

TERMS OF ACCEPTANCE FOR THE RECOVERY OF ENERGY FROM RDF IN THE WASTE-TO-ENERGY PLANT (WTE PLANT/EVA)

- **Conditions of acceptance.**

Waste acceptance requires a confirmed waste recovery and disposal record as defined in the German Regulation on Waste Recovery and Disposal Records [*NachweisV*] or the EU Waste Shipment Regulation.

Waste will only be accepted if it is listed in the annex to the EfbV certificate. Waste types that are unlisted or flagged as exceptions in the certificate will require regulatory approval. **EfbV certificate**

The drivers employed by the transporter must speak enough German and in all other regards be able to follow the instructions given by plant personnel.

The following terms of acceptance apply solely to refuse-derived fuel (RDF).

- **Terms of acceptance: waste types**

Refuse-derived fuel (RDF)

- All material must be delivered to 100% in a loose, pre-shredded and conveyable form.
- The shipments must not contain any out-of-specification tramp materials. See the following tables, "Physical characteristics" and "Tramp materials". Tramp materials are non-combustible items made from the following materials:
 - Glass, ceramic and stone
 - Metal parts (especially aluminum and iron)
 - Clumps, ragger wires or pulper ropes
- Mixtures must be homogeneous and uniform
- The RDF must be organoleptically neutral; in particular, it must not emit any overly unpleasant odors.
- No solvents. LEL < 10 %
- Free of substances that can be expected to react with water.
- No unbound liquid content in the waste shipment.
- Unloading does not produce excessive amounts of dust.

- Terms of acceptance: physical characteristics**

Parameter	Unit	Max. limit	Min. limit	Other conditions
Grain size a,b,c	mm	100% < 500		Except for films
a,b,c	mm	90% < 300		Except for films
a + b + c	mm	< 700		Except for films
Films and tapes ^[1] _{SEP} a, b	mm	100% < 700		
a, b	mm	90% < 500		
Bulk density	kg/m ³	500	150	
Lower heating value, H _{u, WM}	kJ/kg WM	18,000		Ø 13,400

- Terms of acceptance: tramp materials**

Parameter	Unit	Max. limit	Min. limit	Average
Σ following tramp materials: Ceramic, stones, porcelain, glass, Fe metals, aluminum	M-% OM	10		4
Ceramic, stones, porcelain, glass	M-% OM	7		2
Glass	M-% OM	2		1
Fe metals	M-% OM	5		3
Aluminum (Al)	M-% OM	1		0.4

- Terms of acceptance: constituents**

Parameter	Unit	Max. limit	Min. limit	Average
Water content	M-% OM ¹	45	7.0	
Ash content	M-% DM	30		20
Sulfur (S)	M-% DM	1.3 (*)		0.8
Fluorine (F)	M-% DM	0.1		0.02
Chlorine, total (Cl)	M-% DM	1.3 (*)		1
Chlorine, organic (Cl, org.)	M-% OM	1.3		
Chloride (Cl ⁻)	M-% DM	1.3		
Cadmium (Cd)	mg/kg DM ²	20		10
Mercury (Hg)	mg/kg DM	2		1

Thallium (Tl)	mg/kg DM	2		1
Antimony (Sb)	mg/kg DM	80		25
Arsenic (As)	mg/kg DM	15		5
Lead (Pb)	mg/kg DM	500		150
Cobalt (Co)	mg/kg DM	15		6
Chromium (Cr)	mg/kg DM	250		70
Copper (Cu)	mg/kg DM	1,000 ³		350
Nickel (Ni)	mg/kg DM	200		80
Selenium (Se)	mg/kg DM	5		3
Tellurium (Te)	mg/kg DM	5		3
Zinc (Zn)	mg/kg DM	1,500 ³		250
Tin (Sn)	mg/kg DM	150		30
Σ (As, Hg, Tl)	mg/kg DM	1,000		
Σ (As, Pb, Cd, Cr, Co, Cu, Ni, Hg, Se, Tl, Zn, Sn)	mg/kg DM	2,500		
Water-soluble Na+K	mg/kg DM	10,000		5,000
PCB total ⁴	mg/kg DM	5		
PCP ⁵	mg/kg DM	5		
Chlorobenzenes ⁵	mg/kg DM	5		

Footnotes:

* The parties may agree to higher chlorine and sulfur values depending on the plant's operating permit and the technical and financial justifiability for the WTE plant.

¹ M-% OM means the mass percent of the original/wet matter

² mg/kg DM is the weight in the dry matter

³ Higher values may be accepted as long as the metal content is demonstrably present in metallic form

⁴ Determination of PCB content by adding together the concentration of the congeners 28, 52, 101, 138, 153, 180 as per DIN 38414-20; Rev. 1996

⁵ The determination of chlorobenzene and PCP content will be required on a case-by-case basis depending on the origin of the waste

- The waste generator must perform its own analyses and submit the results to T2C. Analyses are required after delivering 1,000 Mg of waste, or once every month, whichever is less frequent. ^A
- If the metal compounds in the waste are unknown, the lowest concentration value defined in the German Waste List Regulation (AVV) for this metal element will apply.
- Dioxins and furans are unlikely given the source of the waste used in RDF production. If any relevant analyses exist, they will immediately be provided to T2C.

^A Condition imposed in the T2C operating permit

Bunker exclusion list:

- Waste classified as “hazardous waste” according to the Waste Catalog Regulation [AVV]
 - Waste classified as very toxic, toxic, highly flammable, flammable or oxidizing
 - Self-igniting, explosive substances and ammunition waste
 - Combustible gases
 - Chemical and biological warfare agents
 - Asbestos-containing substances and peroxides
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- **Transportation, vehicle and driver requirements**
 - The WTE plant premises is governed by the [plant regulations](#) as they may change from time to time
 - Transport vehicles must be low-noise, energy-efficient and comply with the UVV accident prevention regulations for vehicles.
 - Vehicles must meet the Euro 5b emission standard or better.
 - Transport containers must be checked for foreign objects before being loaded.
 - All waste shipments must be covered with a tarpaulin. Transport containers must be covered with a tarpaulin to prevent possible odor and dust nuisance. The cargo area must be re-covered with the tarpaulin after unloading.
 - Vehicles and transport containers must be constructed in such a way to prevent solid leaks and avoid contaminating the traffic routes.
 - Shipments must be delivered in tipper semi-trailers or walking floor vehicles. It is not possible to unload skips (roll-off containers).
 - Unloading must be completed within 45 minutes, including the emptying of residues and clean-up, to allow us to keep the logistics processes running smoothly.
 - Drivers must have the personal protection equipment (PPE) required at the WTE plant. Drivers must voluntarily wear work clothing and PPE at all times while in the tipping hall.
 - **PPE includes:**
Safety shoes (DIN EN 345, S3), hard hat (DIN EN 397, DIN EN 14 052), high-visibility vest (DIN EN 471), safety glasses (DIN EN 166), respirator (DIN EN 149, FFP3) and buttoned-up work clothing (long trousers, long- or short-sleeved shirt)

- **WTE plant delivery times and contact**

Waste acceptance requires prior scheduling in the WTE plant's VuES/SDS-system.

- The driver must present the VuES/SDS scheduling sheet for the shipment before inbound weighing at the scale.
- Trucks can access the plant premises through the Southwest Gate (Tor Süd-West) on Otto-Horn-Straße. Building H318 is the unloading point for the facility.

Delivery times

- Monday to Friday from 6:00 am to 5:00 pm (last entry)
- Different times by prior agreement

Contact: Quantity Planning and Quality Assurance

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