CERTIFICATE

Recyclability of Packaging Material

KRAIBURG TPE GmbH & Co. KG
Friedrich-Schmidt-Strasse 2
84478 Waldkraiburg | Germany

The company receives the certification of recyclability for the following group of packaging materials.

Designation

TPS (Styrenic Block Copolymer)
as thermoplastic elastomer component in HDPE-based packaging applications
Different TPS grades with a density < 1.00 g/cm³, listed in the annex of this certificate.

Test result

Assessment via path:	**Path 2: Polyethylene**
Recyclate (final product):	**HDPE regranulate**

Test standard:

- **CHI-C8-POR-1** – "Recycling compatability test for PO-rigid packaging"
- Tested reference/recyclate application: **Injection moulding**
- Based on **CHI assessment catalogue** for EU-wide certification

According to the CHI standard, these materials had no significant quality-reducing effects on the recyclate in the tested recycling applications and material combinations with realistic concentrations for the materials. Based on this assessment, the tested materials can be rated as:

Conditionally Compatible

in PE-rigid recycling, with the reference application injection moulding

Tested conditions for this classification: The material is used in typical proportions (less than 10 % by weight) in the packaging design, which results in realistically low concentrations (less than 1 % by weight) in the recyclate. The recyclability of a packaging is dependent on the final packaging design for which this material will be used (including composition, size, color, and others).

This certificate (No. 2434-2022-002818-W4) is valid until **31/03/2027** (1 year upon issue) and will lose validity in case of qualitative or quantitative changes of material properties or chemical compositions.

Aachen, dated 03/03/2026 (rev. 19/03/2026)

Von der Industrie- und Handelskammer Aachen
Dr.-Ing. Roland Bothor
Sachverständiger für Verpackungsentsorgung
öffentlich bestellt und vereidigt

Dr. Roland Bothor
Publicly appointed and sworn expert for packaging disposal
Competent authority:
Chamber of Industry and Commerce, Aachen
The detailed results are documented in the corresponding test report (No. 2434-2022-002818).

CHI | cyclos-HTP Institute

Institut cyclos-HTP GmbH
Pascalstrasse 15 - 52076 Aachen
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certified by institute cyclos-HTP
recyclable

ANNEX

to Certificate No. 2434-2022-002818-W4

List of related articles

This certificate is only valid for the groups of TPS grades by Kraiburg TPE, listed in the following tables:

Grade name	*Related material codes*
RC#OGD-a_x	# = 3-9
RC#OGG-a_x	# = 4-9
TC6CHT-a_x	
TF#AA%-a_x	# = 4-9
TF#ATL-a_x	# = 3-9
TF#BTL-a_x	#=3-9
TF#CGT-a_x	# = 3-9
TF#CMA-a_x	# = 5-8
TF#CMB-a_x	# = 8-0
TF#FHT-a_x	# = 3-8
TF#OGL-a_x	# = 3-9
TF#OQD-a_x	# = 3-9
TF#PAO-a_x	# = 4-9
TF#STE-a_x	# = 3-8
TF#SVA-a_x	# = 3-4
TF#SVF-a_x	# = 3-4
TF#THT-a_x	# = 3-8
TM#LFT-a_x	# = 3-9
TM#MED-a_x	# = 3-9
TM#MEP-a_x	# = 3-9

Grade name	
HRB9000/131	HTF8500/93_x
HRB9000/132	HTF8787/132
HRB9000/133	HTF8787/133
HRB9000/160	HTF8787/134
HRB9000/161	HTF8787/95_x
HRB9000/162	HTF8787/96_x
HTC9480/125_x	*HTF9471/110*
HTC9480/126_x	HTF9471/80_x
HTC9480/133_x	HTF9483/91_x
HTC9480/134_x	HTF9486/16_x
HTC9480/135_x	HTF9487/02_x
HTC9480/141_x	HTF9488/428_x
HTC9480/144_x	HTF9488/459_x
HTF2147/129_x	*HTF9488/779*
HTF2147/95_x	HTM8503/91
HTF2150/175	HTM8506/54
HTF2150/176	HTM8510/390_x
HTF2150/178	HTM8510/445_x
HTF2150/191	STF8326/772
HTF6040/80_x	TF7GST-a_x
HTF8326/450	TF9ABA-a_x
HTF8326/723	TM4RST-a_x

-a = either no suffix or "-" followed by 3-4 digits alphanumeric code to define the material colour or minor modifications.

x = 4-5 digit alphanumeric code to define the packaging unit (always present). The underscore before the placeholder "x" is integral to the compound designation.

% = single capital letter (A – H).

= hardness indicator; 1 digit number, limits are given in each line where relevant.

New types on this extended certificate are marked in *italics*.

For additional compounds that fulfil criteria of the underlaying study, KRAIBURG TPE is entitled to use this certificate as well. However, on request reconfirmation is required by cyclos-HTP Institute.

Document history

2434-2022-002818 Certificate (date: 14/03/2022 | validity: 31/03/2023)

- Original certificate document with test report No. 2434-2022-002818
- Certificate limited to countries with existence of a relevant recycling infrastructure for rigid HDPE packaging

2434-2022-002818-W1 Certificate (date: 01/03/2023 | validity: 31/03/2024)

- Re-certification for one further year with unchanged test report No. 2434-2022-002818.
- Expansion of the packaging material group with TPS grades “HTF6040/80_x”, “HTF9488/428_x”, “HTM8510/390_x”, “HTM8510/445_x”
- Change of material code “TF#AA%-a_x” to # = 4-9
- No more countries listed.

2434-2022-002818-W2 Certificate (date: 05/03/2024 | validity: 31/03/2025)

- Re-certification for one further year with unchanged test report No. 2434-2022-002818.
- Expansion of the packaging material group with TPS grades “RC#OGD-a_x” (# = 3-9), “TC6CHT-a_x”, “TF#CMB-a_x” (# = 8-0), “HRB9000/131”, “HRB9000/132”, “HRB9000/133”, “HRB9000/160”, “HRB9000/161”, “HRB9000/162”.
- The grade TF8CMB is now integrated in “TF#CMB-a_x” (# = 8-0).

2434-2022-002818-W3 Certificate (date: 04/03/2025 | validity: 31/03/2026)

- Re-certification for one further year with unchanged test report No. 2434-2022-002818.
- Expansion of the packaging material group with TPS grades “HTF8326/450”, “HTF8326/723“, “HTF8787/132“, “HTF8787/133“, “HTF8787/134“, “HTM8503/91“, “HTM8506/54“, “STF8326/772“, “TF#BTL-a_x” (#=3-9).

2434-2022-002818-W4 Certificate (date: 03/03/2026 | validity: 31/03/2027)

- Re-certification for one further year with unchanged test report No. 2434-2022-002818.
- Based on the definitions in the latest CHI assessment catalogue and the CHI guideline, the categorisation of the test result has been changed from “Compatible” to “Conditionally compatible” and the tested conditions are added.
- Expansion of the packaging material group with TPS grades “HTF2150/175”, “HTF2150/176”, “HTF2150/178”, “HTF2150/191”, “HTF9471/110”, “HTF9488/779”.