



CONTROL UNION



## ISCC PLUS Certificate

**Certificate Number: ISCC-PLUS-Cert-DE105-88519603**

**Control Union Certifications Germany GmbH**  
**Bornitzstr. 73-75, D-10365 Berlin, Germany**

certifies that

**HD Hyundai Chemical Co., Ltd.**  
**181 Pyeongsin 2-ro, Daesan-eup, Seosan-si,, 31902 Chungcheongnam-do**  
**REPUBLIC OF KOREA**

complies with the requirements of the certification system

**ISCC PLUS**  
**(International Sustainability and Carbon Certification)**

Place of the audit

(if different from the legal address of the system user as stated above; only applicable for traders and traders with storage):

n.a.

**This certificate is valid from 28.04.2024 to 27.04.2025.**

The site of the system user is certified as:

Co-Processing plant  
Cracker  
Specialty chemical plant  
Polymerization plant  
Trader with storage

The scope of the certificate includes the following chain of custody options:  
(not applicable for paper traders)

Mass balance

Berlin, 22.04.2024

Place and date of issue

  
Stamp, Signature of issuing party

The issuing Certification Body is responsible for the accuracy of this document.  
Version / Date: 7 / 07.02.2025





## Annex to the certificate:

### Sustainable materials handled by the certified site

(This annex is applicable for all scopes except of Trader, Trader with storage, Warehouse, Logistic centres, MTBE and ETBE)

This annex is only valid in connection with the certificate:

**ISCC-PLUS-Cert-DE105-88519603 issued on 22.04.2024**

Input material	Output material	Add-ons (voluntary) <sup>1)</sup>	Raw material category <sup>2)</sup>	SAI FSA <sup>3)</sup>	FEFAC <sup>4)</sup>
Pyrolysis oil	Naphtha		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	HDPE		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	LDPE		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	EVA		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	PP		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	Butadiene		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	Benzene		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	Mixed xylene		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	Ethylene		Bio-circular Circular	n.a.	n.a.
Pyrolysis oil	Propylene		Bio-circular Circular	n.a.	n.a.
Naphtha	HDPE		Bio Circular Bio-circular	n.a.	n.a.
Naphtha	LDPE		Bio Circular Bio-circular	n.a.	n.a.
Naphtha	EVA		Bio Circular Bio-circular	n.a.	n.a.

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Naphtha	PP		Bio Circular Bio-circular	n.a.	n.a.
Naphtha	Butadiene		Bio Circular Bio-circular	n.a.	n.a.
Naphtha	Benzene		Bio Circular Bio-circular	n.a.	n.a.
Naphtha	Mixed xylene		Bio Circular Bio-circular	n.a.	n.a.
Naphtha	Ethylene		Bio Circular Bio-circular	n.a.	n.a.
Naphtha	Propylene		Bio Circular Bio-circular	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	Co-processed oil to be used for replacement of naphtha	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	HDPE	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	LDPE	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	EVA	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	PP	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	Butadiene	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	Benzene	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	Mixed xylene	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	Ethylene	205-01	Bio	n.a.	n.a.
Crude oil (Soybean), Refined oil (Soybean)	Propylene	205-01	Bio	n.a.	n.a.

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Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	Co-processed oil to be used for replacement of naphtha	205-01	Bio-circular	n.a.	n.a.
Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	HDPE	205-01	Bio-circular	n.a.	n.a.
Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	LDPE	205-01	Bio-circular	n.a.	n.a.
Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	EVA	205-01	Bio-circular	n.a.	n.a.

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Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	PP	205-01	Bio-circular	n.a.	n.a.
Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	Butadiene	205-01	Bio-circular	n.a.	n.a.
Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	Benzene	205-01	Bio-circular	n.a.	n.a.
Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	Mixed xylene	205-01	Bio-circular	n.a.	n.a.

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Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	Ethylene	205-01	Bio-circular	n.a.	n.a.
Used cooking oil (UCO), Used cooking oil (UCO) entirely of veg. origin, Palm oil mill effluent (POME) oil, Animal fats from rendering (category 1 – 3), Food waste, Waste/residues from processing of vegetable or animal oil	Propylene	205-01	Bio-circular	n.a.	n.a.
1) ISCC PLUS add-ons (voluntary application, see <a href="http://www.iscc-system.org">www.iscc-system.org</a> for further information): <ul style="list-style-type: none"><li>202-04: Food Security Standard</li><li>202-07: Low ILUC-risk feedstock</li><li>205-01: GHG emission requirements</li><li>205-02: Consumables</li><li>205-03: Non GMO for food and feed</li><li>205-04: Non GMO for technical markets</li></ul>					
2) Bio raw materials complies with the ISCC Principles 1 – 6 for the cultivation and harvesting of sustainable biomass. Bio-circular and circular raw materials meet the ISCC definition of waste or residue, i.e. it was not intentionally produced and not intentionally modified, or contaminated, or discarded, to meet the definition of waste or residue. For circular raw materials, the voluntary information about PIR (post-industrial recycling) or PCR (post-consumer recycling) material can be stated in brackets.					
3) Farm Sustainability Assessment (FSA) was developed by the Sustainable Agriculture Initiative (SAI) SAI Gold Compliance: ISCC Compliant can be claimed as “SAI FSA 3.0 Gold Level Equivalence”					
4) FEFAC: European Feed Manufacturers’ Federation. ISCC compliant materials can be claimed as “in line with FEFAC soy sourcing guidelines 2015”					