



Compliance with the New Lead Restriction

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The European Voice of Plastic Pipe and
Fitting Manufacturers

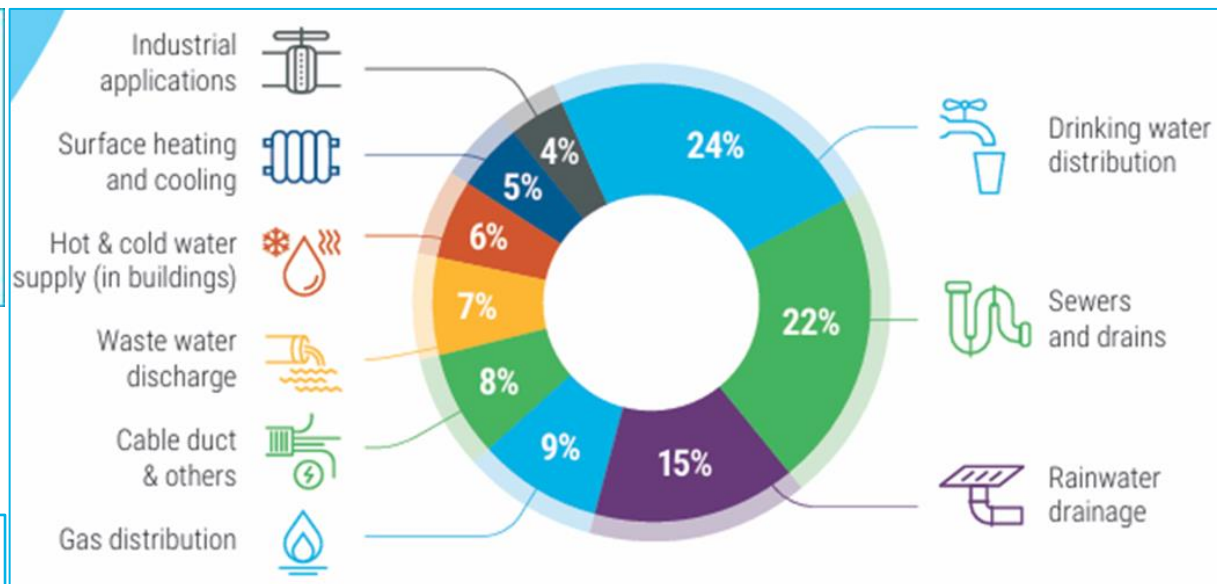
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About TEPPFA

TEPPFA Introduction

TEPPFA members represent:



Founded 1991 as a multimaterial EU association

TEPPFA Members 2024

13 Company members



4 Associated members



Supporting member



14 National Association members



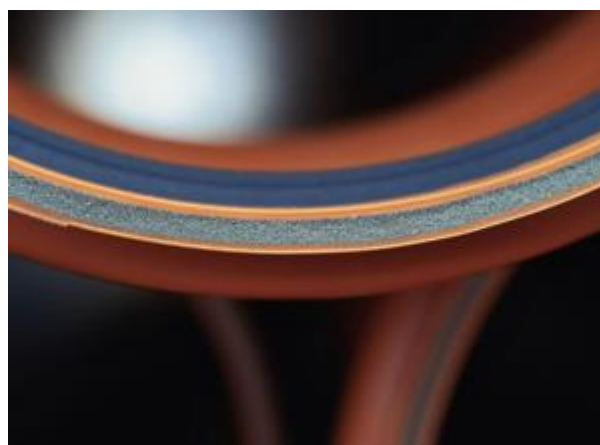
TEPPFA Vision



Plastic pipes can play a major role in achieving the objectives of a large number of the United Nations Sustainable Development Goals (SDGs) by 2030.

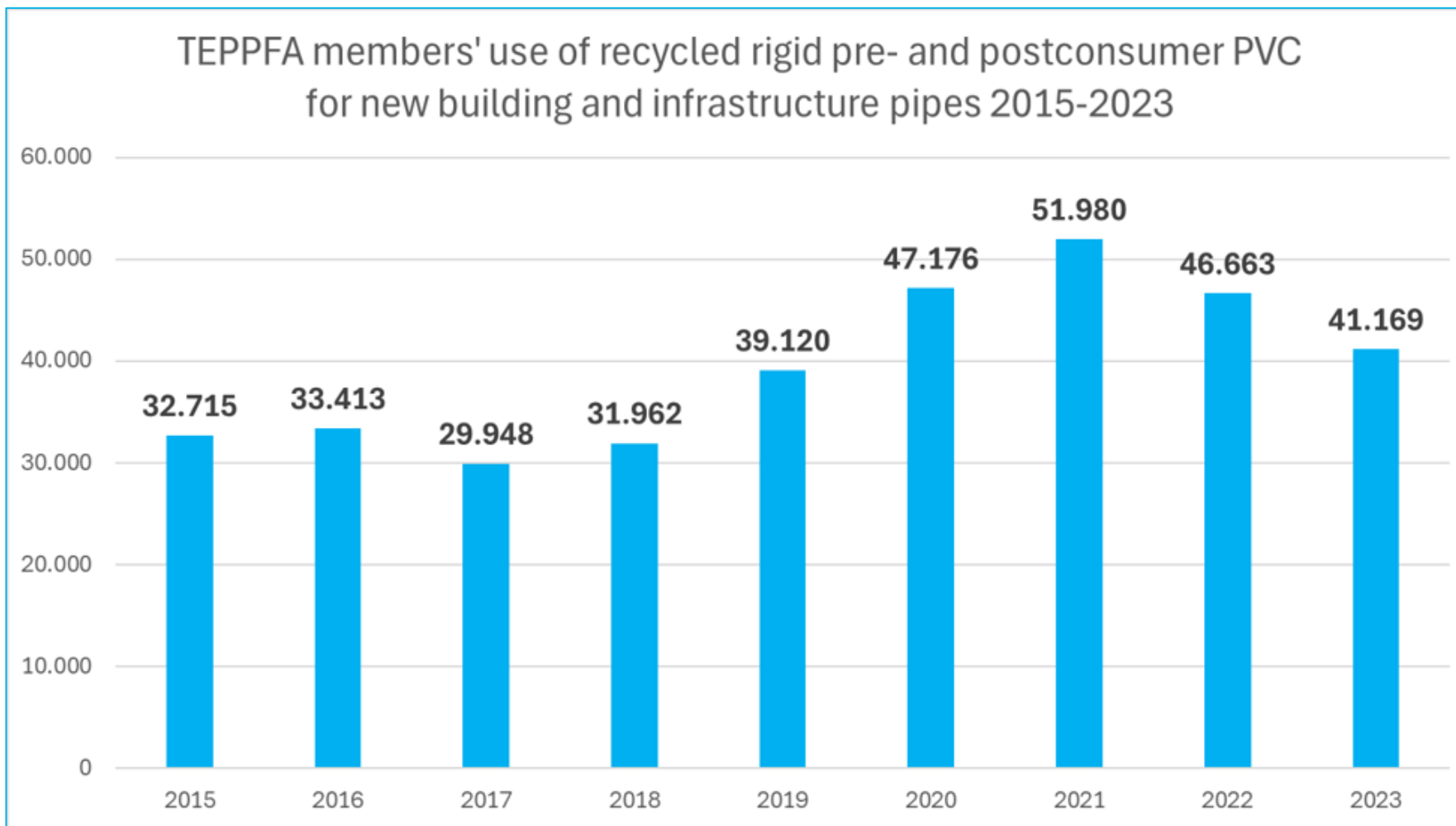
Recycled uPVC Content in Building & Infrastructure Pipes

Recycled uPVC Content in Building & Infrastructure Pipes



- 3-layer non-pressure pipe for sewage
 - Outer and inner skin of Pb free virgin material
 - Core layer of recycled rigid PVC
 - Mixture of profiles (window, shutter, cladding) and pipes
 - Often, but not necessarily foamed without loss of strength. Foaming to make product lighter, easier to install.
 - > 30 years standard product in the product range of EU PVC pipe manufacturers
 - Netherlands: % with KIWA or DNS certification
- PVC cable ducts

Recycled uPVC Content in B & C Pipes 2015 - 2024



Source: VITO June 2024

Recycled uPVC Content in B & C Pipes 2015 - 2024

Origin of the recycled rigid pre- and post-consumer PVC

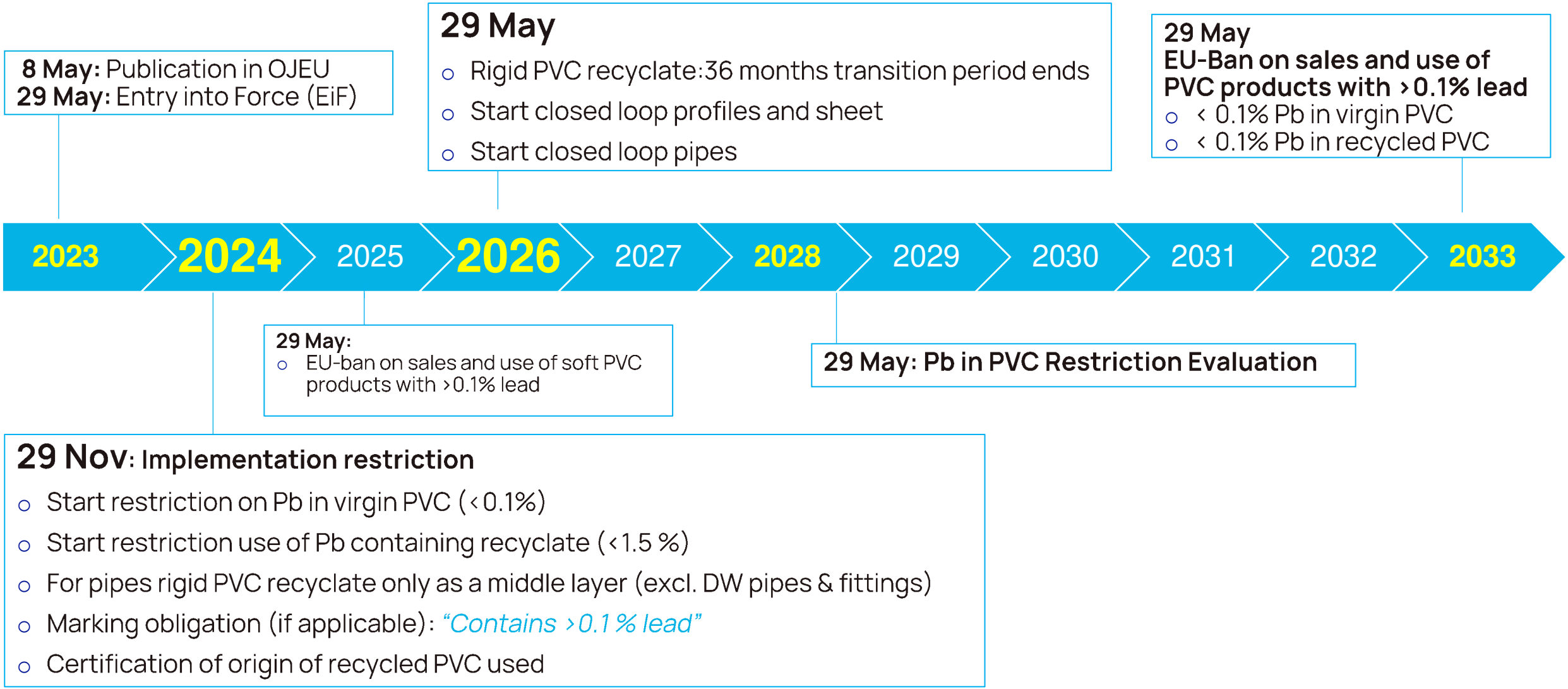
Description	Total (tons)	Total (%)
Pipes	586,0	1,4%
Profiles	1064,0	2,6%
Mixed pipes/profiles/other*	39518,9	96,0%
Total	41168,9	100,0%

- TEPPFA members represent 65-70% of the EU PVC pipe market
 - Total market use of recycled rigid PVC in pipes in 2023: **60,000 tonnes**
- Origin: mixed pipes and profiles = Pipes: 1/3 and Profiles: 2/3
- Expected lifetime of PVC pipes in building and infrastructure
 - Below ground: 100+ years
 - Above ground: 50+ years

Compliance with the New Lead Restriction

1. Timeline
2. Certification of Origin
3. Marking obligation
4. Mandatory closed loop for profiles and sheet

Compliance with the New Lead Restriction



Compliance with the New Lead Restriction

2. Certification of origin from 29 November 2024 onwards

COMMISSION REGULATION (EU) 2023/923 as regards lead and its compounds in PVC

- (20) Considering the difficulties to determine if PVC in articles is of recovered origin, suppliers of PVC articles benefitting from derogations associated to their content in recovered PVC should be able to prove the recovered origin of the material by presenting documentary evidence.

In the Union, [several certification schemes](#), all of which are based on technical specifications in EN 15343:2007 (10), [are available to recyclers](#) to support claims on the traceability of recovered PVC. Given the lack of suitable practical means for enforcement authorities to verify recovery claims associated to recovered PVC in imported articles, such claims should be substantiated via independent [third-party certification](#).

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2. Certification of origin from 29 November 2024 onwards (cont.)

COMMISSION REGULATION (EU) 2023/923. Annex

Suppliers of PVC articles containing recovered rigid PVC shall **submit to national enforcement authorities upon request documentary evidence** to substantiate the claims on the recovered origin of the PVC in those articles.

Certificates issued by schemes to provide proof of traceability and recycled content, such as those developed according to EN 15343:2007 or equivalent recognised standards, may be used to substantiate such claims for PVC articles produced in the Union.

Claims made on the recovered origin of the PVC in imported articles shall be accompanied by a certificate that provides equivalent proof of traceability and recycled content, issued by an independent third party.

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2. Certification of origin from 29 November 2024 onwards (cont.)

Options presented to TEPPFA members: option 1

Inspection certificate 3.1 according to EN 10204

To : *[name pipe manufacturer]*

Ref. : PVC recyclate in compliance with EC regulation C(2023) 2785 dated 3.5.2023 (lead derogation) and agreed specification 123456767/[23]

Order : *[code to be defined by recycler]*

Product : *[product name recyclate if applicable]*

Batch : *[batch size to be defined by recycler, e.g. production run week 46 2023]*

Herewith we declare that the PVC-U recyclates produced by *[recycler name + production location]* complies with the EC lead derogation and the agreed specification 1234567/[YEAR].

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2. Certification of origin from 29 November 2024 onwards (cont.)

Options presented to TEPPFA members: option 2

RecyClass | PVC LEAD DEROGATION CERTIFICATION NEEDS

RECYCLER	CONVERTER
<ul style="list-style-type: none">• Traceability of recycled plastics (EN 15343:2007) profiles & sheets to profiles & sheets only (<i>3 years after entry into force of the Regulation</i>)• Origin of material: controlled-loop• Procedure to monitor the lead concentration in PVC Recycled Output ($\geq 1.5\%$) + Reporting to the customer (internal and external)• Output specification/DoC• Control of the output market (controlled-loop a to f; after 3 years: a to d).	<ul style="list-style-type: none">• Traceability of recycled plastics (EN 15343:2007)• Purchase specification: lead content declaration ($\geq 1.5\%$); Origin of material• Monitoring of lead concentration in Input• Controlled-loop: Use of recyclates in X applications• Labelling of Output Products: if articles contain $\geq 0.1\%$ lead it must be labelled visibly with the statement "Warning: contains lead"

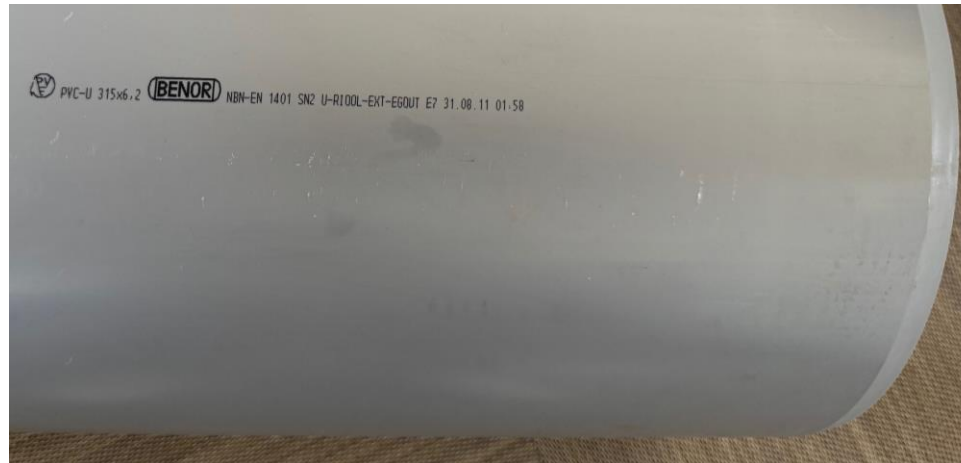
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3. Marking obligation from 29 November 2024 onwards

COMMISSION REGULATION (EU) 2023/923. Annex

“Suppliers of PVC articles containing recovered rigid PVC with a concentration of lead equal to or greater than 0,1% by weight of the PVC material shall ensure, before placing those articles on the market, that they are visibly, legibly and indelibly marked with the statement: “**Contains \geq 0,1%lead**”.

Where the marking cannot be provided on the article due to the nature of the article, it shall be on the packaging of the article.



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4. Mandatory closed loop for profiles and sheet from 28 May 2026 onwards

COMMISSION REGULATION (EU) 2023/923. Annex

“...By way of **derogation**, paragraph 15 shall not apply to the following PVC articles containing recovered rigid PVC until **28 May 2033**, if the **concentration of lead is lower than 1,5 % by weight of the recovered rigid PVC**.

Categories (a) to (d) : profiles and sheet...

(e) multi-layer pipes (excluding pipes for drinking water), provided that the recovered PVC is used in **a middle layer and is entirely covered with a layer of PVC or other material** for which the concentration of lead is lower than 0,1 % by weight;

(f) fittings, excluding fittings for pipes for drinking water.

From **28 May 2026**, rigid PVC recovered from the categories of articles referred to in points (a) to (d) shall only be used for the production of new articles of any of those categories.

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4. Mandatory closed loop for profiles and sheet from 28 May 2026 onwards

Consequences for PVC pipe manufacturers

Restricted availability of recycled material fit for uPVC pipes

- Closed loop for profiles and sheet = closed loop for pipes and fittings
- Offcuts and end-of-life (EoL) of profiles with concentration of lead $< 0,1\%$ can still be used
- Long lifetime of most plastic pipes (50 up to 100+ years) necessitates increased end-of-life pipe collection efforts

Setting up EoL Plastic Pipe Collection Schemes

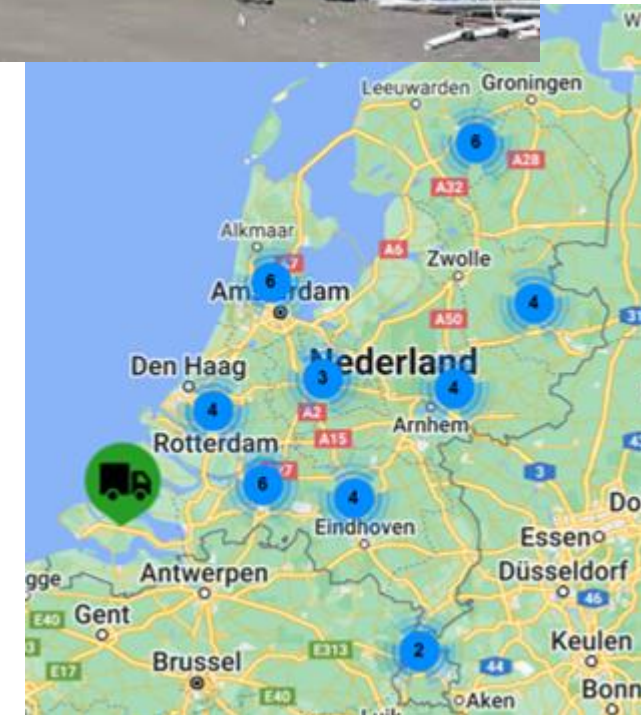
1. Existing Collection Schemes
2. Intensifying and setting-up new voluntary schemes

Existing Plastic Pipe Waste Collection Schemes

The Netherlands B.I.S. Buizen Inzamel Systeem

Plastic Pipe Collection System

- 30 collection points at pipe wholesaler
- Either delivered or supplied via collection bins
 - Subcontracted transport
- Both PVC and polyolefin pipes
- Recycled by Van Werven (NL)
- PVC pipe recyclate reused into multilayer PVC pipes
 - Recycled content is KIWA certified



Existing Plastic Pipe Waste Collection Schemes

Germany: Plastic pipe waste collection. KRV subcontracted to PreZero



Korrekt sortierte lose Schüttung Rohrmix:



Fehlerhaft sortierte lose Schüttung Rohrmix:



Existing Plastic Pipe Waste Collection Schemes

Austria: Plastic pipe waste collection. ÖAKR



Recyclat

aus ÖAKR-Sammelgut erhalten Sie bei unserem Systempartner Struber Recycling GmbH.

Struber Recycling GmbH



ÖAKR-Mitgliedschaft

Sie bringen in Österreich Kunststoffrohre bzw. Kunststoffrohrsysteme in Verkehr und möchten im ÖAKR mitarbeiten?

Die wichtigsten Informationen

Existing Plastic Pipe Waste Collection Schemes

Denmark: WUPPI scheme. EoL rigid PVC collection at municipality parks



WUPPI er Danmarks bedst organiserede system til indsamling af hård PVC



Sortér dit PVC-affald korrekt

More info: <https://www.wuppi.dk>

Intensifying and Setting-up New Voluntary schemes

Pre-studies

- DE: Mass Flow Analysis commissioned by KRV
Project partner: Conversio
- UK: Mass Flow Analysis from BPF Pipes Group.
Project partner: Oakdene Hollins. Co-financed by VinylPlus
- NL: Material Flow Analysis commissioned by BureauLeiding.
Project partner: CE Delft



Voluntary Collection Pilots

- CH: SPPR (Swiss Plastic Pipe Recycling) – 3-year plan (2024-2026)4

Extended Producer Responsibility

- FR: All B & C products (excl. public works and infrastructure). Started 1 May 2023
 - Several EPR schemes (Valobat, Ecomaison, ...) set up
 - Extension of collection network
 - Extension to public works and infrastructure: voluntary industry charter is being considered



Conclusions

- TEPPFA is committed to a circular economy as part of its strategy
- TEPPFA members are ready to comply with the lead restriction
- TEPPFA members align with PVC recyclers to separate PVC profile and pipe to comply with the closed loop requirements from May 2026 onwards
- 50 – 100+ years lifetime of building and infrastructure pipes & legacy additives restrict access to sufficient recycled content
- TEPPFA members intensify collection of EoL plastic pipes with existing and new schemes

PVC **4** PIPES

Thank you!

pvc4pipes.com

