



# Cocoa Butter Alternatives

The natural choice  
for your chocolate and  
chocolate compound business

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The Co-Development Company

**AAK**



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# Chocolate confectionery is the number one global treat

Chocolate confectionery remains the largest snack category and one of the most sought-after consumer goods in the world.



Chocolate confectionery is the largest snack category, representing a fifth of total snack value sales in 2018.

*Euromonitor 2019*

For you, chocolate confectionery manufacturers, the aim is always to create ever-more delightful consumer

experiences while ensuring you make good business sense. There are various ways to do that, to mention a few:

- Customizing taste, texture and appearance
- Extending product shelf life to enable global reach
- Ensuring consistent quality by elimination raw material variations
- Optimizing process efficiency

At AAK, we are experts in developing natural, efficient, and sustainable alternatives to cocoa butter to help you overcome industry challenges and meet your objectives.

Using our unique Co-Development approach, we work alongside you to explore every opportunity together.

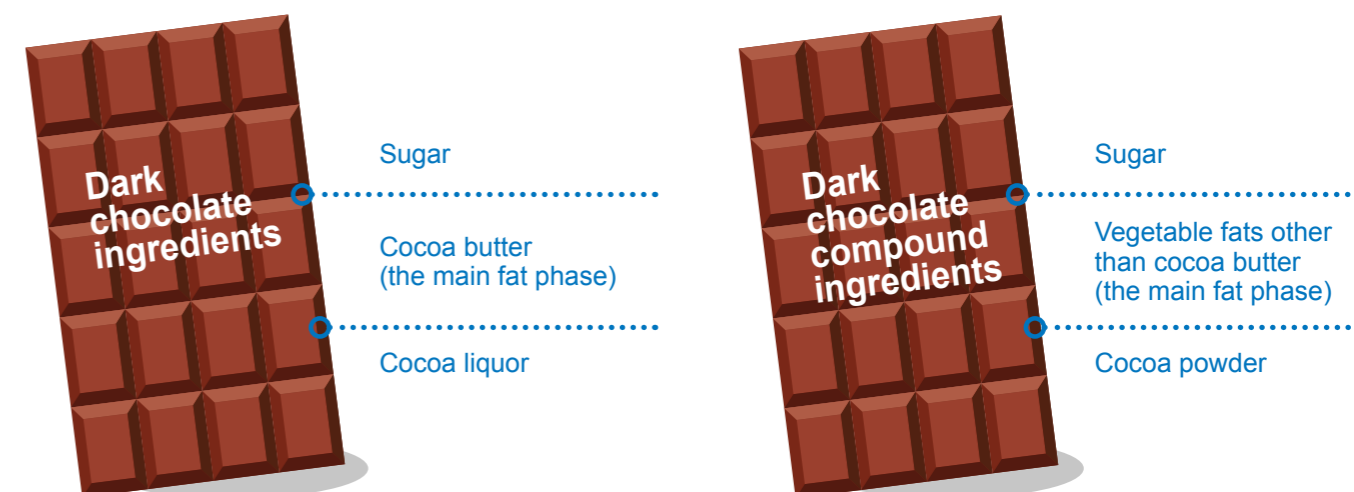
# What are chocolate and chocolate compound?

The chocolate confectionery market comprises two major categories: chocolate and chocolate compound. Chocolate compound is a typically less expensive alternative to chocolate. Sometimes the similarity is so close, it can be hard to taste the difference.

Although both categories can be used for the same applications – tablets, countlines, pralines, coatings and so on – chocolate compound is primarily used in coatings, often called compound coating.

There are big differences between regional markets. While chocolate compound is very common in Asia, the first preference in Europe is for chocolate. However, these regional differences are starting to blur as consumer preferences change. In other words, traditional compound markets are now starting to introduce chocolate products – and vice versa.

Looking at the recipe, the primary difference between chocolate and chocolate compound is their fat phase.



# The advantages of vegetable fats

**Cocoa Butter Alternatives** are vegetable fats designed to supplement or completely replace cocoa butter and are often classified in two categories:

## Chocolate<sup>1</sup>

Cocoa Butter Equivalents (CBE) and Cocoa Butter Improvers (CBI) have a similar composition and properties to cocoa butter and are mainly used for making chocolate. Advantages include a longer shelf life and improved melt-down, snap and texture.

## Chocolate compound<sup>2</sup>

Cocoa Butter Substitutes (CBS) and Cocoa Butter Replacers (CBR) are mainly used for making compound which is easier to process and more cost-efficient as these fats does not need to be tempered. This provides endless possibilities for developing innovative products with new flavors, colors and functionalities.

<sup>1</sup>Various legislation applies when replacing cocoa butter in chocolate. The legislation also covers when a product is to be labeled as chocolate and when not.

- Europe permits 5% of certain vegetable fats other than cocoa butter in chocolate products
- Asia and Latin America tend to follow EU legislation and typically add 5% of certain vegetable fats other than cocoa butter
- North America does not permit using vegetable fats other than cocoa butter in chocolate

We recommend referring to local legislation for more detailed information.

<sup>2</sup>Legislation and standards of identity for chocolate compounds are more flexible than chocolate standards.





## The natural choice for your chocolate business

There is a limit to what you can do for your chocolate's shelf life and sensory properties when using only cocoa butter in your chocolate recipe.

ILLEXAO™ is the choice when your product needs the same premium-quality characteristics as chocolate, but longer shelf life or improved meltdown, snap, and texture.

An overview of CBE and CBI and their characteristics

Table 1

	ILLEXAO™ Cocoa Butter Equivalent (CBE)	ILLEXAO™ Cocoa Butter Improver (CBI)
Tempering needed	Yes	Yes
Hydrogenation and trans fatty acids	No	No
Raw materials	Exotic fats (Shea, palm, illipe, kokum, mango, sal)	Exotic fats (Shea, palm, illipe, kokum, mango, sal)
Effect of shelf life	Similar to cocoa butter Possible to increase bloom stability	Increased heat stability and shelf life
Crystallization speed	Similar to cocoa butter	Faster than cocoa butter

## What ILLEXAO™ does for your chocolate?



### Tailor-made sensory properties

- Exploring the textural possibilities in chocolate confectionery
- Customized melting properties



### Long-lasting quality

- Longer shelf life due to delayed fat migration and heat-related bloom
- Optimized appearance and gloss



### Cost-efficient premium chocolate

- Possible reduction in raw material costs
- Cost-effective production and consistent quality
- Superb, cost-efficient super compound



# Tailor-made sensory properties

There is an opportunity to play with the sensory attributes such as meltdown, taste and texture in confectionery products as more and more consumers are showing hunger for new experiences.

## Exploring the textural possibilities in chocolate confectionery

Texture plays an important role in chocolate confectionery sensory experience. The sound, feel and satisfaction provided by texture can make products more appealing for consumers.



Texture is the latest tool to engage the senses and deliver share-worthy experiences.

*Mintel Food & Drink's 2018*

With our extensive portfolio of solutions more products can be developed with combinations of textures that surprise and delight consumers.

## A smooth and creamy sensation in rich dark chocolate

Chocolate with a high content of cocoa enjoys increasing popularity in most markets because of its healthier image. In addition, a growing number of consumers are resorting to plant-based and vegan products as a lifestyle choice.

However, reality shows that people still prefer excellent smoothness, flavor release and meltdown of milk chocolate.

**ILLEXAO™ ER** is designed specifically for this market. Replacement of 5% cocoa butter with **ILLEXAO™ ER**:

- Enhances the smoothness, flavor release and meltdown in dark chocolate
- Meets plant-based and vegan consumer trends

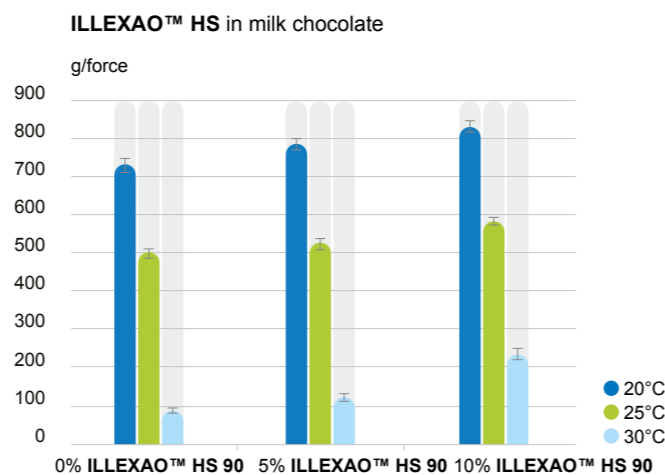
## Desired hardness

It has always been a challenge for manufacturers to control hardness and prevent fast meltdown, particularly if the chocolate contains milk fat. **ILLEXAO™ HS** is designed to raise the melting point of chocolate and counter softness.

Replacing cocoa butter with **ILLEXAO™ HS** in chocolate recipes:

- Improves the texture of dark and milk chocolate and maintains the right snap (figure 1)
- Improves stability in formulations with a very high content of milk fat
- Enables manufacturers to use soft cocoa butter in combination with **ILLEXAO™ HS**, which provides hardness at high temperatures

Significant texture and hardness improvement Figure 1



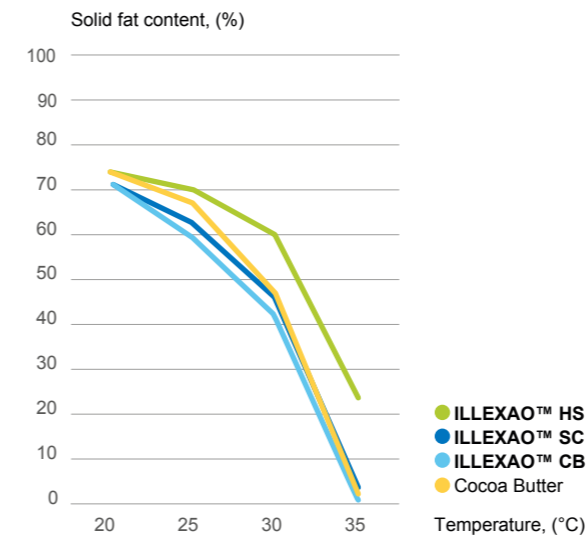
According to this figure, there is a significant positive effect on texture at both 25 and 30 degrees Celsius in milk chocolate.

## Customize melting properties

Creating different mouthfeel experiences can be a challenge due to differences in the melting properties of cocoa butters from various origins.

Our portfolio of CBE and CBI enables you to produce products with different melting properties as required, regardless of cocoa butter origin (figure 2).

Solid fat content of ILLEXAO™ solutions Figure 2



The variations in the **ILLEXAO™** range enable you to customize meltdown for the various chocolate formulations

### AAK solutions for chocolate with tailor-made sensory properties

### Advantages when choosing these products

CBI

ILLEXAO™ HS

- Increased heat stability and shelf life
- Improved texture and handling properties
- Better stability in formulations with a very high content of milk fat
- Possible to use soft cocoa butter
- Improved processing capacity
- Shea-based product

CBE

ILLEXAO™ ER

- Excellent flavor release
- Smooth meltdown
- Reduced ingredient costs





# Long-lasting quality

Bloom is one of the main challenges that needs to be controlled to obtain confectionery products with the desired shelf life. Appearance, flavor and textural qualities are all affected by bloom, leading to quality complaints and a compromised brand experience for the consumer, so it is extremely crucial to minimize this risk.

Milk fat is often used because it delays bloom. But this also has disadvantages, such as a significant softening effect, allergens labeling, and delayed crystallization, which reduces production capacity.

Using AAK products you can beat bloom without compromising the enjoyment of traditional dark chocolate or reducing production speed.

## Heat-related bloom

One of the most frequent reasons for chocolate quality complaints in hot climates is heat-related bloom. In these markets, there is often a lack of sufficient capacity to keep chocolate cool during transportation from production to consumer. For this reason, delaying heat-related bloom is one of the most important considerations.

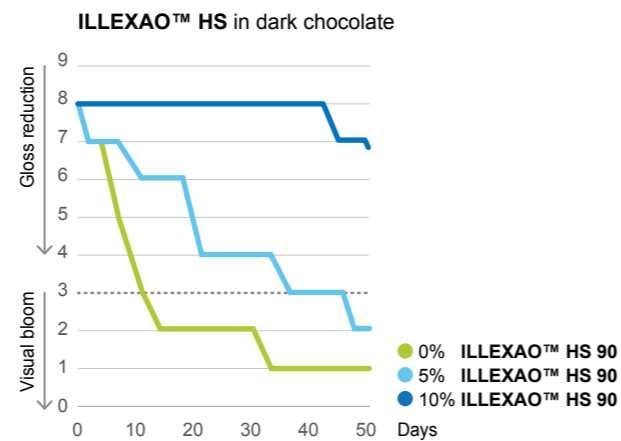
At AAK, we have designed CBIs for warm climates. Providing enhanced heat resistance and melting characteristics, CBI improves the ability of chocolate to resist warm climates.

**ILLEXAO™ HS** is designed to raise the melting point of chocolate.

Using **ILLEXAO™ HS** in your chocolate recipe:

- Improves the bloom stability of the end product significantly (figure 3)

Significant bloom inhibiting effect Figure 3



- All tablets are cycled between 25°C and 31°C twice a day
- "Grade 3" (the dotted line) is given for visible bloom development on the tablet surface
- There is a positive correlation between higher content of **ILLEXAO™ HS 90** in the chocolate and higher bloom stability

## Fat migration bloom

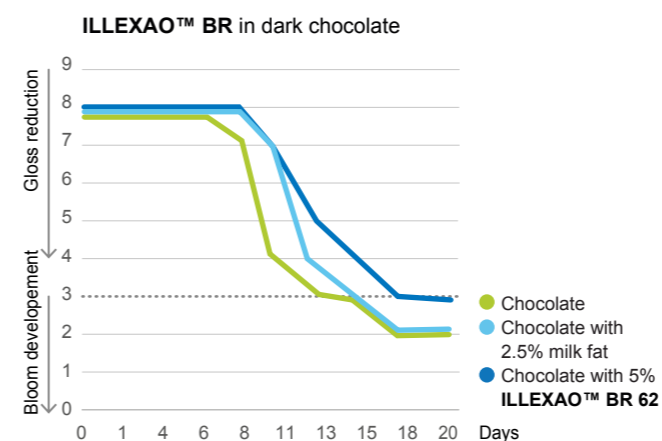
Fat migration bloom can occur when storage temperatures fluctuate and filling fats migrate into the chocolate. Processing and application type can also play a role.

**ILLEXAO™ BR** has a significant bloom-inhibiting effect in chocolate products where temperature variations or filling fat migration occur.

Use of up to 5% **ILLEXAO™ BR** in your chocolate recipe:

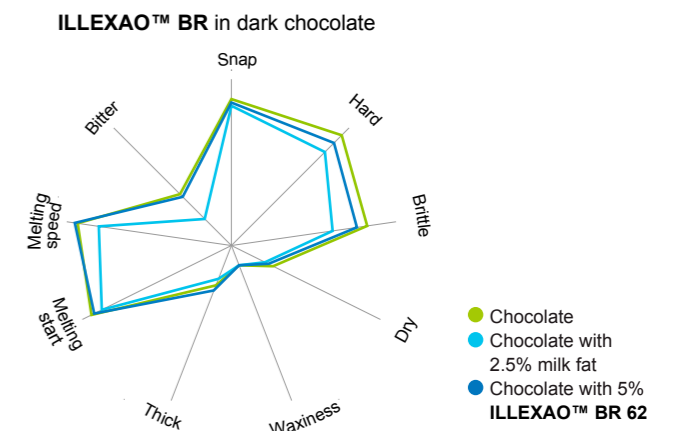
- Improves stability against fat migration bloom significantly (figure 4)
- Leaves the sensory profile unchanged (figure 5)
- Maintains your tempering capacity or de-molding time, as occurs when using 2.5% milk fat

Significant bloom-inhibiting effect Figure 4



- All tablets are cycled between 25°C and 31°C twice a day
- "Grade 3" (the dotted line) is given for visible bloom development on the tablet surface

Similar sensory experience Figure 5



- The dark blue curve, representing chocolate with 5% **ILLEXAO™ BR 62**, shows no significant difference compared to chocolate
- The light blue curve, representing chocolate with milk fat, shows a significant difference in hardness, bitterness and brittleness

AAK solutions for chocolate with long-lasting quality	Advantages when choosing these products
CBI <b>ILLEXAO™ HS</b>	<ul style="list-style-type: none"> <li>Increased heat stability and shelf life</li> <li>Better stability in formulations with a very high content of milk fat</li> <li>Improved texture and handling properties</li> <li>Possible to use soft cocoa butter</li> <li>Improved processing capacity</li> <li>Shea-based product</li> </ul>
<b>ILLEXAO™ BR</b>	<ul style="list-style-type: none"> <li>Significant bloom retarding</li> </ul>





# Cost-efficient premium chocolate

## Possible reduction in raw material costs

Cocoa-based ingredients make up a significant part of the ingredient costs for the chocolate manufacturer. Using most AAK chocolate fats, it is possible to obtain a significant reduction in raw material costs. Exact savings depend on the actual cocoa price and the type of chocolate fat used.

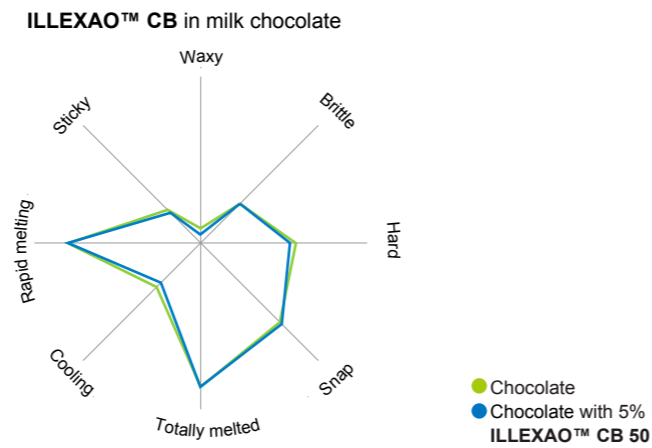
## Consistent quality and fewer variations in raw materials

Consumers expect the same sensory experience every time they taste chocolate. However, this can be a challenge due to differences in the melting profile of different cocoa butters from various origins.

**ILLEXAO™ CB** and **ILLEXAO™ SC** are two good examples to meet this challenge. Adding up to 5% of **ILLEXAO™ CB** or **SC** in your recipe:

- Adapts easily to flavor, texture, and meltdown needs, maintaining the same sensory properties as chocolate based entirely on cocoa butter (figure 6)

Unchanged sensory experience Figure 6



The dark blue curve, representing chocolate with 5% **ILLEXAO™ CB 50**, shows no significant difference compared to chocolate

## Flexible production line

**ILLEXAO™ HS** is AAK's solution for accelerating chocolate's crystallization speed, reducing demolding time and improving processing capacity overall.

In chocolate with a high milk fat content, the addition of just 5% **ILLEXAO™ HS** to the recipe is sufficient to overcome quality and processing issues.

## High quality, cost-efficient super compound

By using the right CBE to replace all the free cocoa butter in the chocolate recipe, it is possible to produce a cost-efficient super compound with CBE as the main fat phase. AAK's **ILLEXAO™ SC** super compound solutions have been specifically designed for this purpose.

Based on specialty raw materials, they add functionalities such as:

- Rich chocolate flavor: the high content of cocoa mass ensures a characteristic rich flavor
- Bloom stability: the resistance to fat bloom increases with the content of CBE. This vital contribution to storage stability ensures the super compound looks delicious for longer
- Customized melting properties: the melting properties of a super compound can be similar to chocolate. They can also be adjusted, enabling you to produce harder or softer products as required
- Faster crystallization speed and production: improved processing efficiency makes it possible to reach optimum line capacity

Examples of AAK solutions for cost-efficient premium chocolate		Advantages when choosing these products
CBE	<b>ILLEXAO™ SC</b>	<ul style="list-style-type: none"> <li>Significant cost savings when replacing some or all of the cocoa butter in a chocolate formulation</li> <li>Customized sensory properties and melting point</li> <li>Increased storage stability and shelf life</li> <li>Consistent quality</li> </ul>
	<b>ILLEXAO™ CB</b>	<ul style="list-style-type: none"> <li>Consistent quality</li> <li>Reduced ingredient costs</li> <li>Customized sensory properties and melting point</li> </ul>



# Chocolate

## Application guide

At AAK, we have translated market needs into technical solutions for your chocolate and the super compound segments. Our solutions can be tailor-made to your products – so you can be sure they meet not only your expectations but also the promise to the final consumer.

Tailor-made sensory properties



Long-lasting quality



Cost-efficient premium chocolate



Sustainability



		Soft texture	Hard Texture	Consistent quality	Inhibit fat migration bloom	Inhibit heat related bloom	5% solution	Super compound	Faster crystallization speed	Sustainable solutions
CBI	ILLEXAO™ HS		✓	✓	✓✓	✓✓	✓		✓✓	✓
	ILLEXAO™ BR			✓	✓✓✓	✓	✓			✓
CBE	ILLEXAO™ SC			✓	✓		✓	✓	✓	✓
	ILLEXAO™ CB			✓			✓			✓
	ILLEXAO™ ER	✓		✓			✓			✓



Chocolate

Chocolate compound





## Key solutions for your chocolate compound business

Cocoa butter is widely regarded as an essential ingredient in chocolate production. But the fact is that cocoa butter is not always the best choice.

AKOPOL™, CEBES™, and SILKO™ are the choices when you need easier and more cost-efficient production line.

Each have specific sensory qualities and processing characteristics (table 2).

- AKOPOL™ contains primarily non-lauric fats and is able to tolerate moderate levels of cocoa butter, offering great formulation flexibility.

- CEBES™ and SILKO™ are lauric-based fats with faster crystallization speed.

Selecting the right fat depends very much on your production and final application requirements.

An overview of CBR and CBS and their characteristics Table 2

	AKOPOL™ Cocoa Butter Replacer (CBR)	CEBES™/SILKO™ Cocoa Butter Substitute (CBS)
Tempering needed	No	No
Hydrogenation and trans fatty acids (%)	Yes/No <1 - 50	Yes/No <1 - 5
Raw materials	Soya, palm, rapeseed oil and other fats	Lauric fats (Palm kernel, coconut)
Compatibility with cocoa butter	Partly compatible	Not compatible

## What can AKOPOL™, CEBES™ and SILKO™ do for your chocolate compound?



**Healthier profile**

- Recognizable ingredients for permissible indulgence
- Healthier solutions without major compromises in processing and functionality



**Tailor-made sensory properties**

- Chocolate-like taste for your chocolate compound
- Excellent texture and melting properties



**Long-lasting quality**

- Heat stability
- Shiny appearance throughout product shelf life



**Cost-efficient production**

- Fast crystallization speed
- Flexibility on your production line

# Healthier profile

As snacks increasingly replace meals, health plays a growing role. Consumers are looking for convenient products which can bridge the gap between health and indulgence.

## Recognizable ingredients

Consumers are increasingly focused on the ingredients in the products they buy and read labels. There is a growing demand for recognizable and natural ingredients on product labels.

69% of consumers say product labels have an impact on their purchasing behavior.

C+R research, 2017

Hydrogenated fat labeling is compulsory in many countries<sup>1</sup>.

- Partially hydrogenated fats are traditionally used in chocolate compounds but are now banned in many countries due to their trans fat content
- Fully hydrogenated oils do not contain trans fats – however, manufacturers are reluctant to use them

More than 35% of consumers globally perceive the word hydrogenated, either fully or partially, as negative as the process is not recognizable to them.

AAK global consumer survey, 2019

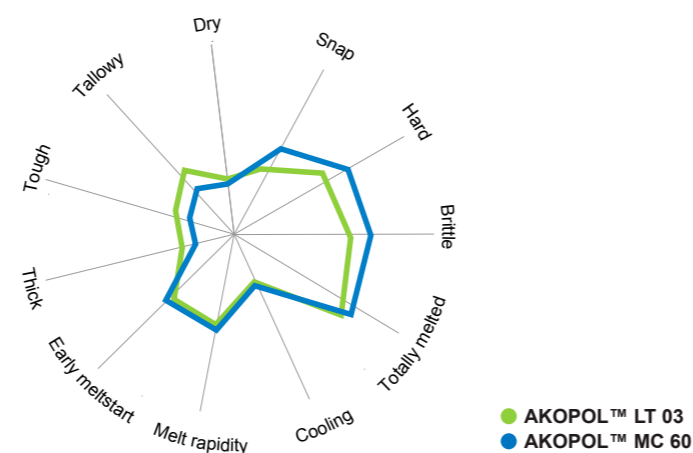
Hydrogenation gives fat functionalities such as good shelf life, flavor stability, texture and performance. For this reason, producing non-trans alternatives with similar characteristics to hydrogenated products requires expertise and a different approach to oil processing.

At AAK, we have expanded our portfolio with a full range of non-hydrogenated, trans-free and low trans fatty acid products, which have comparable functional advantages and sensory properties to products with a higher content of trans fatty acids (figure 7).

- From our CBR range, **AKOPOL™ NH** is completely non-hydrogenated and **AKOPOL™ LT** has a low content of trans fatty acids
- From our CBS range, **CEBES™ LS**, **CEBES™ NH**, and **SILKO™ NH** are designed to provide a clean label, non-hydrogenated end-product

Similar sensory experience Figure 7

AKOPOL™ LT in dark coating application



Similar sensory experience in dark coatings with **AKOPOL™ LT** with a low content of trans fatty acids and **AKOPOL™ MC** with a higher content of trans fatty acids

## Healthier solutions

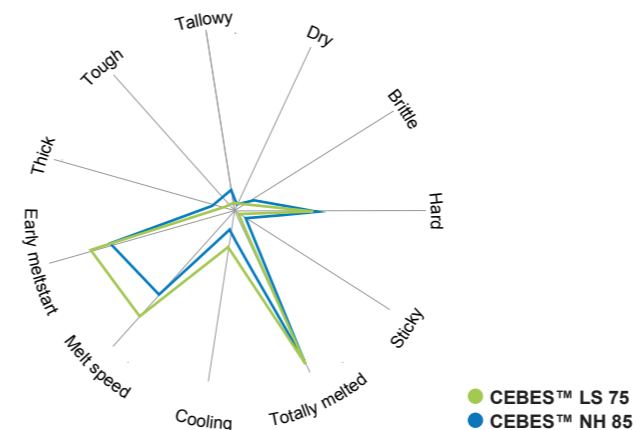
AAK chocolate compound fats are also available with a lower saturated fatty acid content.

Great examples of this kind of solution are **AKOPOL™ NH** and **CEBES™ LS** for healthier, clean-label products.

Compared to other CBS, **CEBES™ LS** stands out for a lower content of saturated fatty acids with no compromise in processing or product functionality. At the same time, it provides good gloss retention and fast setting time in the cooling tunnel (figure 8 and 9).

Similar sensory experience Figure 8

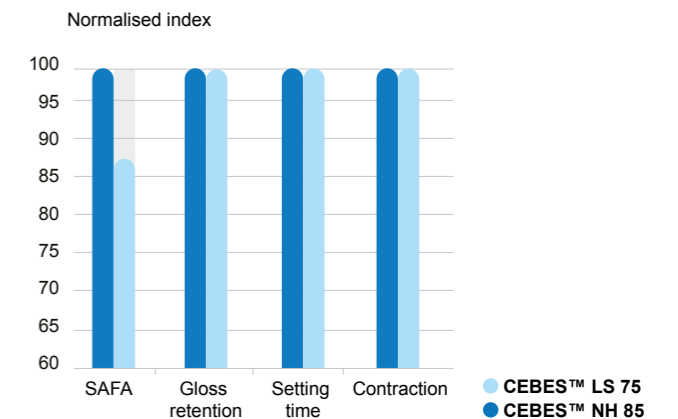
CEBES™ LS in dark coating application



The sensory profiles of dark coatings with **CEBES™ LS 75** and **CEBES™ NH 85** display similar sensory profiles

Unchanged properties Figure 9

Properties of **CEBES™ LS 75** compared to **CEBES™ NH 85**



**CEBES™ LS 75** provides a similar setting time and gloss retention to **CEBES™ NH 85** while delivering a 14% reduction in saturated fatty acid content

### AAK solutions for chocolate compound with healthier profile

### Advantages when choosing these products

CBR

**AKOPOL™ NH**

- Non-trans and non hydrogenated solution
- Possible to have the same level of saturated fatty acids as cocoa butter

**AKOPOL™ LT**

- Low trans
- Good melting properties, bloom stability and crystallization speed

CBS

**CEBES™ LS**

- Lower content of saturated fatty acids
- Good shelf life and gloss retention
- Non-trans and non hydrogenated solution

**CEBES™ NH**

- Non-trans and non hydrogenated solution
- Very good meltdown
- Good shelf life and gloss retention
- Fast setting time
- Can be used for coating and molding

**SILKO™ NH**

- Cost efficient
- Non-trans and non hydrogenated solution

<sup>1</sup>As part of its goal to eliminate industrially produced trans fat from the global food supply, the World Health Organization (WHO) has called on governments all over the world to prohibit the use of trans fats by 2023. In this light, brands should begin to make their own plans and embrace new regulations and guidelines that restrict trans fats (WHO news release, May 2018).



# Tailor-made sensory properties

## Chocolate-like taste

The high cocoa butter compatibility of our products enables you to use all types of cocoa powder or certain levels of cocoa liquor, giving the final product a rich chocolate flavor release.



More than 60% of consumers globally indicate that taste is the most important characteristic of chocolate products.

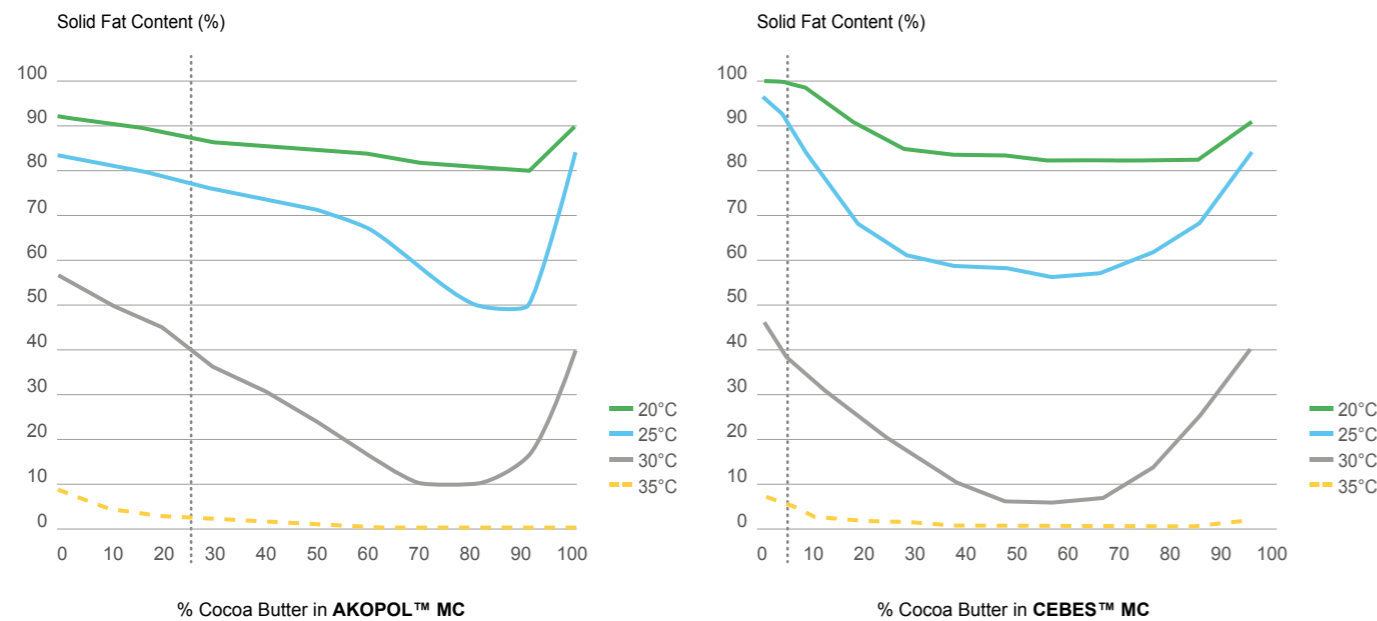
AAK global consumer survey, 2019

- Our low-trans and no-trans CBR products, **AKOPOL™ LT** and **NH** are compatible with up to 10-11% cocoa butter based on the fat phase
- Our **AKOPOL™ MC** products, which have a higher content of trans isomers, are compatible with up to 25% cocoa butter based on the fat phase (figure 10)

Together with cocoa liquor, **AKOPOL™ MC** provides excellent sensory properties, suitable for molded products and coatings where good meltdown is crucial. The taste and meltdown properties are very close to chocolate.

Compatibility of **AKOPOL™** and **CEBES™** with cocoa butter

Figure 10



The dotted line is given for the maximum possible adding cocoa butter with no negative impact on shelf life and sensory properties

## Texture and meltdown

Controlling the sensory attributes of confectionery products, meltdown, taste and texture have always been particularly demanding for manufacturers.

AAK meets consumer requirements for chocolate com-

pound with a range of solutions that adapt easily to different needs for texture, meltdown, and snap (figure 11).

CBS-based chocolate compounds generally have melting properties very similar to chocolate.



# Long-lasting quality

## Heat stability

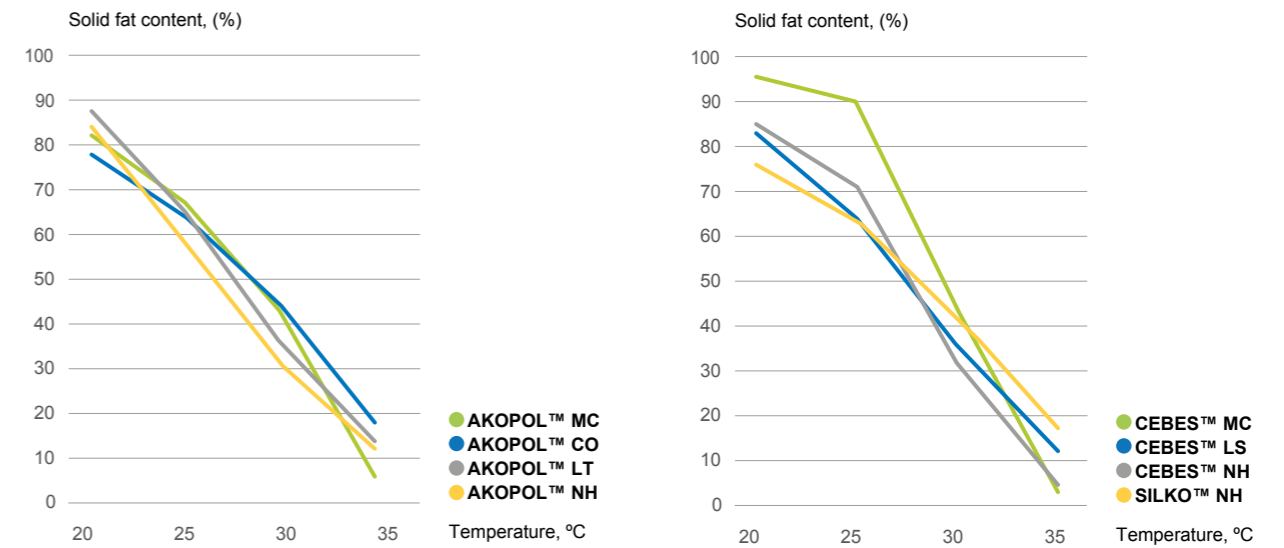
Heat stability is probably the biggest issue for most chocolate confectionery manufacturers when working with chocolate and chocolate compound in warmer climates. Particularly storage conditions are very tough to control.

Within the CBR range, you will find products with a high solids content, well suited to use in warmer climates (figure 11).

Chocolate compounds should be hard and stable at room temperature and non-greasy to the touch.

Solid fat content of **AKOPOL™**, **CEBES™** and **SILKO™** solutions

Figure 11



The variations in our **AKOPOL™**, **CEBES™** and **SILKO™** solutions enable you to find the right fat for your specific needs

## Glossy appearance

Consumers expect foods to look good right to the end of their shelf life. For chocolate products, high bloom resistance that ensures a long-lasting glossy appearance is key to their appeal.

We have a broad range of extended shelf life solutions. **CEBES™ MC** and **AKOPOL™ MC** are perfect choices to give your product an excellent gloss and bloom stability.

### AAK solutions for chocolate compound with long-lasting quality

### Advantages when choosing these products

CBR AKOPOL™ MC

- Can be used for coating and molding
- Very fast crystallization speed
- Partially compatible with cocoa butter

AKOPOL™ CO

- Crack-resistant coatings

CBS CEBES™ MC

- Can be used for coating and molding
- Very fast crystallization speed
- Excellent melting properties and flavor release
- Excellent snap



## Cost-efficient production

### Fast crystallization speed

At AAK, we help you ensure very fast crystallization for your chocolate compound, resulting in high capacity on your production line. Examples that deliver these promises are **AKOPOL™ MC** and **CEBES™ MC**.

### Flexibility on your production line

Many of our **AKOPOL™ MC** products can be produced on the same line as your chocolate products. Their compatibility with cocoa butter provides extreme flexibility in recipe development and on the production line, avoiding the risk of lauric fat contamination and a soapy taste.

### Pinpointing the right fat for different applications

Different confectionery applications require different considerations to ensure your production line performs optimally.

The molded applications need functionalities such as:

- ◆ Good contraction
- ◆ Fast crystallization speed
- ◆ Good bloom stability
- ◆ Good snap and texture
- ◆ Good flavor release

The coating and enrobing applications need functionalities such as:

- ◆ Fast crystallization speed
- ◆ Control migration bloom
- ◆ Shiny appearance without being too sensitive to touch or scraping
- ◆ Viscosity and flow properties
- ◆ Flexible coating

AAK offers a range of solutions to meet consumer demands for a variety of applications.

- ◆ **AKOPOL™ CO** and **SILKO™ NH** are specially developed for coated products, offering an economical alternative for products that require a good gloss, long shelf life and tolerance of mechanical handling
- ◆ **AKOPOL™ MC**, **CEBES™ MC** and **CEBES™ NH** can be used for coating and molding applications, providing flexibility and production simplicity



# Chocolate compound

## Application guide

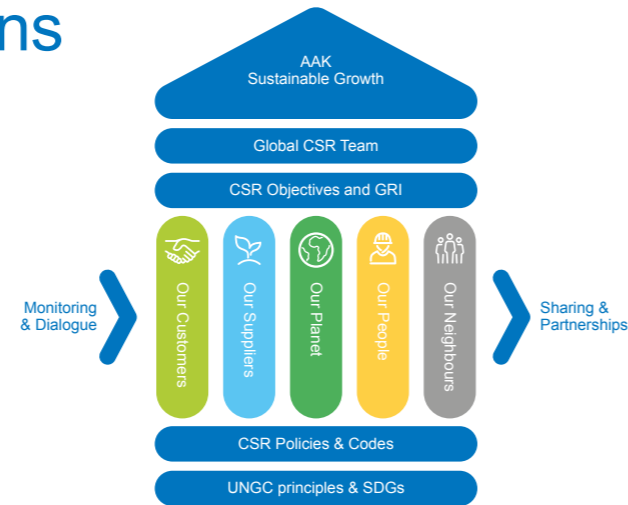
At AAK, we have translated market needs into technical solutions for your chocolate compounds. Our solutions for chocolate compound can be tailor-made to your products – so you can be sure that they will inspire and satisfy your consumers.

	Application		Healthier profile			Tailor-made sensory properties			Long-lasting quality		Cost-efficient production	Sustainability
	Moulding	Coating	Non hydro	Non/Low TFA	Low SAFA	Fast meltdown	Hardness	Cocoa butter tolerance	Gloss	Bloom stability	Faster processing	Sustainable solutions
		✓	✓	✓	✓	✓			✓	✓	✓	✓
CBS	CEBES™ LS		✓	✓	✓	✓			✓	✓	✓	✓
	CEBES™ MC	✓	✓		✓		✓✓✓	✓✓	✓✓	✓✓	✓✓	✓
	CEBES™ NH	✓	✓	✓	✓		✓✓	✓	✓	✓	✓	✓
		✓	✓	✓							✓	✓
		✓						✓				✓
CBR	AKOPOL™ MC	✓	✓			✓	✓	✓✓	✓	✓	✓	✓
	AKOPOL™ NH		✓	✓	✓			✓				✓
	AKOPOL™ LT		✓		✓			✓				✓
	AKOPOL™ CO		✓					✓				✓





Dedicated to delivering sustainable solutions



## Sustainability & responsible growth

To ensure a sustainable business footprint, we have developed a model based on the UN Global Compact principles. This allows us to drive progress within our CSR activities and focus efforts within five key areas. We continuously achieve objectives within each area, thanks to internal and external performance benchmarks, sharing best-practice principles and our highly engaged global organization.

## Responsible sourcing of raw materials

### ◆ Palm

Sustainable sourcing of palm oil remains a crucial activity in our raw material responsible sourcing journey and our engagement with suppliers.

AAK has been a founding member and board member of the Roundtable on Sustainable Palm Oil (RSPO) ever since.

With the new RSPO standards approved in November 2018, we move into a new phase. The bar has been raised again to meet the needs of its members reflecting amongst others, the zero deforestation commitments.

AAK is able to offer RSPO certified sustainable palm oil solutions for all different applications from our different sites and able to provide you the assurance you are looking for.

### ◆ Shea

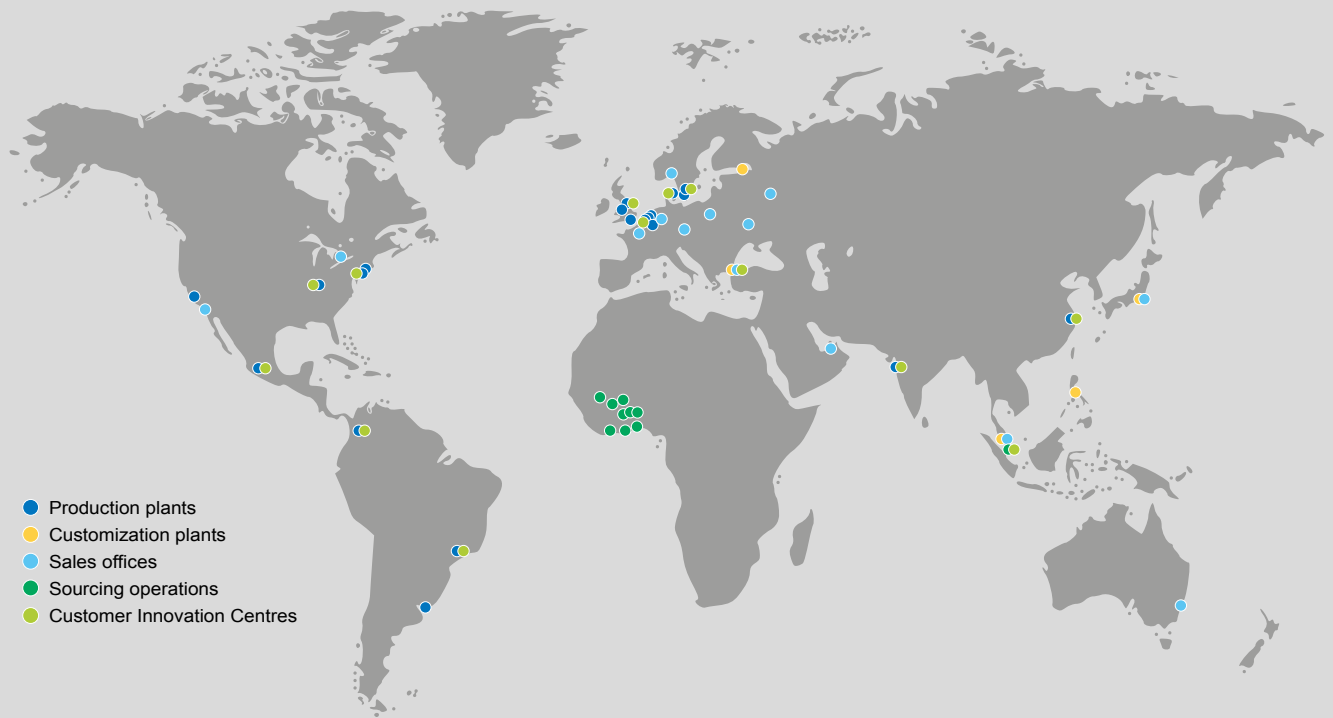
Shea kernels come from the shea tree and are an important raw material for AAK. The shea tree is a wild tree growing in Africa, with most found in Mali, Burkina Faso, Ghana, Ivory Coast, Benin and Togo.

Through more than 60 years' experience working with the kernels, we have gained considerable knowledge about them, as well as the local communities in which AAK operates.

Local presence in West Africa ensures full control of our supply chain from working with the collecting women in the bush to final shipment to the AAK production site.

AAK continuously monitors compliance with the AAK Supplier Code of Conduct. We are also a founding member of the Global Shea Alliance. Our commitment is to continuously improve the sustainability of our supply chain.





## We are AAK

AAK is a leading provider of value-adding vegetable oils & fats. Our expertise in lipid technology within foods and special nutrition applications, our wide range of raw materials and our broad process capabilities enable us to develop innovative and value-adding solutions across many industries – Chocolate & Confectionery, Bakery, Dairy, Special Nutrition, Foodservice, Personal Care, and more. AAK's proven expertise is based on more than 140 years of experience within oils & fats. Our unique co-development approach brings our customers' skills and know-how together with our own capabilities and mindset for lasting results. Listed on Nasdaq Stockholm and with our headquarters in Malmö, Sweden, AAK has more than 20 different production facilities, sales offices in more than 25 countries and more than 3,700 employees.



We are AAK – The Co-Development Company.

