

TECHNICAL DATA SHEET | AUSTRALIAN SI FORMAT

Kontain SpecLinerHD

GM13 Series | Smooth black HDPE geomembrane

KHDPE-GM13 | Revision D | 23 September 2026 | Supersedes Revision C

SpecLinerHD is Kontain's high-density polyethylene geomembrane for water, waste, mining and civil containment. This sheet specifies smooth black material to GRI-GM13 Revision 19, Table 1(b). Values are specification requirements, not measured production results. Supplied-material conformance is supported by production-lot certification and manufacturing quality-control (MQC) reports.

STANDARD ON EVERY ROLL	CUSTOMISE FOR THE ORDER
Removable weld protection film along both longitudinal edges, protecting the mating weld faces.	Roll dimensions and core type: cardboard or weatherproof, recyclable plastic.

Mechanical properties by nominal thickness

Minimum test-method averages, not statistical MARV. Tensile: ASTM D6693 Type IV; tear: ASTM D1004; puncture: ASTM D4833. Values apply to smooth black sheet only.

Nominal thickness (mm)	Yield strength (kN/m)	Break strength (kN/m)	Yield elong. (%)	Break elong. (%)	Tear (N)	Puncture (N)
1	15	27	12	700	125	320
1.25	18	33	12	700	156	400
1.5	22	40	12	700	187	480
2	29	53	12	700	249	640
2.5	37	67	12	700	311	800
3	44	80	12	700	374	960

Thickness - ASTM D5199: minimum average equals nominal thickness; the lowest of ten individual measurements must be at least 90% of nominal. This does not permit the whole sheet to be 10% below nominal.

Minimum MQC frequencies: thickness per roll; tensile every 9,000 kg; tear and puncture every 20,000 kg. Tensile averages use five specimens in each of the machine and cross-machine directions.

Typical roll planning sizes

Thickness (mm)	1.00	1.50	2.00	2.50	3.00
Typical length (m)	210	140	105	84	70
Area at 7.5 m (m ²)	1,575	1,050	787.5	630	525
Area at 8.0 m (m ²)	1,680	1,120	840	672	560

Nominal widths: 7.5 or 8.0 m. All lengths are customisable; 1.25 mm length is made to order. These are planning sizes, not fixed limits or stock sizes. Confirm usable width, mass, lifting and loading for the selected line. Blown film is standard; flat die is available by request.

Durability and quality control

Kontain SpecLinerHD | GRI-GM13 smooth black specification

Property	Test method	Requirement	Minimum MQC frequency
Formulated sheet density	ASTM D1505 / D792	$\geq 0.940 \text{ g/cm}^3$	90,000 kg
Stress-crack resistance	ASTM D5397 Appendix SP-NCTL	$\geq 500 \text{ h}$	Per GRI-GM10
Carbon black content	ASTM D4218	2.0-3.0%	9,000 kg
Carbon black dispersion	ASTM D5596	Ten views: nine in Category 1 or 2; no more than one in Category 3	20,000 kg
Initial oxidative induction time	ASTM D8117 / D5885	Standard OIT $\geq 100 \text{ min}$ OR HP-OIT $\geq 400 \text{ min}$	90,000 kg
Oven ageing at 85°C: retained OIT after 90 days	ASTM D5721 with D8117 / D5885	Standard OIT $\geq 55\%$ OR HP-OIT $\geq 80\%$	Each formulation
UV: retained HP-OIT after 1,600 h	ASTM D7238 with D5885	HP-OIT $\geq 50\%$	Each formulation

GRI-GM13 permits either applicable OIT method. Specify both if the project requires both. Standard OIT is not recommended for the UV assessment. ASTM D1603 or D6370 may be used for carbon black content where an appropriate correlation to D4218 is established.

Formulation, traceability and release

Virgin polyethylene resin; no post-consumer resin. Resin density is generally $\geq 0.932 \text{ g/cm}^3$ and melt index $< 1.0 \text{ g/10 min}$. Similar, clean HDPE rework is limited to 10% under GM13 and the agreed order specification.

Identify every roll by roll number, lot, thickness, width, length and area. Link the roll register and packing list to the MQC results and formulation records. Provide a certificate of conformance and production-lot MQC reports. Confirm test methods, frequencies and acceptance criteria before manufacture.

Independent production-line sampling and testing through TRI in China can be arranged at additional cost. Agree factory access, sample selection, roll identification, test scope, frequency and turnaround before manufacture. Testing may be allocated within TRI's laboratory network; results apply to the sampled material and tests performed.

Basis: [GRI-GM13 Revision 19, 11 June 2025, Table 1\(b\)](#). This TDS is not a batch certificate or independent certification of each roll. Field seams require separate qualification and testing under the applicable specification and project CQA plan.

Weld protection and roll handling

Kontain SpecLinerHD | Standard supply features

Removable weld protection film - every roll

Every roll includes removable film along both longitudinal edges to protect the mating weld faces within the eventual overlap. Leave the film in place during storage, handling and deployment to help keep dust, dirt and site debris off the weld zone.

Peel the film away on site immediately before welding. It exposes the protected surface and reduces manual cleaning and repeated seam preparation. Remove the film completely from both mating faces; no film is to remain in the finished seam.

Check that surfaces are clean, dry and free of residue. Clean any recontamination. Cut edges, roll ends and repairs require normal preparation under the qualified welding procedure. Film does not replace trial welds, inspection or seam testing.

Installation labour context

A Kyiv landfill study of 1.5 mm AGRU HDPE allocated 0.327 of 4.982 person-hours per 100 m² to seam dust removal: approximately 6.6% of total reported labour. The study did not test protective film. This is the cleaning labour allocation, not a demonstrated saving for SpecLiner; actual savings depend on site conditions and final preparation time.

Source: Hryhorovskiy et al., Building Production No. 76, pp. 9-17, Table 1 (p. 14). DOI: [10.36750/2524-2555.76.9-17](https://doi.org/10.36750/2524-2555.76.9-17).

Customisable cardboard or plastic cores

Choose cardboard or plastic cores to suit storage and handling. Plastic cores are weatherproof and recyclable through a suitable plastics recycler, subject to local acceptance and contamination limits. Keep cardboard cores dry.

The established plastic-core configuration is 152 mm internal diameter with 10 mm wall thickness, end caps and woven lifting slings at both roll ends. Core type and dimensions are customisable; confirm the ordered configuration, marked lifting capacities and actual packed mass before handling.

Use a suitable spreader beam, rated slings or an approved mandrel arrangement. Keep unprotected forks clear of the sheet. Store on a firm, dry surface, secure against movement and protect from damage. Container and road payload limits govern final loading.

Concrete connections and options

Kontain SpecLinerHD | Compatible accessories

ConcreteLockPE concrete embedment profile

ConcreteLockPE is Kontain's polyethylene concrete embedment profile, supplied from Inno. Cast its anchor ribs into fresh concrete, leaving the flat polyethylene face exposed. Extrusion-weld the compatible HDPE liner to this face to form the designed liner-to-concrete connection.

Used at concrete walls, channels, sumps, pits and other liner terminations. Restrain the profile for the pour, consolidate concrete around the ribs and keep the weld face clean. Detail joints, corners, loads and movement; qualify the extrusion weld under the project procedure.

Inno standard profile	Nominal dimension / packing
Overall width	150 mm
Overall height	30 mm
Base thickness	5 mm
Length	3 m per piece
Bundle	10 lengths = 30 linear metres

Dimensions follow the supplied Inno profile diagram; confirm tolerances and order drawing. No pull-out capacity or pressure rating is declared. This separate accessory is not certified by the geomembrane's GM13 specification. Matching-resin HDPE welding rod can also be supplied; confirm diameter and connection details.

Separately specified smooth HDPE options

Option	Selection requirement
Higher SCR	Agree a minimum SP-NCTL value and supporting evidence for the exact formulation.
Higher OIT / HP-OIT	Specify initial and retained values for the exposure; index results alone do not establish service life or chemical compatibility.
White / other colours	Confirm layer construction, pigmentation and exposure-specific durability.
Conductive construction	Confirm manufacture, electrical properties, continuity and the intended leak-location method.
Custom rolls	7.5 or 8.0 m nominal widths and made-to-order lengths; confirm the selected line, mass and programme.

Textured products need a separate specification. Coloured and conductive smooth variants require confirmed layer-specific data. Enhanced properties alone do not establish GM42 compliance.

Order schedule: thickness, surface / colour, SCR and OIT requirements, width / length, extrusion route, core type / dimensions, packing / delivery limits, accessories and independent testing. Product selection still requires project design, chemistry, exposure, interface and installation assessment.