D3O
THE LAB
7-8 COMMERCE WAY
CROYDON
CR0 4XA
UK

D3O® SHEETS

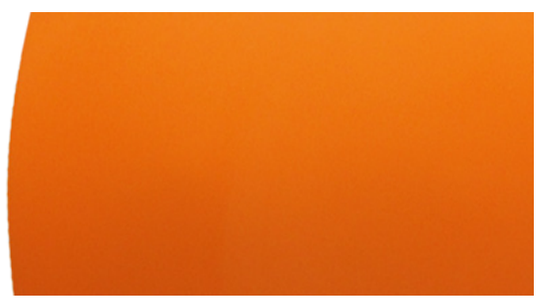
D3O has an extensive portfolio of material formulations, each one tuned for different applications. Our materials are available in sheet form across a wide variety of thicknesses, giving you complete flexibility to die-cut and integrate into your product to meet specific needs and help accelerate the product development process.

D3O® AERO

Sports · Electronics · Motorcycle · Military · Industrial

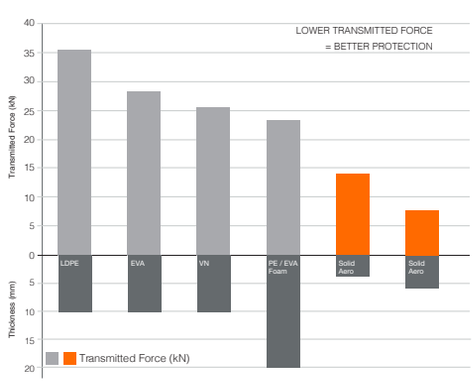
SF

A lightweight, versatile material optimised for low to moderate impact energies, D3O® Aero is frequently used for helmet liners, palm padding, back-of-hand protection and back protectors.



Material	D3O® Aero						
Product Name	Skived 2mm Sheet	Skived 4mm Sheet	Solid 3mm Sheet	Solid 4mm Sheet	Solid 6mm Sheet	Solid 8mm Sheet	Solid 10mm Sheet
Product Code	12373	12445	11190	11191	11192	11193	11211
Material Code	SF010	SF010	SF010	SF010	SF010	SF010	SF010
Dimensions (mm)	255 x 369	255 x 369	250 x 362	250 x 362	250 x 362	250 x 362	250 x 362
Thickness (mm)	2	4	3	4	6	8	10
Weight (g)	39	77	116	139	186	226	253
Hardness (Shore 00)	40	38	62	58	54	53	50
Density (g/cm3)	0.20	0.20	0.41	0.37	0.33	0.30	0.27

D3O® Aero, Comparative Impact Test (10 J)



Material	D3O® AeroMax			
Product Name	Skived 2mm Sheet	Skived 4mm Sheet	Skived 6mm Sheet	Skived 10mm Sheet
Product Code	13340	13411	13657	13591
Material Code	SF028	SF028	SF028	SF028
Dimensions (mm)	1000 x 1000	1000 x 1000	1000 x 1000	1000 x 1000
Thickness (mm)	2	4	6	10
Weight (g)	452	904	1356	2260
Hardness (Shore 00)	46	40	40	40
Density (g/cm3)	0.23	0.23	0.23	0.23

D3O® AeroMax, Comparative Impact Test (10 J)

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D3O® DECELL

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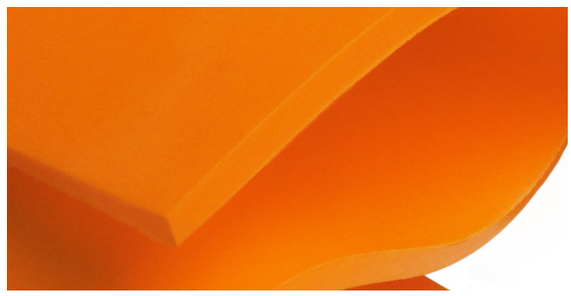
D3O® Decell is the material of choice for insoles and heel inserts, as it offers maximum protection whilst providing a softer, lighter ride. Optimised for moderate to high impact energies, it is designed for markets where high durability is key.



Material	D3O® Decell			
Product Name	Solid 4mm Sheet	Solid 6mm Sheet	Solid 6mm Sheet	Solid 10mm Sheet
Product Code	11350	11217	12105	11351
Material Code	SF007	SF007	SF007	SF007
Dimensions (mm)	250 x 362	250 x 362	347 x 377	250 x 362
Thickness (mm)	4	6	6	10
Weight (g)	147	209	295	282
Hardness (Shore 00)	70	67	67	61
Density (g/cm3)	0.39	0.37	0.37	0.30

D3O® Decell, Comparative Impact Test (10 J)

D3O® ST

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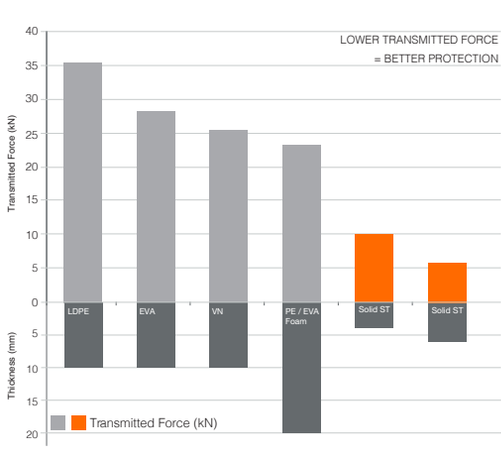
Designed for markets where high impact energies are experienced, D3O® ST is a soft, flexible and versatile material frequently used within limb, back and chest protectors.

Material	D3O® ST				
Product Name	Solid 3mm Sheet	Solid 4mm Sheet	Solid 6mm Sheet	Mesh 4mm Sheet	Mesh 6mm Sheet
Product Code	11063	10620	10983	10972	10929
Material Code	SF001	SF001	SF001	SF001	SF001
Dimensions (mm)	250 x 362	250 x 362	250 x 362	255 x 369	264 x 378
Thickness (mm)	3	4	6	4	6
Weight (g)	155	188	282	159	238
Hardness (Shore 00)	76	76	74	70	68
Density (g/cm3)	0.55	0.50	0.50	0.48	0.45

D3O® ST, Comparative Impact Test (10 J)



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D3O® XTi

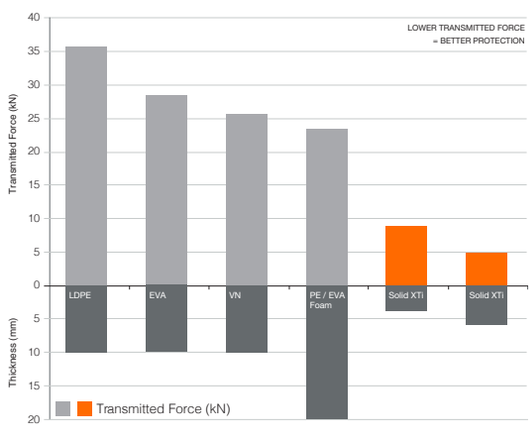
Sports Motorcycle Military Industrial

SF

Optimised for high impact energies, D3O® XTi provides soft, flexible and lightweight impact protection frequently used for limb protectors in motorcycle and sport.

Material	D3O® XTi				
Product Name	Solid 3mm Sheet	Solid 4mm Sheet	Solid 6mm Sheet	Mesh 4mm Sheet	Mesh 6mm Sheet
Product Code	11064	11081	11082	11083	11084
Material Code	SF005	SF005	SF005	SF005	SF005
Dimensions (mm)	250 x 362	250 x 362	250 x 362	255 x 369	264 x 378
Thickness (mm)	3	4	6	4	6
Weight (g)	161	196	294	206	301
Hardness (Shore 00)	76	76	78	80	78
Density (g/cm3)	0.57	0.52	0.52	0.62	0.57

D3O® XTi - Comparative Impact Test (10 J)

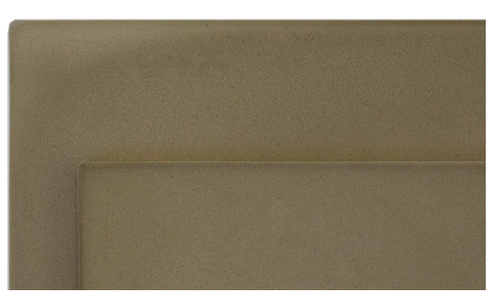


D3O® US DECELL TRUST

Military

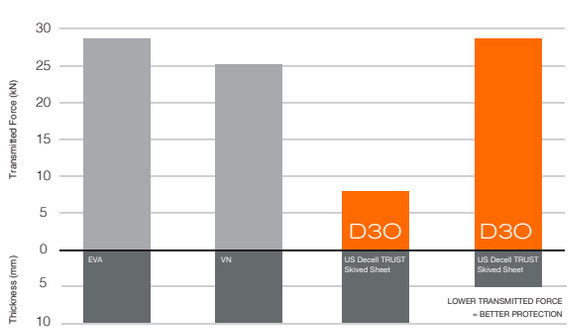
SF

Highly suitable for padding and cushioning, Berry Compliant D3O® US Decell TRUST was designed for military use in helmets and limb protection applications.



Material	D3O® US Decell TRUST			
Product Name	Skived 2mm Sheet	Skived 3mm Sheet	Skived 5mm Sheet	Skived 10mm Sheet
Product Code	13251	13620	13192	13252
Material Code	SF019	SF019	SF019	SF019
Dimensions (mm)	305 x 337	305 x 337	305 x 337	305 x 337
Thickness (mm)	2	3	5	10
Weight (g)	45	68	113	226
Hardness (Shore 00)	58	58	58	58
Density (g/cm3)	0.22	0.22	0.22	0.22

D3O® US Decell TRUST -Comparative Impact Test (10 J)



*When tested at 2.5 J, the 2mm sheet achieved 27.5kN Transmitted Force

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D3O® LITE

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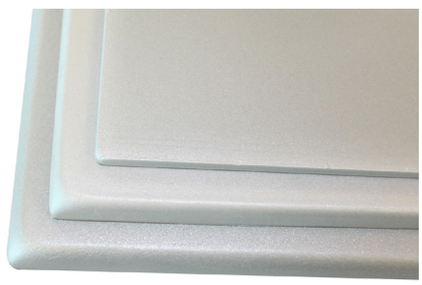
These D3O® comfort and cushioning solutions are developed for markets where impact energies are typically lower and where other performance properties, such as temperature stability and flexibility, are the key considerations.



Material	D3O® LITE			
Product Name	Low Solid 4mm Sheet	Low Solid 10mm Sheet	Mid Solid 4mm Sheet	High Solid 4mm Sheet
Product Code	13283	13286	13284	13285
Material Code	FF006	FF006	FF007	FF008
Dimensions (mm)	1000 x 1000	1000 x 1000	1000 x 1000	1000 x 1000
Thickness (mm)	4	10	4	4
Weight (g)	480	1200	880	1200
Hardness (Asker C)	32	32	55	65
Density (g/cm3)	0.12	0.12	0.22	0.30

D3O® LITE - Comparative Impact Test at 10 J

D3O® ZERO

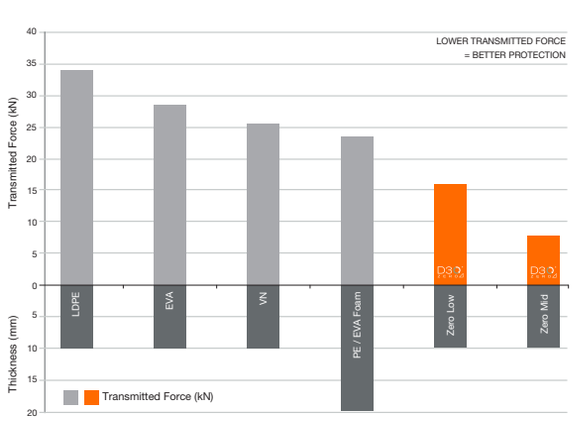
Sports · Electronics · Military · Industrial

RF

Created by recycling surplus material from D3O factories, D3O® Zero™ is the first recycled grade D3O® impact protective material, offering maximum impact protection, while working towards zero waste.

Material	D3O® Zero™							
Product Name	Solid Low 2mm Sheet	Solid Low 4mm Sheet	Solid Low 6mm Sheet	Solid Low 10mm Sheet	Solid Mid 2mm Sheet	Solid Mid 4mm Sheet	Solid Mid 6mm Sheet	Solid Mid 10mm Sheet
Product Code	13486	13488	13619	13490	13487	13489	13618	13491
Material Code	RF001	RF001	RF001	RF001	RF002	RF002	RF002	RF002
Dimensions (mm)	1000 x 1000	1000 x 1000	1000 x 1000	1000 x 1000	1000 x 1000	1000 x 1000	1000 x 1000	1000 x 1000
Thickness (mm)	2	4	6	10	2	4	6	10
Hardness (Shore 00)	49	49	49	49	60	60	60	60
Density (g/cm3)	0.24	0.24	0.24	0.24	0.29	0.29	0.29	0.29

D3O® Zero™ - Comparative Impact Test at 10 J



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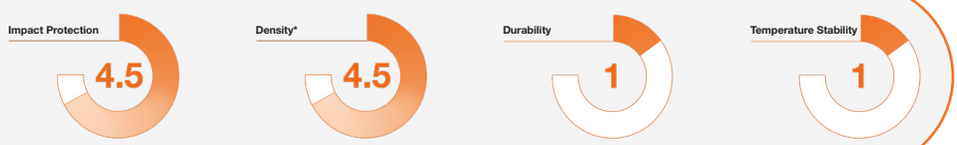
D3O® MATERIAL MATRIX

Understand the different features of the full range of D3O® materials. A higher number indicates a greater performance in that feature.

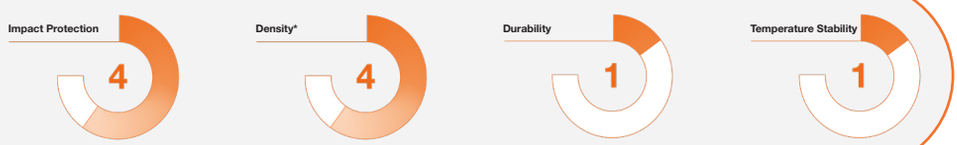
Aero - SF010

Lightweight and frequently used for helmet liners and back protectors.



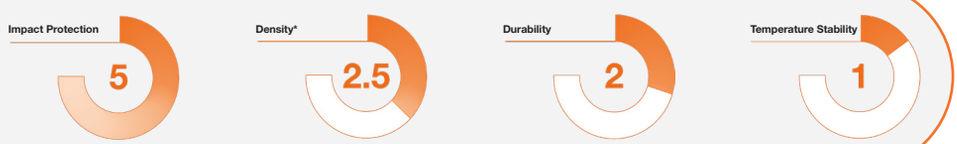
AeroMax - SF028

A slightly denser version of Aero, available in 1m x 1m sheets to increase yield and efficiency..



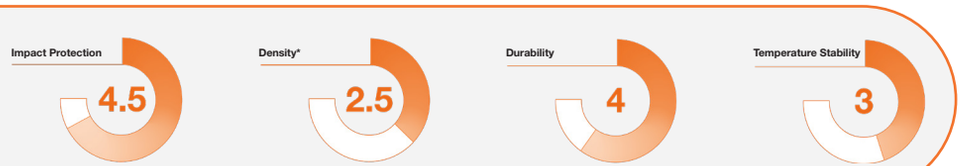
ST - SF001

Designed for markets, such as motorcycle and sports, where high impact energies are experienced.



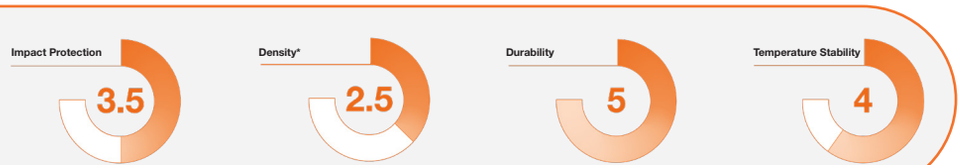
XTi - SF005

Soft, flexible and durable impact protection frequently used for motorcycle limb protectors and sport.



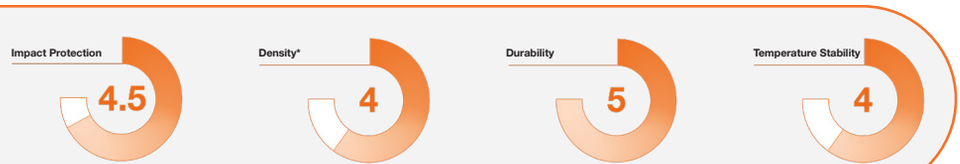
Decell B - SF007

Decell provides superior protection while being light and durable and is the material of choice for Industrial Workwear, including head and knee protection, and Footwear, including insoles and heel inserts.



US Decell TRUST - SF019

US Decell TRUST was designed for military use in helmets and limb protection applications.



*The higher the density score the less dense the material is (5 is the least dense material)

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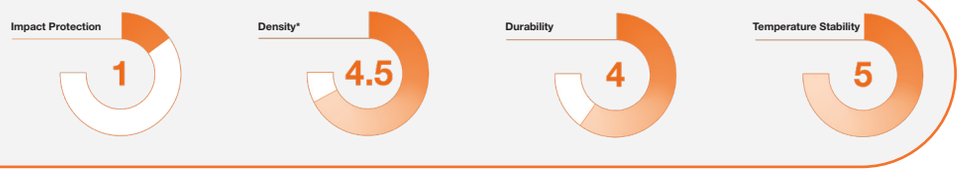
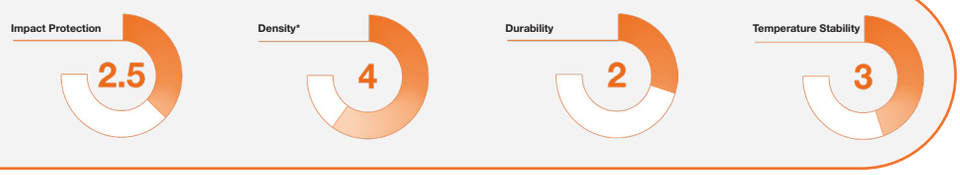
LITE

Developed for markets where impact energies are typically lower and where other performance properties, such as temperature stability and flexibility, are the key considerations.



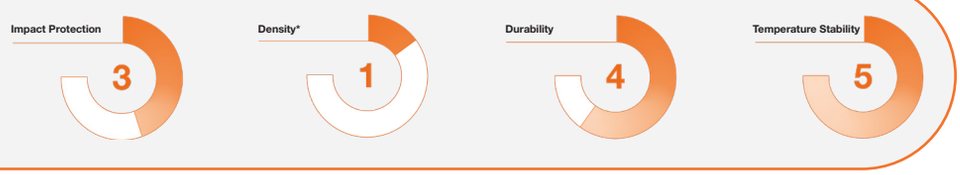
D3O® Zero™

Recycled grade D3O® impact protection material. Designed for applications where low impact energies are experienced and environmentally conscious materials are preferable.



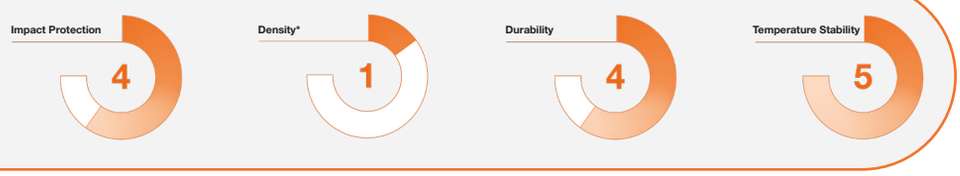
D3O® powered by DuPont™ Hytrel® - FE003

D3O® powered by DuPont™ Hytrel® addresses the market need for products and applications that benefit from an increasingly stiff material at higher frequencies or rates.



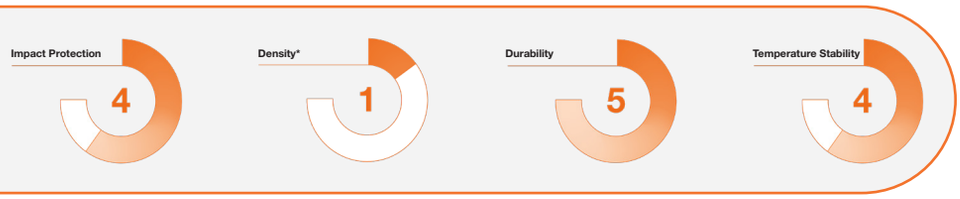
TPE

The Formable Elastomer range has been developed for injection moulding, specifically consumer electronics cases.



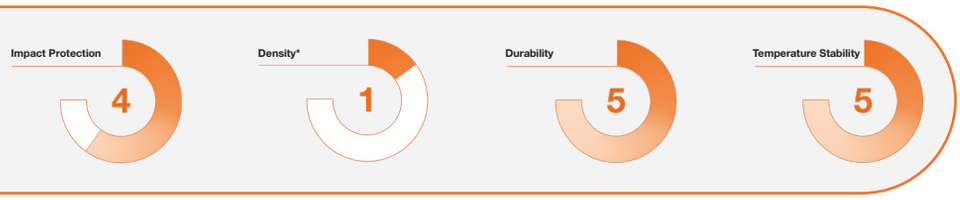
SE004

SE004 can be engineered into structures and designs that offer unrivalled shock absorption and achieve a thinner, more detailed impact protection layer.



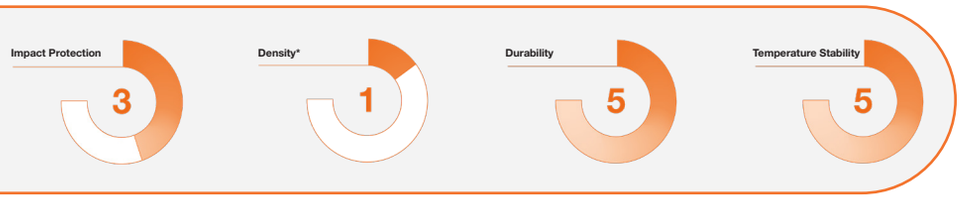
Impact Print™ (iP) - SE005/SE006

Can form into complex geometries to enhance protection, comfort, dexterity and breathability. These highly durable materials are suitable for integration onto the outside of protective garments and accessories.



Impact Additives™ (iA)

Combines advanced polymer chemistry and manufacturing techniques to deliver unmatched impact protection to traditional TPR without compromising on dexterity or comfort.



*The higher the density score the less dense the material is (5 is the least dense material)

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