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LINERWASTE RELINING SYSTEM

CONTENTS

Safety **1**

The Linerwaste system **2**

Linerwaste standard liner **3**

Linerwaste liners 3

Linerwaste resin **3**

Mixing ratios for Linerwaste resin *4*

Mixing table 4

Linerwaste resin, open times and curing times *5*

Linerwaste FAST 5

Linerwaste MEDIUM 6

Linerwaste SLOW 6

Expected shelf life of unopened packaging 6

Resin consumption and roller settings **6**

Epoxy weight per total liner length 7

SAFETY

The Linerwaste system contains epoxy. Please see the Material Safety Datasheet for more information. Always use suitable protective equipment when working with Linerwaste.

Base



Skin Irrit. 2;H315
Skin Sens. 1;H317
Eye Irrit. 2;H319 Aquatic Chronic 2;H411

Hardener – (FAST, MEDIUM, SLOW)



Skin Irrit. 2;H315
Skin Sens. 1;H317
Eye Irrit. 2;H319 Aquatic Chronic 2;H411

THE LINERWASTE SYSTEM

As a user of the Linerwaste relining system, you have chosen a leading solution for a wide range of applications. The system includes liners available from DN50 to DN225. These innovative liners create a durable, self-supporting pipe infrastructure that adapts smoothly to varying sizes and handles sharp 90° bends with minimal wrinkles.

Our unique low-viscosity resins, available in fast, medium and slow curing options, further enhance the Linerwaste system. When these resins are combined with our liners, the result is robust and adaptable renovated drain pipes. After curing, these pipes show impressive chemical resistance and a high E-modulus, matching the performance of brand-new, traditionally manufactured PP drain pipes.

As a valued Linerwaste user, you can take full advantage of the following benefits:

- Efficient installation process: The Linerwaste system simplifies the pipe renewal process and minimises downtime and disruption to your operations.

- Long-lasting results: The renovated pipes have an extended service life, which reduces future maintenance and replacement costs.
- Environmentally friendly solution: The Linerwaste relining system does not release harmful substances during curing, which contributes to a greener environment.
- Quality assurance: Our system follows strict industry standards and has received the prestigious RISE CR072 approval in Sweden, which guarantees high-quality and reliable results.

By using the Linerwaste relining system to its full potential, you can maximise the benefits of this superior, user-focused solution for all your pipe renewal needs.

LINERWASTE STANDARD LINER

Linerwaste is available in diameters from DN50 to DN225. It is made of 100% PES fibre and has a TPU coating. The liner is compatible with room-temperature curing, hot water or steam curing processes up to 80°C. All liners are flexible enough to fill variations in pipe diameter. The liner does not stretch lengthwise, only radially. This allows precise relining of pipes of known lengths.

LINERWASTE LINERS

DN Liner	Layflat width	Undersizing
50–70	54 mm	25%
70–100	85 mm	20%
100–150	130 mm	15%
150–225	191 mm	17%

Textile: ~95% Polyester ~5% Elastane
Coating: Thermoplastic Polyurethane 0.15mm
Designed for wall thickness: 3mm

The liner is designed to have a diameter that is 15-25% smaller than the smallest pipe diameter it is designed for.
Example: the liner for DN 100-150 is around 86mm in diameter

LINERWASTE RESIN

Our epoxy resin is specially designed to be compatible with a wide range of liners, including both woven and felt options, but especially with Linerwaste liners. The low viscosity allows easy impregnation of all liners.

MIXING RATIOS FOR LINERWASTE RESIN

All Linerwaste resins have a mixing ratio of 100:30, base:hardener

Example: to make 1.3 kg of finished epoxy of the FAST variant, mix 1 kg Linerwaste BASE and 300g Linerwaste FAST

MIXING TABLE

Total epoxy weight (kg)	Linerwaste BASE (grams)	Linerwaste Hardener (FAST, MEDIUM or SLOW) (grams)	**Total epoxy weight (kg)**	Linerwaste BASE (grams)	Linerwaste Hardener (FAST, MEDIUM or SLOW) (grams)
0.5	385	115	15.5	11 923	3 577
1.0	769	231	16.0	12 308	3 692
1.5	1 154	346	16.5	12 692	3 808
2.0	1 538	462	17.0	13 077	3 923
2.5	1 923	577	17.5	13 462	4 038
3.0	2 308	692	18.0	13 846	4 154
3.5	2 692	808	18.5	14 231	4 269
4.0	3 077	923	19.0	14 615	4 385
4.5	3 462	1 038	19.5	15 000	4 500
5.0	3 846	1 154	20.0	15 385	4 615

5.5	4 231	1 269	20.5	15 769	4 731
6.0	4 615	1 385	21.0	16 154	4 846
6.5	5 000	1 500	21.5	16 538	4 962
7.0	5 385	1 615	22.0	16 923	5 077
7.5	5 769	1 731	22.5	17 308	5 192
8.0	6 154	1 846	23.0	17 692	5 308
8.5	6 538	1 962	23.5	18 077	5 423
9.0	6 923	2 077	24.0	18 462	5 538
9.5	7 308	2 192	24.5	18 846	5 654
10.0	7 692	2 308	25.0	19 231	5 769
10.5	8 077	2 423	25.5	19 615	5 885
11.0	8 462	2 538	26.0	20 000	6 000
11.5	8 846	2 654	26.5	20 385	6 115
12.0	9 231	2 769	27.0	20 769	6 231
12.5	9 615	2 885	27.5	21 154	6 346
13.0	10 000	3 000	28.0	21 538	6 462
13.5	10 385	3 115	28.5	21 923	6 577
14.0	10 769	3 231	29.0	22 308	6 692
14.5	11 154	3 346	29.5	22 692	6 808
15.0	11 538	3 462	30.0	23 077	6 923

LINERWASTE RESIN, OPEN TIMES AND CURING TIMES

LINERWASTE FAST

Curing: 3 hours to self-supporting at 20°C,

Open time at 20°C: 15 minutes (time until the viscosity doubles)

LINERWASTE MEDIUM

Curing: 6 hours to self-supporting at 20°C,

Open time at 20°C: 35 minutes (time until the viscosity doubles)

LINERWASTE SLOW

Curing: 8 hours to self-supporting at 20°C,

Open time at 20°C: 50 minutes (time until the viscosity doubles)

The recommended working temperature is 15–30°C. At lower temperatures the viscosity will be high and the resin will be difficult to work with. The curing time is affected by the ambient temperature. For every 10°C the temperature drops, the curing time doubles. In the same way, for every 10°C above the recommended working temperature, the curing time is halved.

Linerwaste FAST resin cures in 10 hours at 5°C and 1.5 hours at 30°C

Linerwaste MEDIUM resin cures in 18 hours at 5°C and 3 hours at 30°C

Linerwaste SLOW resin cures in 28 hours at 5°C and 4 hours at 30°C

EXPECTED SHELF LIFE OF UNOPENED PACKAGING

6 months from our warehouse

RESIN CONSUMPTION AND ROLLER SETTINGS

	To reach a 3mm wall thickness	
DN	Roller gap	Linerwaste Epoxy required kg /m
50–70	7 mm	0.6
70–100	8.5 mm	0.8
100–150	10 mm	1.3
150–225	12 mm	2.2

EPOXY WEIGHT PER TOTAL LINER LENGTH

DN 50–70		DN 70–100		DN 100–150		DN 150–225	
Length (metres)	Total epoxy weight (kg)	Length (metres)	Total epoxy weight (kg)	Length (metres)	Total epoxy weight (kg)	Length (metres)	Total epoxy weight (kg)
1	0.60	1	0.8	1	1.3	1	2.20
2	1.20	2	1.6	2	2.6	2	4.40
3	1.80	3	2.4	3	3.9	3	6.60
4	2.40	4	3.2	4	5.2	4	8.80
5	3.00	5	4.0	5	6.5	5	11.0
6	3.60	6	4.8	6	7.8	6	13.2
7	4.20	7	5.6	7	9.1	7	15.4
8	4.80	8	6.4	8	10.4	8	17.6
9	5.40	9	7.2	9	11.7	9	19.8
10	6.00	10	8.0	10	13	10	22.0
11	6.60	11	8.8	11	14.3	11	24.2
12	7.20	12	9.6	12	15.6	12	26.4
13	7.80	13	10.4	13	16.9	13	28.6
14	8.40	14	11.2	14	18.2	14	30.8
15	9.00	15	12.0	15	19.5	15	33.0
16	9.60	16	12.8	16	20.8	16	35.2
17	10.20	17	13.6	17	22.1	17	37.4
18	10.80	18	14.4	18	23.4	18	39.6
19	11.40	19	15.2	19	24.7	19	41.8
20	12.00	20	16.0	20	26	20	44.0
21	12.60	21	16.8	21	27.3	21	46.2
22	13.20	22	17.6	22	28.6	22	48.4
23	13.80	23	18.4	23	29.9	23	50.6
24	14.40	24	19.2	24	31.2	24	52.8
25	15.00	25	20.0	25	32.5	25	55.0
26	15.60	26	20.8	26	33.8	26	57.2
27	16.20	27	21.6	27	35.1	27	59.4
28	16.80	28	22.4	28	36.4	28	61.6
29	17.40	29	23.2	29	37.7	29	63.8
30	18.00	30	24.0	30	39	30	66.0

31	18.60	31	24.8	31	40.3	31	68.2
32	19.20	32	25.6	32	41.6	32	70.4
33	19.80	33	26.4	33	42.9	33	72.6
34	20.40	34	27.2	34	44.2	34	74.8
35	21.00	35	28.0	35	45.5	35	77.0
36	21.60	36	28.8	36	46.8	36	79.2
37	22.20	37	29.6	37	48.1	37	81.4
38	22.80	38	30.4	38	49.4	38	83.6
39	23.40	39	31.2	39	50.7	39	85.8
40	24.00	40	32.0	40	52	40	88.0

INSTALLATION AND CURING PRESSURE

Size	Installation pressure	Curing pressure
DN 50-70	0.4-1.0	0.4-0.8
DN 70-100	0.3-0.7	0.3-0.7
DN 100-150	0.3-0.6	0.3-0.6
DN 150-225	0.2-0.4	0.2-0.4