



# RECYCLABILITY VAN VERPAKKINGEN VAN PAPIER EN KARTON

HENRIKE HOLWERDA

# INTRODUCTIE

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Initiatief van de Vereniging van  
Nederlandse Papierfabrieken (VNP)

Missie: de **kennisinfrastructuur in  
de Nederlandse papier- en  
kartonindustrie te versterken** door  
generatie, ontsluiting en  
verspreiding van kennis.





**RECYCLEBAAR OF NIET?**

# RECYCLEBAAR OF NIET?



# RICHTLIJNEN RECYCLABILITY

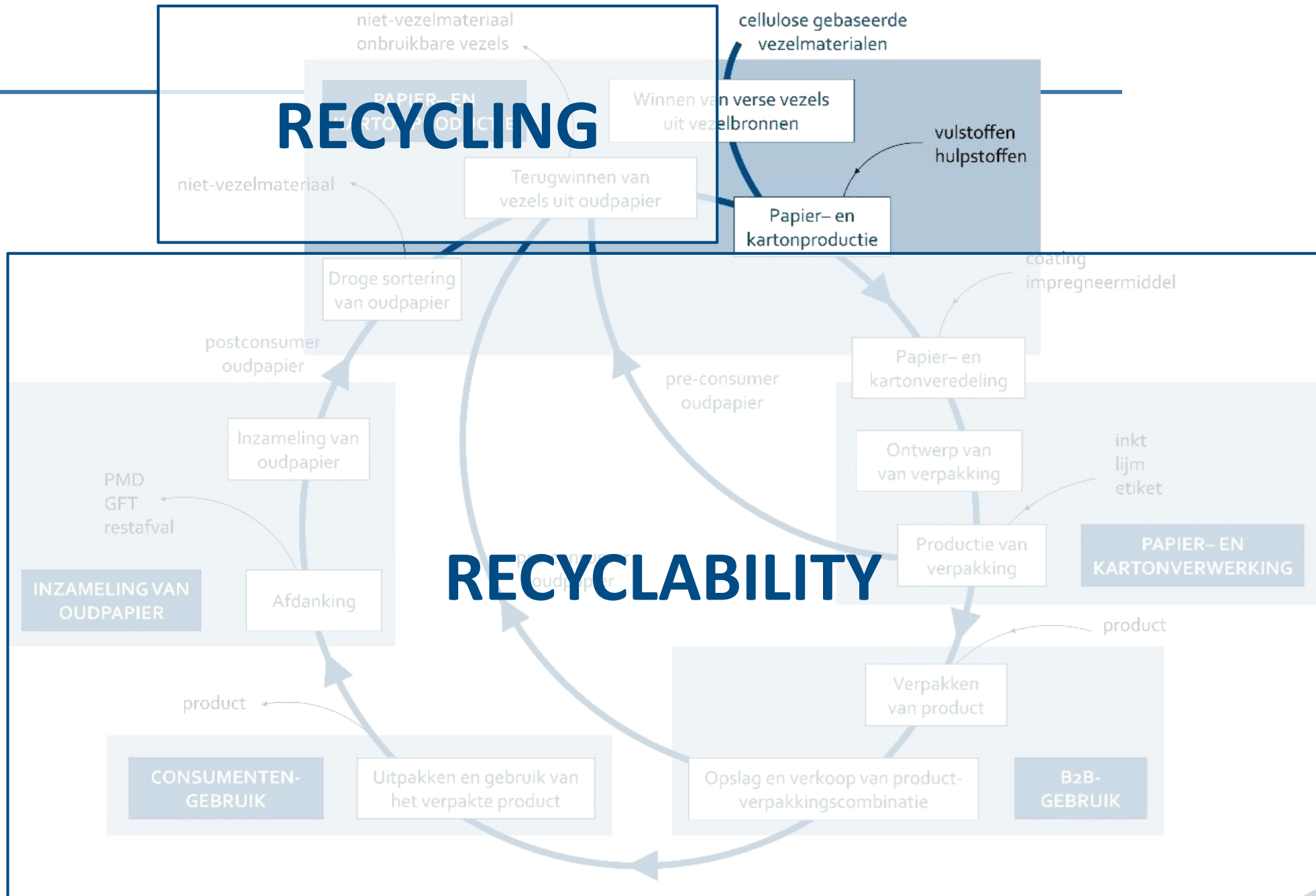
In opdracht van en in samenwerking met:

- Kennisinstituut Duurzaam Verpakken (KIDV)
- Papier Recycling Nederland (PRN)



# RECYCLING

# RECYCLABILITY



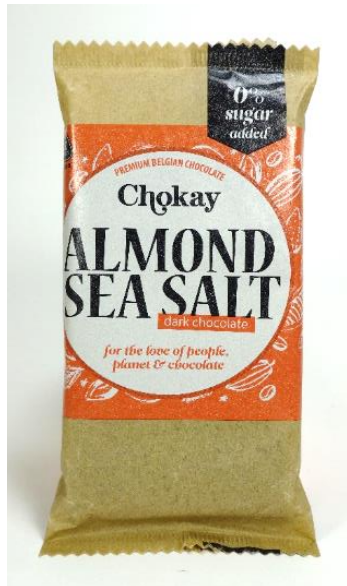


# ROUTE NAAR HET RECYCLINGPROCES

# BEOOGDE AFDANKING



# HERKENBAARHEID MATERIAAL



# AFDANKINSTRUCTIES

Deze verpakking is klimaatneutraal.

Graag de verpakking recycleren.



Deze verpakking bestaat uit meer dan 90% gerecycled karton. De binnenfolie en het karton van de bak kunnen na gebruik gemakkelijk gescheiden worden. De kartonnen bak kan bij het oud papier, de binnen- en bovenfolie kunnen bij het plastic afval gevoegd worden.



**Dit karton is volledig recyclebaar. Als u dit bij het oude papier stopt, helpt u mee aan de papier- en kartonkringloop.**



Bespaar verpakking door recycleren of navullen



**MET ONZE VERPAKKINGEN DRAAGT U BIJ AAN EEN BETER MILIEU**

**VERPAKKING BIJ DRANKEN KARTONS**

- 100% Recyclebaar
- FSC® Gecertificeerd Karton
- Hernieuwbaar plastic

Lees meer op: [www.campina.nl](http://www.campina.nl)



**Dit doosje is vervaardigd uit 80% gerecycled karton. Doe het lege doosje bij het oud papier en help mee aan de papier- en kartonkringloop.**



This carton is biodegradable and can be recycled



**Tevreden met je aankoop?**  
Recycle mij dan weer. Bijvoorbeeld als slaap- of speelplek voor je kat, kind of cavia of als opbergdoos voor je rommel. Heb je mij niet meer nodig? Doe me dan bij het oud papier. No hard feelings ...



# AFDANKINSTRUCTIES

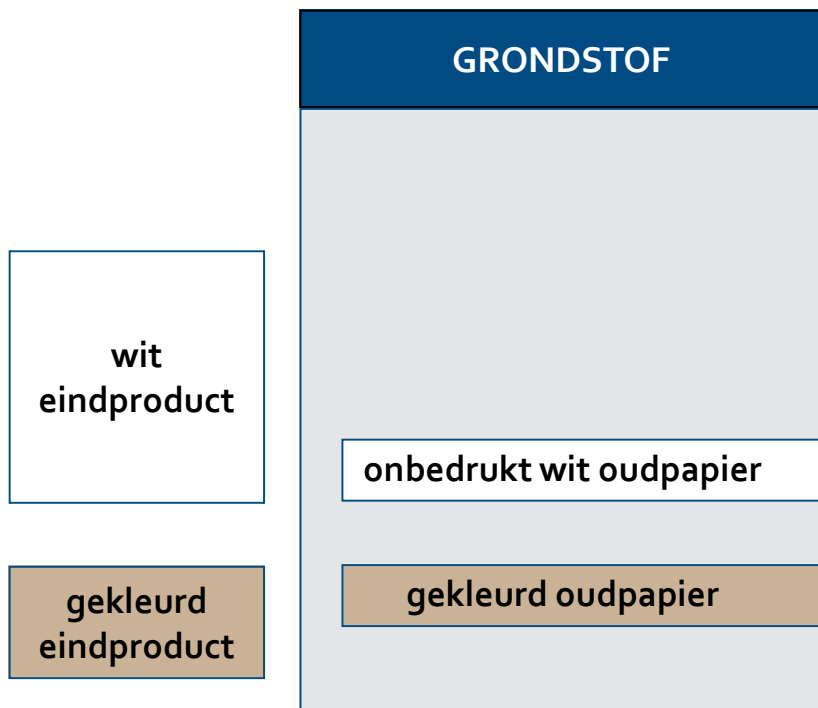


# SCHOON EN DROOG WEGGOOIEN





**EENVOUDIGE STOFBEREIDING**



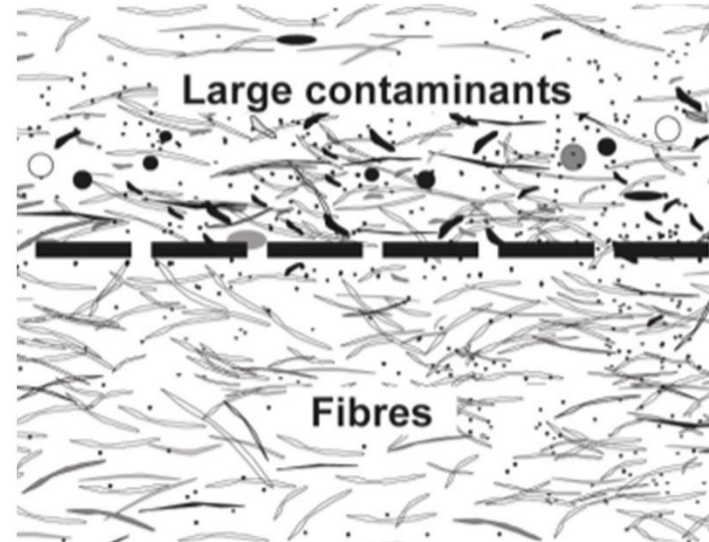
# VERVEZELEN



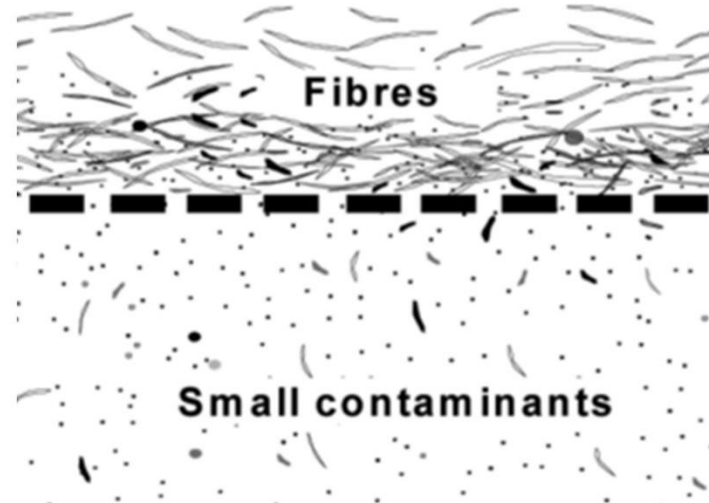
# REINIGEN



## SCREENING STAGE 1



## SCREENING STAGE 2



# (ON)GEBLEEKTE VEZELS

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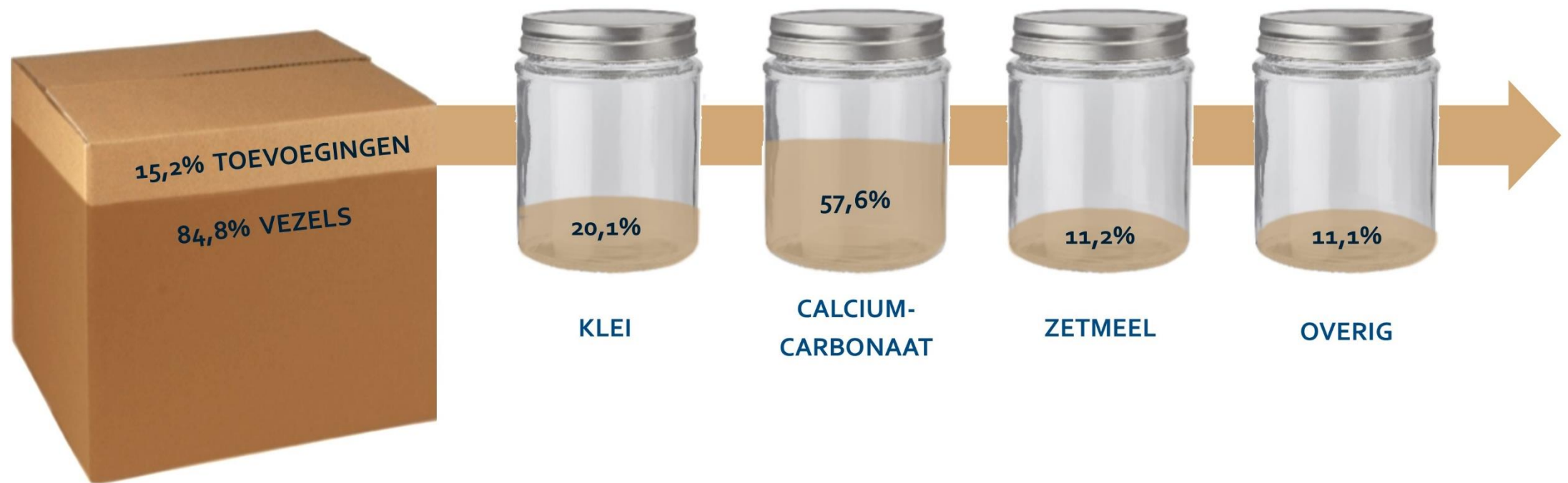


# ALTERNATIEVE VEZELS

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# HOEEVEELHEID VULSTOFFEN



# SILICONEN-, DOORZICHTIG, VETVRIJ EN NATSTERK



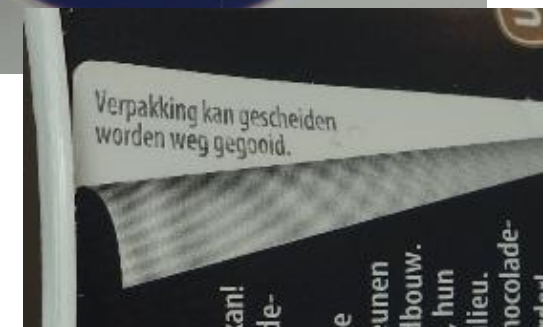
# KRAFTVEZELS MET VOCHTBARRIÈRE



# BEIDE ZIJDES VRIJ VAN VOCHTBARRIÈRE



# BEVESTIGING (NIET)VEZELMATERIAAL



# VENSTERS



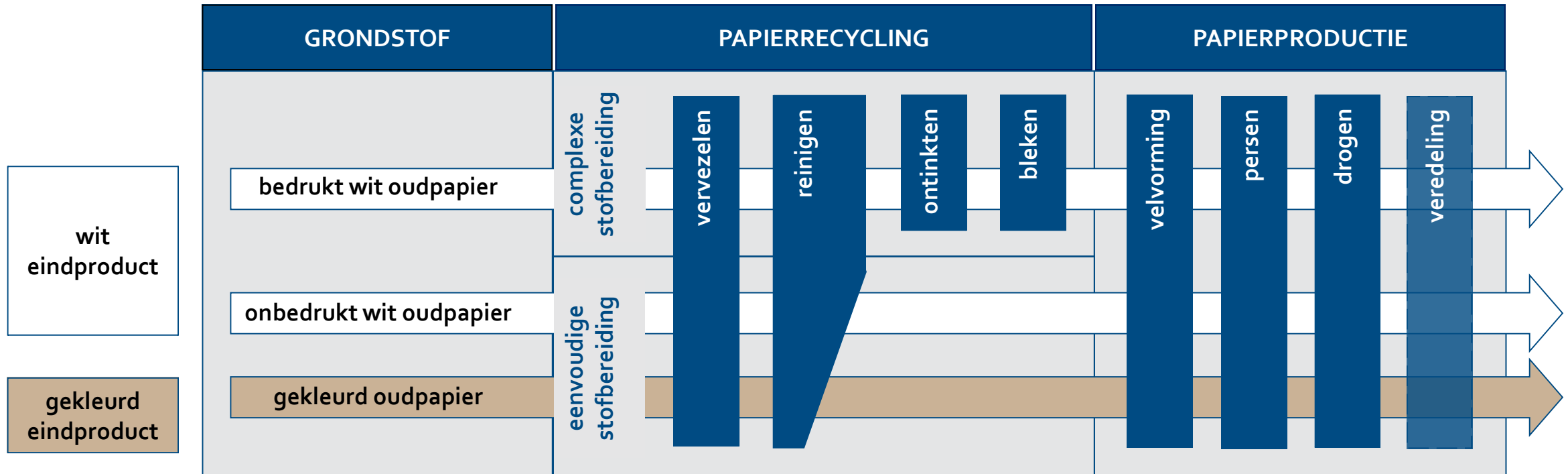
# BIODEGRADEERBARE KUNSTSTOFFEN





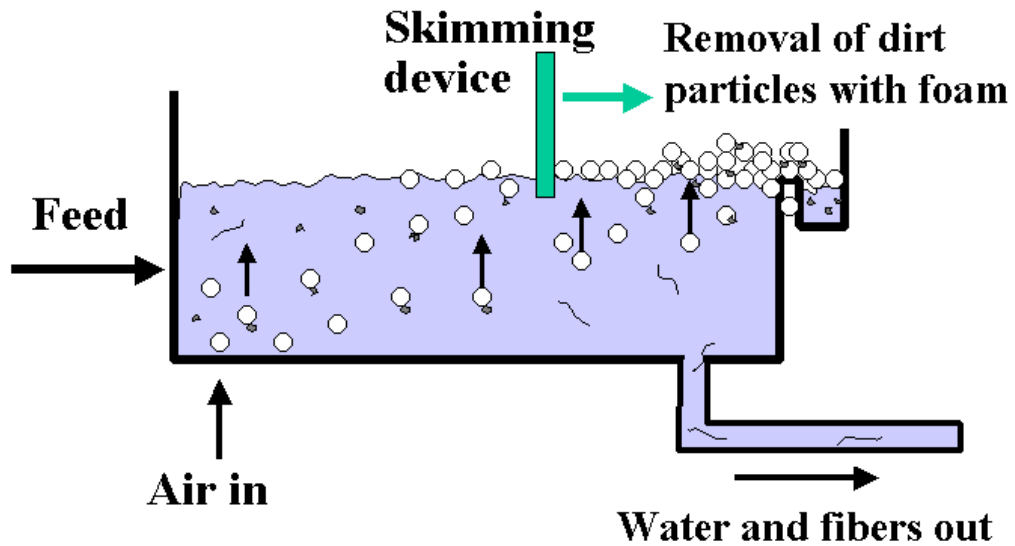
# COMPLEXE STOFBEREIDING

# HET PAPIERRECYCLINGPROCES



# ONTINKTEN & BLEKEN

## Ontinkten




## Bleken:

Zuurstof gebleekt met:

- Waterstofperoxide
- Ozon

# STICKIES

Type		Afkomstig uit	Voorbeeld
Macrostickies		Reeds plakkerige componenten	
Microstickies	Primaire stickies		
	Secundaire stickies	Bindmiddelen	

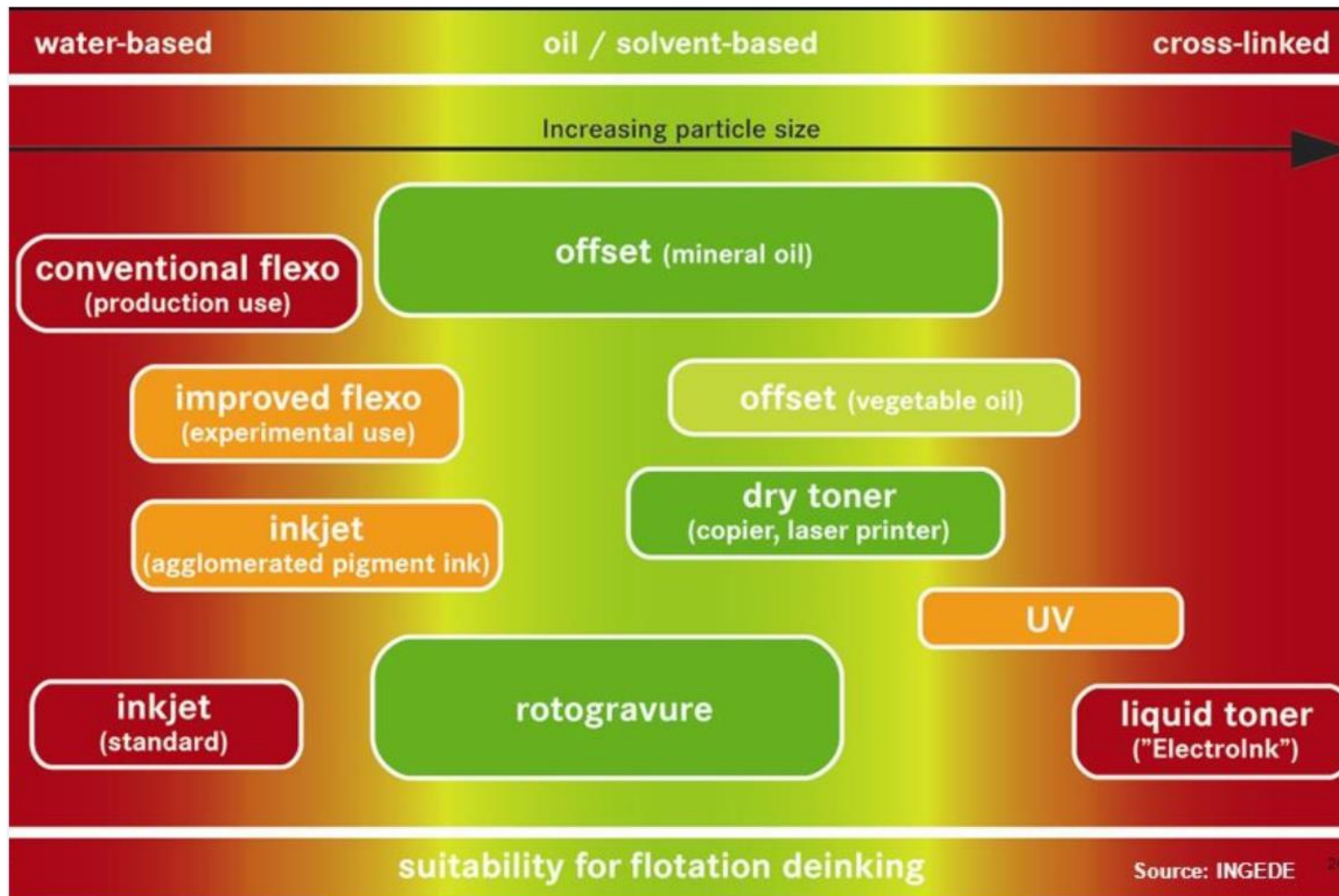
# STICKIES

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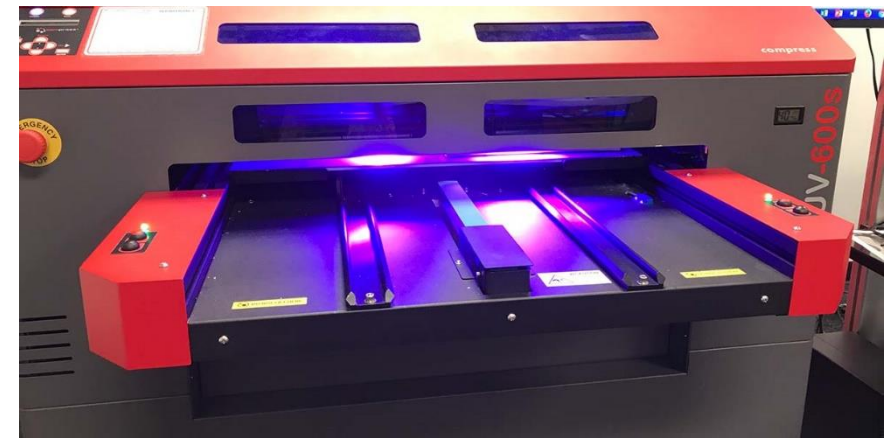
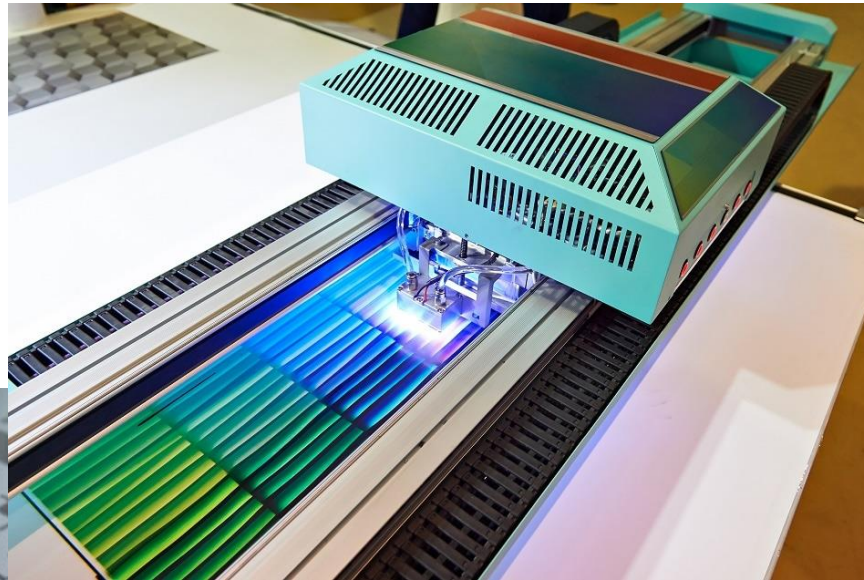
- Hotmelt
- Drukgevoelige kleefstoffen
- Dispersiecoating
- Cold-set lijm
- Uithardende lijm
- Wateroplosbare lijm
- Anorganische coatings



# WATEROPLOSBARE INKTEN



# UV LAKKEN EN INKTEN





## Food Packaging made from Recycled Paper and Board

Monitoring in Europe of packaging and foods has identified mineral oil contamination in a range of packaged foods. Mineral oils are widely used, and end up in foodstuffs by various routes. Since then, almost all sectors of the food industry as well as laboratories and supply industry have been concerned with the presence of mineral hydrocarbons and investigated into their origin. As a result, industry has gained a comprehensive understanding of the different sources of mineral oil contaminations.<sup>1</sup> Many measures for the reduction of the transfer and occurrence of undesired mineral oils that have already been taken show objectively measurable success.

There are many different routes by which contamination of foodstuffs with mineral oils can occur. Food packaging has been identified as one of these sources. EuPIA members have long offered mineral oil-free inks to be applied to the non-food side of packaging, and recommend that only these inks are used for these applications. Mineral oils can, however, migrate from recycled paper and board used for food packaging.

In several EU member states the food packaging chain was called to take measures such that levels of mineral oil in foodstuffs are reduced. The European Commission has issued a recommendation<sup>2</sup> on the monitoring of mineral oil hydrocarbons in food and in materials and articles intended to come into contact with food in 2017. In Germany the BMEL has drafted a legislation aimed at restricting mineral oil in food contact materials made from recycled paper and board.

In this respect, the European trade associations representing the paper industry (CEPI) and the paper converting industries (CITPA) have recommended to their members to only use mineral oil-free printing inks on paper and board packaging. Additionally, the German Federation for Food Law and Food Science (BLL) has recommended to the food industry - besides other measures - the use of specific printing inks:

- for food packaging: printing ink systems, which have been optimized for low migration
- for all other packaging: mineral oil free printing inks

To enable printers and converters to meet their respective industry association's commitment, EuPIA identified appropriate packaging ink options in the information note "Printing ink industry contribution to the paper, paper converting and food industry initiatives to reduce mineral oil in paper and board packaging" ([www.eupia.org](http://www.eupia.org)).

The recycled paper or board itself must be considered as a main source of mineral oil: the waste paper from which it is made currently contains a significant proportion of used newspapers. Inks for printing newspaper (news inks) contain mineral oils as an important part of the formulation, which upon printing are absorbed by the paper (this is how printed news inks dry). Thus mineral oils may come into direct contact with foodstuffs as substances contained

<sup>1</sup> BLL (German Federation of Food Law and Food Science) "Toolbox for Preventing the Transfer of Undesired Mineral Oil Hydrocarbons into Food" 2017

<sup>2</sup> Commission recommendation (EU) 2017/84

# DOORGEKLEURD PAPIER

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# METAALKLEURIGE FOLIE





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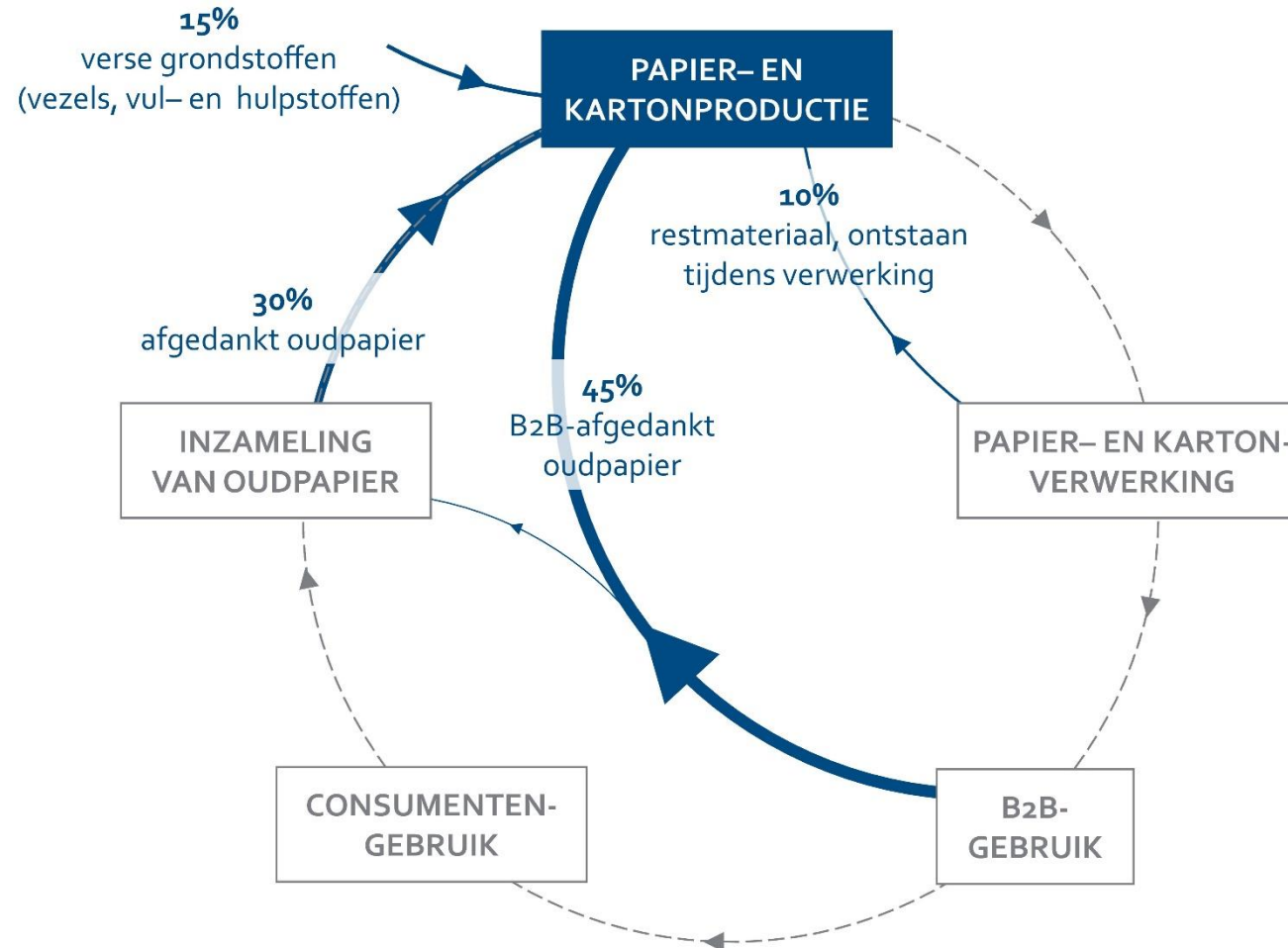


# ALLES IS RECYCLEBAAR

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“al het papier en karton is recyclebaar, op voorwaarde dat de **inzamelingslogistiek** en de **recyclingmethode** zijn aangepast aan het papier- en kartonproduct”

# INZAMELINGSLOGISTIEK AANPASSEN



# RECYCLINGPROCES AANPASSEN



# RICHTLIJNEN RECYCLABILITY

Rapport op aanvraag via:  
[info@kcpk.nl](mailto:info@kcpk.nl)





HENRIKE HOLWERDA

+31(0)6 3380 0101 | [h.holwerda@bumaga.nl](mailto:h.holwerda@bumaga.nl)