Dryflex® Interior

VOC

OVERVIEW

The Dryflex Interior TPE series is designed to minimise emissions from volatile organic compounds (VOCs) and improve air quality in automotive interiors.

The compounds also fulfil specifications relating to lightfastness, flammability and mechanical performance. They offer efficient processing and the possibility of finely structured surfaces or complex geometry in part design. They are available in customer specific colours as well as black and natural.

TYPICAL APPLICATIONS: Inlay mats, fascia, cup holder liners, interior trim, buttons, seals and HVAC components.

CUSTOMISED GRADES: Below we show several grades to demonstrate possibilities, these tables do not list all available materials. Please contact us → to discuss your specific requirements.

	Hardness[1] ISO 868 Shore A	Density ISO 2781 g/cm3	Tensile Strength[2] ISO 37 Type 2 / DIN 53504 S2 MPa	Elongation at Break[2] ISO 37 Type 2 / DIN 53504 S2 %	CS 23°C / 72h ISO 815-1 Type B Method A %	CS 70°C / 22h SO 815-1 Type B Method A %	CS 100°C / 22h SO 815-1 Type B Method A %	Flammability ISO 3795 / DIN 75200 / FMVSS 302 mm / min	Lightfastness : Grey scale ISO 105-B06 (condition 3) / VW PV 1303
Grades with improved compression set, suited for HVAC flaps and interior sealings									
Dryflex INT 25A201N	25	1.09	5.0	>700	8	26	48	<80	4[3]
Dryflex INT 40A201N	40	1.09	7.4	>700	11	30	47	<80	4[3]
Dryflex INT 60A201N	60	1.09	10.6	>750	21	40	53	<80	4[3]
Grades suited for inlay mats and visible interior parts									
Dryflex INT 65A210B	65	0.97	8.5	>750	21	42	-	<80	4 - 5[4]
Dryflex INT 75A210B	75	0.97	9.7	>700	27	48	-	<80	4 - 5[4]
Dryflex INT 85A210B	85	0.97	10.8	>700	38	52	-	<80	4 - 5[4]

[1] After 15 seconds
[2] Across the flow direction
[3] After 2 periods [4] After 3 periods

Dryflex® Interior

VOC

EMISSIONS TESTING

	Gravimetric Fogging ISO 6542 / DIN 75201-B / SAE J1756-B mg	Thermodesorption (VOC) VDA 278 µg/g	Thermodesorption (FOG) VDA 278 µg/g	Headspace (TVOC) VDA 277 / VW PV 3341 / VOLVO VCS 1027, 2749 µg C/g	Odour VDA 270, B3
Dryflex INT 25A201N	0.27	57	424	2.6	2.5
Dryflex INT 40A201N	0.30	66	447	2.2	2.5
Dryflex INT 60A201N	0.32	67	397	2.4	2.0
Dryflex INT 65A210B	0.41	103	574	2.9	3.0
Dryflex INT 75A210B	0.51	109	493	4.5	3.0
Dryflex INT 85A210B	0.65	108	509	3.4	3.0

MECHANICAL PROPERTIES AFTER AGEING

	Change in Hardness [1] ISO 868 Shore A	Change in Tensile Strength [2] ISO 37 Type 2 / DIN 53504 S2 %	Change in Elongation at Break [2] ISO 37 Type 2 / DIN 53504 S2 %
Dryflex INT 25A201N 90°C / 7 days	-1	4	6
Dryflex INT 40A201N 90°C / 7 days	0	20	5
Dryflex INT 40A201N 90°C / 42 days	0	18	5
Dryflex INT 60A201N 90°C / 7 days	1	-5	1
Dryflex INT 60A201N 90°C / 42 days	1	-5	2
Dryflex INT 85A210B 120°C / 42 days	2	-0.9	0

[1] After 15 seconds
[2] Across the flow direction

Dryflex® Interior

VOC

PROCESSING & STORAGE

Dryflex Interior TPE compounds can be processed using standard thermoplastic processing methods, they are optimised for Injection Moulding. This processing information is intended only as a guide. The actual parameters will depend on the machine used and the moulding being produced.

As higher temperatures can impact odour and emissions, processing temperatures, shear rate and pressure should be kept as low as possible.

STORAGE	The product should be stored in a dry and cool place in the original packaging. Dryflex TPEs have an expected shelf life of minimum 12 months after shipment date.
PRE-DRYING	Can be processed without predrying when stored under normal conditions. If poor surface finish, bubbles, voids or streaks are seen the material should be dried for 2 to 3 hours at 80°C (176°F).
CYLINDER TEMPERATURE	We suggest not to exceed 220°C (428°F) in order to keep odour and emission values low.
MOULD TEMPERATURE	20 - 60°C (68 - 140°F)
INJECTION SPEED	The process should be a maximum of 3 seconds.
INJECTION PRESSURE	Depending on the size of the components and injection geometry.
BACK PRESSURE	Low - Medium.
HOLDING PRESSURE	Sufficiently high so there is no spring back of the screw. Start with 50% after switching from injection pressure then increase to 80%.
CYCLE TIMES	Cycle times will be governed by temperature and section thickness.
COOLING	Care must be taken to allow sufficient cooling of the section prior to demoulding in order to prevent permanent distortion of the article.

Additional processing information is available in our Processing Guides which can be downloaded from our website www.hexpolTPE.com →