2	10'10"	10
5"	7.3	200	656	3,664	2	10'10"	10
5"	6.3	180	591	3,721	2	10'10"	10

2.2. Pipe is coiled onto the reel so that the pipe printline marking is visible on the ID of the reeled pipe coil. Pipe marking identifies the pipe size and DR, PE material, manufacturing standard, manufacturing date. The printline repeats every 2-ft.

3. Reel Identification

3.1. WL Plastics packages reeled pipe on returnable steel reels from two manufacturers, Reelco (Type 1) and L&R (Type 2). Reelco and L&R reels are of different construction. See Figures 1 and 3. Due to the different reel construction, Reelco reel parts cannot be used with L&R reels, and L&R reel parts cannot be used with Reelco reels.

- 3.2. After coiled pipe is removed, fully assembled reels are to be returned to WL Plastics Crossfield, AB plant. Do not disassemble reels.
- 3.3. The Reelco reel (Figure 1) has two flanges with 8 core stave spokes and 2 additional load support spokes to either side of one core stave spoke. Eight core staves are bolted to the 8 flange core stave spokes. (Figure 2.) The core stave spoke and the two load support spokes on both sides are painted orange. Whenever the loaded reel rests on the reel flanges for storage or shipping, these three orange spokes are oriented down so that the load is properly supported. Loaded reel storage or shipping in any other orientation can result in reel damage.



Figure 1 Reelco Reel

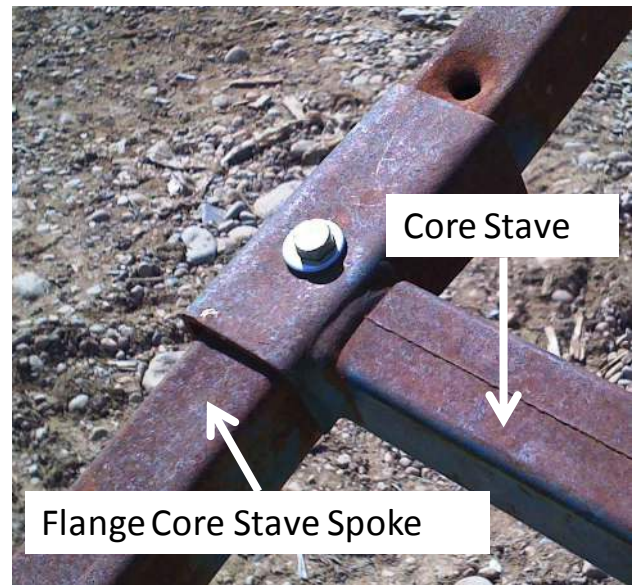


Figure 2 Reelco Core Stave to Flange Spoke Mounting

- 3.4. The L&R reel (Figure 3) has two flanges with 10 core stave spokes and 1 additional load support spoke between two core stave spokes. Ten core staves are bolted to the 10 flange core stave spokes. (Figure 4.) The core stave spokes and the load support spoke in between are painted orange. Whenever the loaded reel rests on the reel flanges for storage or shipping, these three orange spokes are oriented down so that the load is properly supported. Loaded reel storage or shipping in any other orientation can result in reel damage.

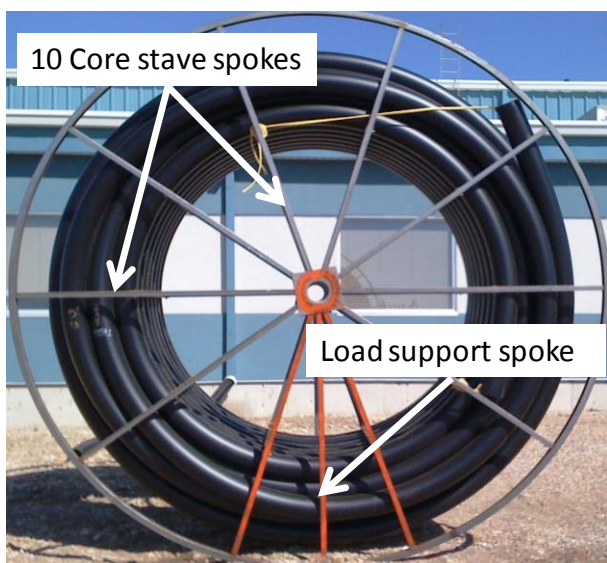


Figure 3 L&R Reel

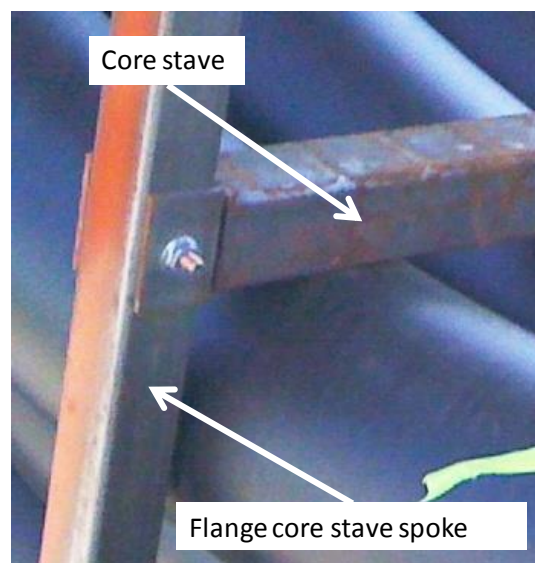


Figure 4 L&R Core Stave to Flange Spoke Mounting

4. Commercial Truckload Shipment Configuration

- 4.1. Per Table 1 and Figure 5, reels are shipped on commercial flatbed or step deck tractor trailer trucks. Five rows of two coils are loaded onto the trailer, chocked and strapped to the trailer deck.



Figure 5 Reeled Pipe Truckload

5. WL Plastics Inspection

- 5.1. All reels are inspected for mechanical damage during return inspection, before loading the reel with pipe, before loading the truck for shipment, and before truck departure.
- 5.2. Damaged reel parts are repaired or discarded, and new core stave to reel spoke bolts are used. Bolt nuts are torqued to manufacturer's specifications during reassembly.
- 5.3. If reel or pipe damage is discovered after loading the reel with pipe, the reel is quarantined; the pipe is removed from the damaged reel and reground.
- 5.4. If pipe or reel damage is discovered after loading the truck, the reel is removed from the load and replaced with an undamaged loaded reel.
- 5.5. Both sides of all reeled pipe loads are photographed before truck departure. Load photographs are filed with shipping documents.
- 5.6. The commercial carrier transporting the load is responsible for the load from its departure until the load is delivered and all receiving documentation is completed at the delivery site.

6. Receiving Inspection by Receiving and Unloading Personnel

- 6.1. When the shipment arrives, paperwork is received from the truck driver including:
 - 6.1.1. Bill of Lading (Shipping Manifest)
 - 6.1.2. WL Plastics Unloading Guidelines, WL111 (signed by driver)
 - 6.1.3. WL Plastics Recommended Customer Handling for WL Plastics Reeled Pipe, WL111A (this document)
- 6.2. The Bill of Lading (Shipping manifest) should be compared to the customer purchase order to verify that the product received is the product that was ordered. Pipe size may be confirmed by reading the printline from the pipe on the reels.

6.3. WL111 and WL111A to be reviewed and observed by receiving and unloading personnel. WL111 and

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WL111A provide recommendations for safely unloading reeled pipe from the trailer, handling reeled pipe at the receiving location, and storing reeled pipe at the receiving or storage location. Failing to observe WL111 and WL111A recommendations can result in pipe or reel damage, property damage, or injury or death to persons.

- 6.3.1. Before receiving personnel accept the load by signing a delivery receipt, inspect each reel for damage such as broken core stave bolts. If reel damage is discovered, write a description of the damage on the receiving documents, call WL Plastics Customer Service at 403-946-0202, and report the damage.
- 6.3.1.1. WL Plastics business hours are Monday through Friday, 8:00 AM to 5:00 PM, Mountain Time, excluding holidays. Please ask for Customer Service. If calling during non-business hours, please leave a voice message on the answering system, including your name and a call-back phone number with area code. You will be contacted the next business day.
- 6.3.1.2. The transporting carrier is responsible for the load from the time it leaves the WL Plastics plant until the shipment is received by signature at the delivery site. Notification of load damage must be provided to the transporting carrier within 7 days of receipt.
- 6.3.2. If in-transit load damage is severe, receiving personnel may refuse to accept the load. In this circumstance, call WL Plastics Customer Service 403-946-0202 and report the damage.

7. Unloading

- 7.1. **Before unloading reeled pipe from the trailer, all unloading persons and all persons in the unloading area are to read and observe WL111 and WL111A. Failing to observe WL111 and WL111A recommendations can result in pipe or reel damage, property damage, or injury or death to persons.**
- 7.2. Reeled pipe is unloaded using a forklift with padded forks or with lifting equipment and a fabric sling. Lifting with chains or wire rope is prohibited. Rolling or pushing reeled pipe off the trailer is prohibited.
- 7.3. Forklifts shall have a load capacity equal to or greater than the reeled pipe weight per Table 1.
- 7.3.1. Forklift load capacity is at a specified distance from the back of the forks to a point part way out on the forks. Load capacity is reduced when the load center is farther out on the forks.
- 7.3.2. See Figures 6 and 7 for fork padding.



Figure 6 Fork Padding



Figure 7 Fork Pad Securing

- 7.4. Lifting equipment and fabric slings shall have a load capacity that is equal to or greater than the reeled pipe weight per Table 1. Before use, fabric slings shall be inspected and shall not be used if cut or if excessively worn or frayed.
- 7.5. Unloading Procedure – **Observe WL111 Unloading Guidelines in addition to these procedures.** See Appendix.

- 7.5.1. The trailer shall be parked on relatively level, smooth ground with the parking brake set and wheels chocked. The unloading area shall be large enough to accommodate the tractor and trailer, the movement of unloading and handling equipment, and sufficient room for temporary reeled pipe storage.
- 7.5.2. Persons that are not involved with unloading shall move away and stay away from unloading operations.
- 7.5.3. At all times during unloading operations, all persons that are involved in unloading operations shall position themselves so that they can be seen to all others involved in unloading operations.
- 7.5.4. At all times during unloading operations and especially before vehicles or reeled pipe is to be moved, all persons shall check to be sure that they can see all other persons, and that no other persons are out or sight or in a potentially dangerous location.
- 7.5.5. If at any time during unloading operations a person cannot be seen, unloading operations shall immediately cease and that person shall be located. Unloading operations shall not recommence until all persons are accounted for and are in sight of each other and are in safe locations.
- 7.5.6. Unload the trailer from the front (the tractor end) to the back, one reel at a time. Do not remove straps that secure reeled pipe to the trailer until that pair of reels is to be unloaded.
- 7.5.7. Lift individual reeled pipe from the trailer with a forklift as shown in Figure 8, or with lifting equipment and a fabric sling. When lifting with a fabric sling, the sling shall be looped only around the coiled pipe. The sling shall not bear against reel flanges. The sling shall be looped through the open center of the reel, around the coiled pipe, and inside the outer ring of the reel flange. Sling loops shall be attached to a safety latched hook on the lifting equipment. Both sling loops may be attached to the hook or may be looped as a choker and the free end attached to the safety latched hook. Lifting using a backhoe bucket tooth or a hook without a safety latch is prohibited.



Figure 8 Forklift Reeled Pipe Handling

- 7.5.8. After lifting reeled pipe from the trailer, move the reeled pipe to a storage location where unloaded reeled pipe will not interfere with trailer unloading operations.

8. Storage and Post-Storage Handling

- 8.1. Reeled pipe shall be stored with the load support spokes down. See Figures 1 and 3. While in storage, reeled pipe flanges shall be chocked to prevent rolling.

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- 8.2. Except for reeled pipe that is being loaded onto reel trailers for installation, reeled pipe that is moved or relocated while in storage shall be moved or relocated using a forklift with padded forks per Figures 6, 7 and 8, or with lifting equipment and a fabric sling per 7.5.7.
- 8.3. Handling reeled pipe with reel trailers and for installation shall be in accordance with customer procedures.

Appendix – WL111



These guidelines are provided for the safety of personnel on site during unloading. If you have any questions or concerns, please contact the WL Plastics plant immediately.

WARNING – PIPE FALLING OFF THE TRUCK CAN KILL OR INJURE.

DRIVER: ► Read and observe these UNLOADING GUIDELINES and observe all customer, employer, and regulatory authority safety requirements.

DRIVER: ► Before unloading, give these UNLOADING GUIDELINES to unloading personnel at the unloading site.

UNLOADING PERSONNEL: ► Read and observe these UNLOADING GUIDELINES and observe all customer, employer and regulatory authority safety requirements.

► **UNLOADING GUIDELINES FOR WL PLASTICS POLYETHYLENE PIPE** ◄

- Park the truck on level ground. Engage parking brakes and chock wheels. The unloading area must be large enough to safely unload and transport the pipe to the storage area.
- **NEVER GO TO THE OPPOSITE SIDE OF THE TRAILER WHEN UNLOADING EQUIPMENT IS MOVING NEAR THE TRUCK.** Moving equipment could knock the load down on top of you. To avoid your own death or injury, tell the operator to stop moving and wait while you work on the other side of the load.
- **IF A PERSON CANNOT BE SEEN, IMMEDIATELY STOP UNLOADING AND FIND THAT PERSON.** Do not continue unloading until all persons are accounted for and are in full view. Persons not involved with unloading should move away and stay away from the unloading area during unloading.
- Do not loosen or remove load straps until the load has been checked to be sure that it has not shifted and is stable. Use caution straightening shifted loads.
- Never push or pull pipe off the truck. Always lift the pipe off the truck and place it on the ground.
- Never remove pipe banding while the pipe is on the truck.
- Never walk or stand on the pipe or the truck while pipe is being unloaded from the truck.
- Unloading equipment must have sufficient load rating to lift the pipe and must be in safe operating condition before use. Do not use inadequate or unsafe equipment.
- Lift pipe joints (lengths) off the truck with equipment such as a crane or a forklift. Use spreader bars whenever possible. Use fabric slings around the pipe. Do not use chains or wire ropes, which can slip. Forks must be long enough to extend completely under the pipe bundle, and set as wide apart as practical. Unload pipe joints or bundles from the top down.
- Lift coiled pipe off the truck with equipment such as a crane or a forklift. Unload coiled pipe from the front (the tractor end of the trailer) to the back.
 - When lifting non-palletized coiled pipe with equipment such as a crane, use fabric slings looped through the center of the coil. When lifting non-palletized coiled pipe with a forklift, pad the forks with protective material, center the forks together on the forklift, extend the forks through the center of the coil to the full width of the coil, and lift the coil off the truck.
 - Lift palletized coiled pipe with a forklift. Forks must be long enough to extend completely through the pallet. Center the forks, and set them as wide apart as practical. Extend the forks between the top and bottom pallet boards to the full depth of the pallet, and lift the palletized coiled pipe off the truck.

Driver

Date



Estas indicaciones se proporcionan para la seguridad del personal en el sitio durante la descarga. En caso de preguntas o dudas, favor contactar la planta de WL Plastics de inmediato

ADVERTENCIA: LOS TUBOS AL CAER DEL CAMIÓN PUEDEN PROVOCAR LA MUERTE O CAUSAR LESIONES

Conductor: ► Lea y siga estas INSTRUCCIONES PARA DESCARGAR así como todos los requerimientos de seguridad de los clientes, empleados y de las autoridades correspondientes.

Conductor: ► Antes de descargar, déle estas INSTRUCCIONES PARA DESCARGAR al personal encargado de realizar el procedimiento de descarga en el lugar en que dicho procedimiento se efectúe.

Personal encargado de la descarga: ► Lea y siga estas INSTRUCCIONES PARA DESCARGAR así como todos los requerimientos de seguridad de los clientes, empleados y de las autoridades correspondientes.

► INSTRUCCIONES PARA DESCARGAR TUBOS DE POLIETILENO DE LA EMPRESA WL PLASTICS ◀

- Estacione el camión a nivel del suelo. Aplique los frenos de estacionamiento y las calzas para inmovilizar las ruedas. El área de descarga debe ser lo suficientemente grande como para descargar en forma segura y transportar el tubo al área de almacenamiento.
- **JAMÁS SE COLOQUE EN EL LADO CONTRARIO DEL REMOLQUE CUANDO EL EQUIPO DE DESCARGA SE ESTÉ MOVIENDO CERCA DEL CAMIÓN.** El equipo en movimiento puede chocar con la carga y caer encima de usted. Para evitar la muerte o lesiones, dígame al operador que pare el movimiento y que espere hasta que usted esté al otro lado de la carga.
- **SI ALGUNA PERSONA NO ESTÁ VISIBLE, DEJE DE DESCARGAR HASTA QUE LA ENCUENTRE.** No continúe descargando hasta que pueda ver a todas las personas y saber dónde se encuentran. Las personas que no participen en el procedimiento de descarga deberán retirarse del lugar y mantenerse alejadas mientras se realiza dicho procedimiento.
- No afloje ni retire las correas de la carga hasta que se haya comprobado que está segura y estable y que no se ha movido. Con toda precaución, proceda a asegurar la carga que se haya movido.
- Jamás empuje ni jale el tubo hacia fuera del camión. Levante siempre el tubo, retírelo del camión y póngalo sobre el suelo.
- Jamás quite las bandas del tubo mientras éste se encuentre en el camión.
- Jamás camine o permanezca parado sobre el tubo o en el camión mientras estén descargando el tubo.
- El equipo de descarga debe ser suficientemente fuerte como para soportar el peso de la carga y debe estar en buenas condiciones de operación antes de usarlo. No use equipo inseguro o inadecuado.
- Levante las conexiones del tubo y retírelo del camión con equipo apropiado que puede ser una grúa o un montacargas. De ser posible, utilice barras de descarga. Use correas de tela alrededor del tubo. No use cadenas ni cuerdas de alambre. Los brazos del montacargas deben ser lo suficientemente largos como para pasar completamente por debajo del atado del tubo y para operar con tanto espacio como se requiera. Descargue las conexiones o los atados del tubo de arriba abajo.
- Levante el tubo enrollado y sáquelo del camión con equipo apropiado, como una grúa o un montacargas. Descargue el tubo enrollado del frente (la parte del remolque que se une al tractor) hacia atrás.
 - Al levantar un tubo que no se encuentre sobre una plataforma con equipo apropiado como una grúa, use correas de tela y páselas a través del enrollamiento del tubo. Al levantar un tubo que no se encuentre sobre una plataforma con un montacargas, cubra las barras del montacargas con material de protección, centre las barras juntas en el montacargas, extiéndalas a través del centro del atado y a todo lo ancho del mismo y levante el atado y retírelo del camión.
 - Si el tubo está sobre una plataforma, levántelo con un montacargas. Los brazos del montacargas deben ser lo suficientemente largos como para ir a través de toda la plataforma. Céntrelos y colóquelos tan retirados uno del otro como se requiera. Extiéndalos entre la parte superior e inferior de las tablas de la plataforma y a todo lo profundo de la plataforma y levante el tubo con su plataforma y retírelo del camión.

Conductor

Fecha