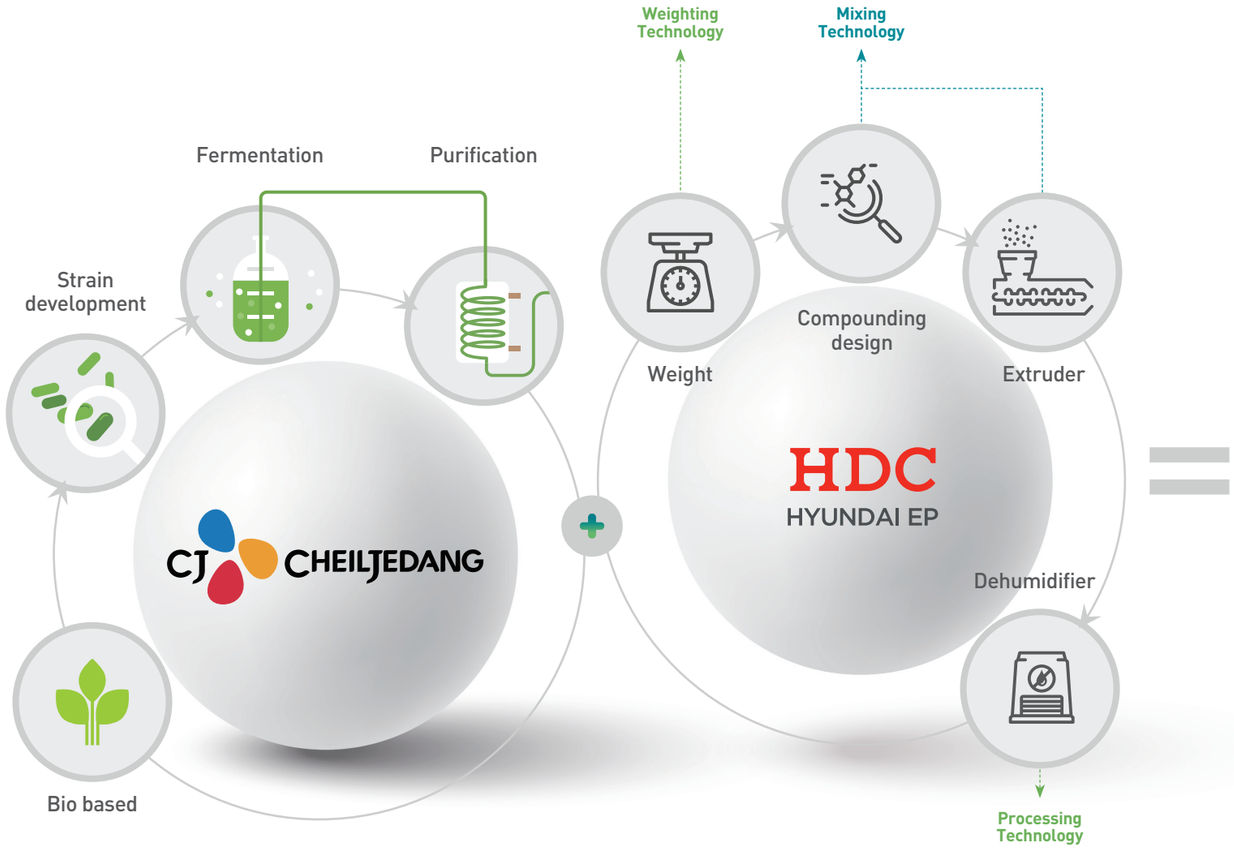
Global Green Product Hub
BIOSOL

CJ HDC biosol

About CJ HDC biosol

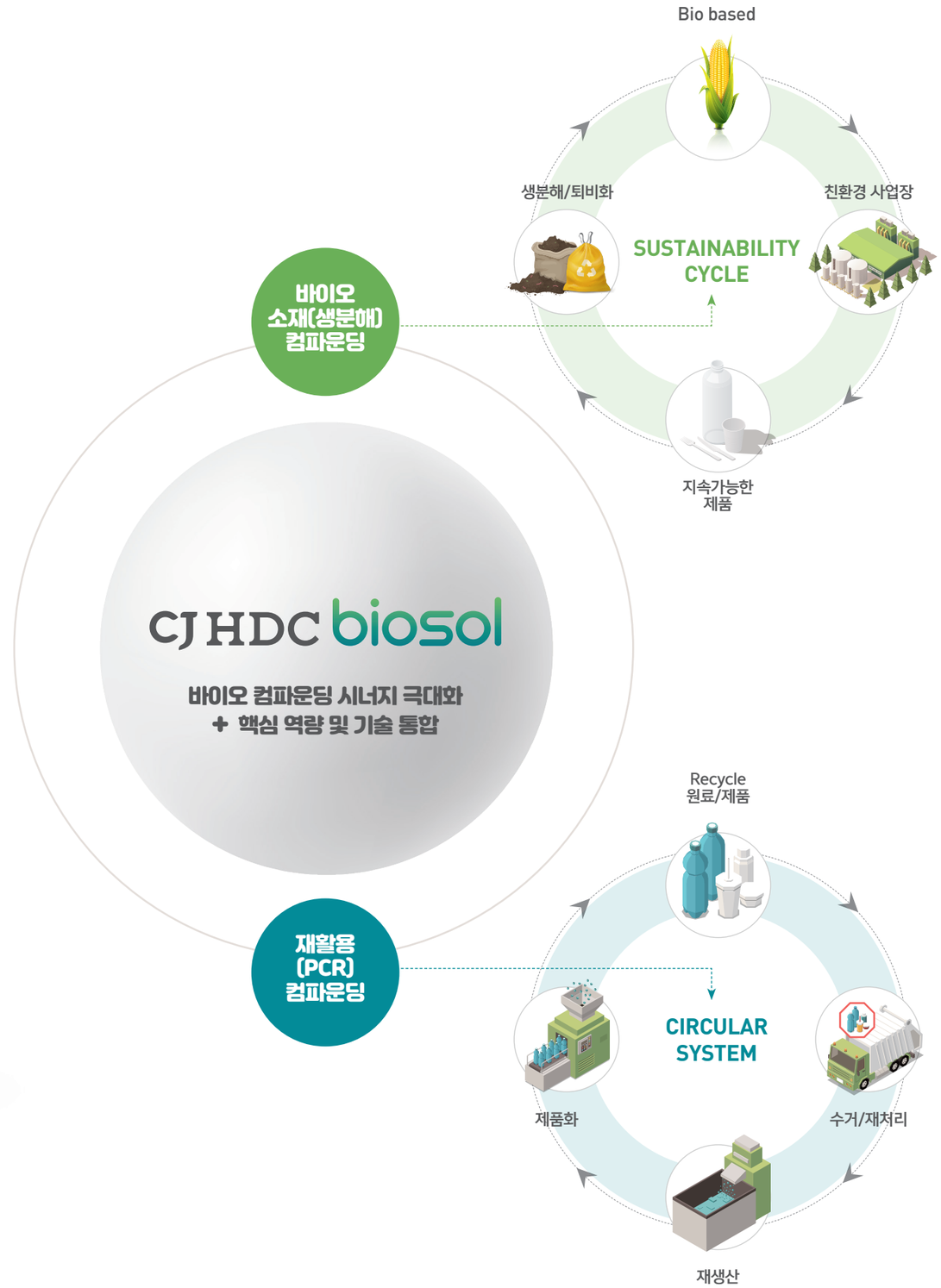
CJ HDC biosol은 CJ제일제당과 HDC 현대EP 투자를 통해 설립된
바이오 전문 컴파운딩 합작회사입니다.

CJ HDC biosol은 CJ제일제당의 PHA 소재, PLA, PBAT, 셀룰로오스 등
다양한 **바이오 소재를 기반**으로 국내 컴파운드 제조사 1위인 HDC 현대EP의
독보적인 기술 경쟁력을 더해 연간 1만톤이상의 생산 규모를 구축하고 있습니다.



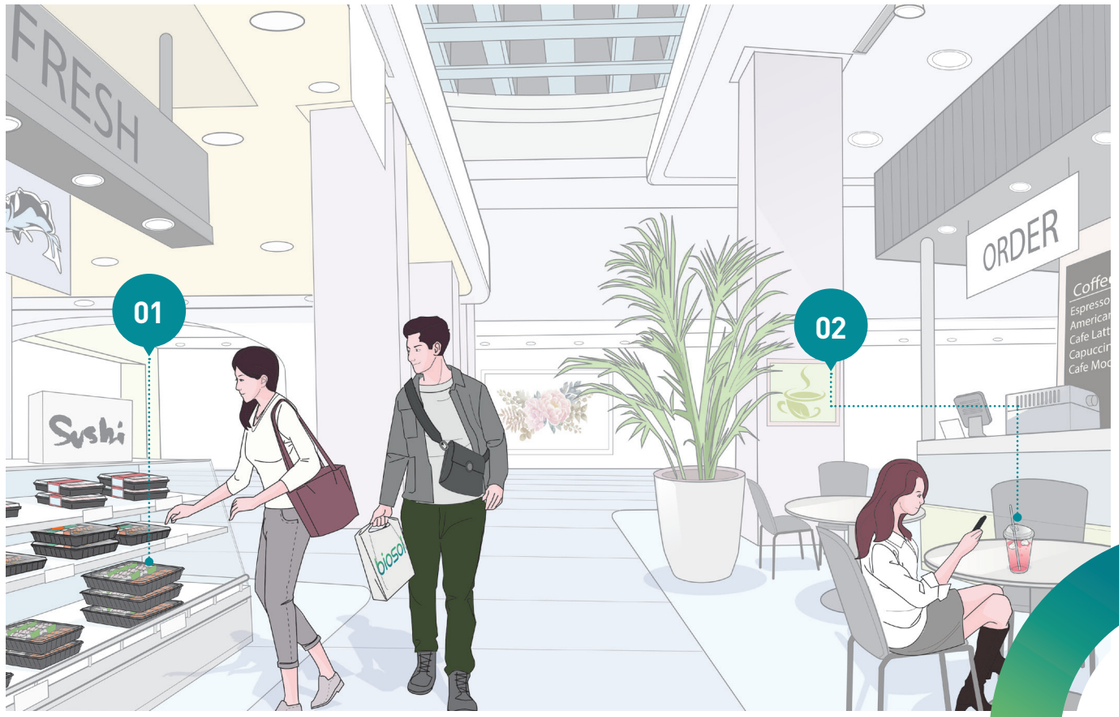
- 생명공학 기반 글로벌 BIO 기업
- 다양한 소재 확보
- 바이오 소재 용도개발 역량 보유

- 국내 PP 컴파운딩 1위 기업
- 컴파운딩 기공기술 역량 보유
- 품질관리 우수

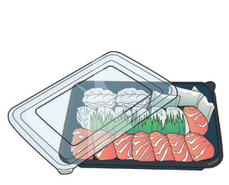


PHA PROCURMENT | COMPOUND TECHNOLOGY | LARGE SCALE PRODUCTION

CJ HDC biosol Application

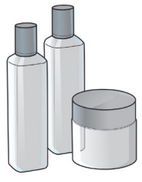


탄소 중립 & 자원 순환 구축



01. Food Container

02. Cup & Straws



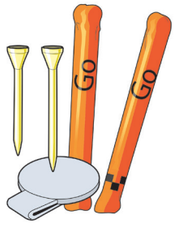
03. Cosmetic

04. Amenity

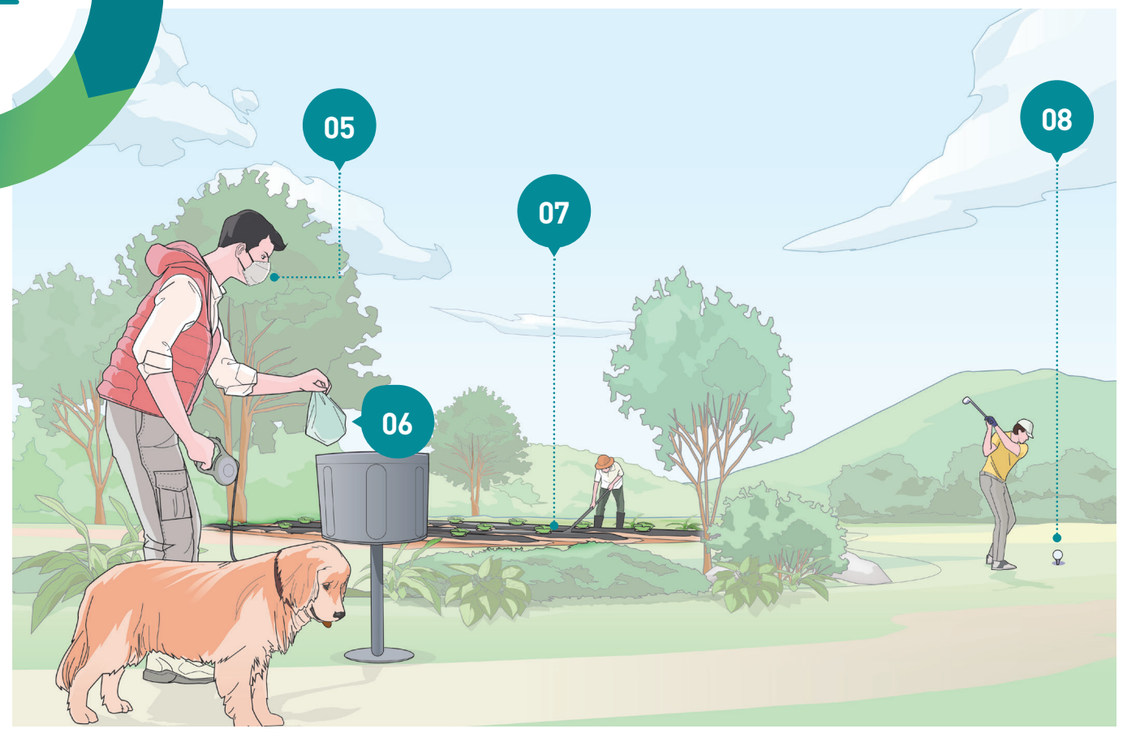
05. Hygiene & Personal care

06. Shopping bag & Compost bag

07. Mulching film



08. Sports & Leisure



FILM

PROPERTIES OF FILM

Properties	Units	Method	Result
Forms	–	-	Pellet
Tensile Strength(MD)	kgf/㎠	ASTM D638	> 300
Tensile Strength(TD)	kgf/㎠	ASTM D638	> 200
Elongation(MD)	%	ASTM D638	> 200
Elongation(TD)	%	ASTM D638	> 300
Tear Strength(MD)	kgf/㎝	ASTM D638	> 100
Melting Point[1]	℃	ASTM D3418	110~130, 150~170
Melt Flow Rate(190℃,2.16kg)	g/10min	ASTM D1238	3~6

1) Differential Scanning Calorimeter (DSC), peak of endotherm. Heating rate 10 ℃/min

PROCESSING CONDITION

Cylinder Temperature	135 ~ 150 ℃	Head Temperature	150 ~ 160 ℃
Dies Temperature	160 ~ 175 ℃		

SHEET

PROPERTIES OF SHEET

Properties	Units	ASTM No	Result
Forms	–	-	Pellet
Specific Gravity	–	D792	1.26
Hardness	Shore D	D2240	
- Max			76
- 15s			73
Tensile Strength at Break[1]	MPa	D638	45
Elongation at Break[1]	%	D638	14
Flexural Strength	MPa	D790	28
IZOD Impact Strength (UNnotched)	kJ/m	D256	Non break
IZOD Impact Strength (Unnotched, -20℃)	kJ/m	D256	45
Heat Deflection Temperature / 0.455 Mpa	℃	D648	50
Melting Point[2]	℃	D3418	150
Glass Transition Temperature[2]	℃	D3418	-16, 57
Melt Flow Rate (190℃, 2.16Kg)	%	D1238	4~5
Mold shrinkage[3]	℃	D3418	0.3

1) Injection specimens conforms to ASTM D638. Crosshead speed 50 mm/min for tensile strength.
2) Differential Scanning Calorimeter (DSC), peak of endotherm. Heating rate 10 ℃/min
3) Injection mold temperature was 25 ℃.

PROCESSING CONDITION

Dry Temperature	80 ℃ X 5 hrs		
Feed Temperature	155 ~ 175 ℃	Compression section	180 ~ 200 ℃
Melt Temperature	180 ~ 200 ℃	Nozzle	180 ~ 200 ℃

INJECTION




PROPERTIES OF INJECTION

Properties	Units	ASTM No	Result
Forms	–	-	Pellet
Specific Gravity	–	D792	1.29
Hardness	Shore D	D2240	
Tensile Strength at Break[1]	MPa	D638	44
Elongation at Break[1]	%	D638	26
Flexural Strength	MPa	D790	Non break
IZOD Impact Strength (Notched)	kJ/m	D256	8
Heat Deflection Temperature / 0.455 Mpa	℃	D648	50
Melting Point[2]	℃	D3418	165
Glass Transition Temperature[2]	℃	D3418	-16, 62
Melt Flow Rate (190℃, 2.16Kg)	%	D1238	9

1) Injection specimens conforms to ASTM D638. Crosshead speed 50 mm/min for tensile strength.
2) Differential Scanning Calorimeter (DSC), peak of endotherm. Heating rate 10 ℃/min

PROCESSING CONDITION

Dry Temperature	80 ℃ X 5 hrs		
Feed Temperature	155 ~ 175 ℃	Compression section	180 ~ 200 ℃
Melt Temperature	180 ~ 200 ℃	Nozzle	180 ~ 200 ℃

EXTRUSION

PROPERTIES OF EXTRUSION

Properties	Units	Method	Result
Forms	–	-	Pellet
Specific Gravity	–	ASTM D792	1.23
Seal Strength	kgf/15mm	ASTM F88	≥0.8
Melting Point[1]	℃	ASTM D3418	172.5
Glass Transition Temperature[1]	℃	ASTM D3418	-18.58
Melt Flow Rate(190℃,2.16kg)	g/10min	ASTM D1238	3~5

1) Differential Scanning Calorimeter (DSC), peak of endotherm. Heating rate 10 ℃/min

PROCESSING CONDITION

Dry zone temperature	95℃	* Dry zone temperature when using primer	
Feed Temperature	140~180℃	Compression section	175~210℃
Melt Temperature	180~210℃	Nozzle	175~210℃

FIBER

PROPERTIES OF FIBER

Properties	Units	ASTM No	Result
Forms	–	-	Pellet
Specific Gravity	–	D792	1.23
Melt Flow Rate (190℃, 2.16Kg)	%	D1238	8
Glass Transition Temperature[1]	℃	CJ	-16
Glass Transition Temperature[1]	℃	CJ	171

1) Differential Scanning Calorimeter (DSC), peak of endotherm. Heating rate 10 ℃/min

PROCESSING CONDITION

Dry Temperature	60 ℃ X 5 hrs		
Feed Temperature	min. 160 ℃	Compression section	min. 180 ℃
Melt Temperature	min. 170 ℃	Nozzle	min. 190 ℃

Solution Provider for Saving Our Earth

CJ HDC biosol은 바이오 소재를 기반으로 석유화학 소재를 대체하여
지속가능한 순환경제, 탄소중립 사회 실현의 솔루션을 제공합니다.

CJ HDC biosol

www.cjhdc-biosol.com

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