

# **FOOD SAFETY AWARENESS WHEN SELECTING CONSUMABLES WITHIN MILLING OPERATIONS**

# THE PROBLEM

- **This presentation will focus on how the decision makers within Flour Mills select and purchase consumables such as bolting cloth, sieve cleaners, connector sleeves, and food contact dust bags.**
- **The awareness and the importance of compliancy with national / international food safety regulations are sometimes not fully understood.**
- **All the above products will come into contact with the flour, therefore adhering to the highest food safety standards should be part of the mind set when selecting these types of components for a mill.**

# RELEVANT GUIDELINES & REGULATIONS

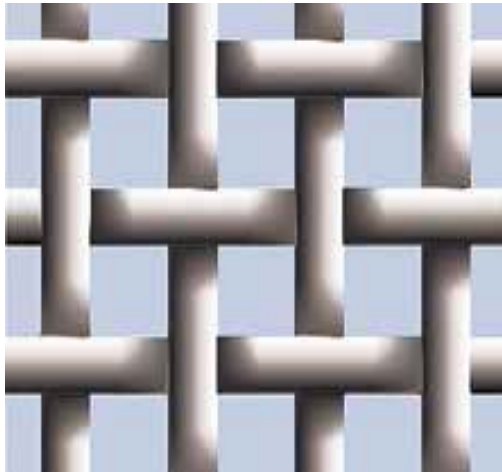
- **FDA Code of Federal Regulations (USA), Food and Drugs, Art.21,Section 177.1500 for PA,177.1630 for PET (indirect foodstuff additional material: polymers)**
- **Regulation (EU) No 1935/2004 of Commission dated 27<sup>th</sup> Oct.2004 on material and articles made of plastic and are intended to come into contact with foodstuffs.**
- **Regulation (EU) No 10/2011 of Commission dated 14 Jan.2011 on materials and articles made of plastic that are intended to come in contact with foodstuffs.**

# MILLING FABRICS

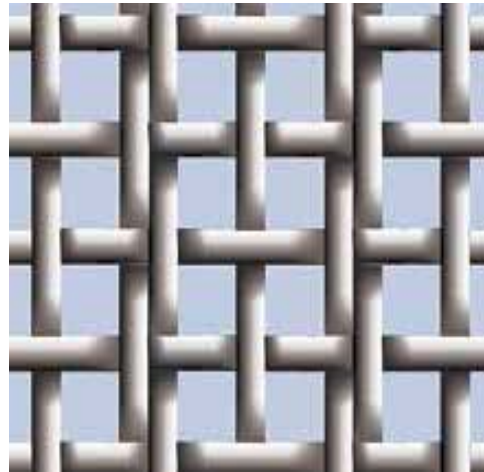
- **Starting with the mesh (aka bolting cloth or fabric) as probably the most important consumable in the production of flour**
- **Millers sometimes – knowingly or unknowingly – will base their choice of fabric solely on parameters that are directly linked to yield. Mesh opening size, thread count, open area etc are all familiar criteria which are also defined by the OEM supplying the plan sifter or purifier.**

# MESH TYPES

Fabric construction  
SEFAR NYTAL® PA-XXX  
SEFAR NYTAL® PA-MF



Fabric construction  
SEFAR NYTAL® PA-Milling



Fabric construction  
SEFAR NYTAL® PA-Schlinger  
(Leno weave)



- **As the flour has to migrate through dozens of screens, the mesh has an exposed role when it comes to food safety.**
- **There is the possibility of mesh breakage resulting in possible contamination of the flour with yarn fragments, along with any substances on or in the yarn that can also migrate into the product.**
- **Strict quality management within the companies producing yarn, weaving the mesh and possibly performing confectioning work are crucial.**

# PLANSIFTER - PROCESS

## 6 different granulations:

F = Break stocks

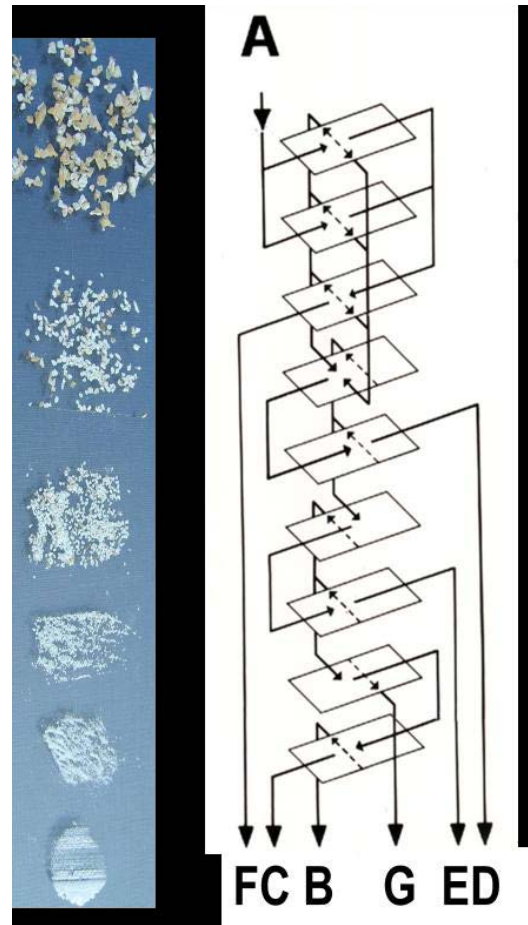
D = Coarse middling

E = Medium middlings

C = Fine middlings

B = Dunst

Flour



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# FOOD SAFETY

- **Mesh produced for other types of applications eg screen printing often find their way into milling industry.**
- **While these types of mesh may share the same weaving specifications (polymer type, mesh opening), adherence to food safety regulations is not of the same high level as with fabrics produced specifically for the milling industry. eg FDA**





# SIEVE CLEANERS

- Sieve cleaners work hand in hand with the mesh and the frame in a plan sifter in order to ensure efficient sifting.
- Selection of cleaners is often based on the type of sieve they should work with (with backwire or pan), mesh type (metal mesh or polymer-based) and weaving specifications (mesh opening etc.).
- In addition to these aspects, decision makers need to be very aware, that the type and composition of the materials used to produce these accessories will have an influence on the purity and safety of the flour produced

# NEW SIEVE CLEANERS



Commission Regulation (EU) No  
10/2011

U. S. Food and Drug  
Administration (FDA),  
Code of Federal Regulations  
(CFR), Title 21



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# SIEVE CLEANERS

- Besides these more chemically related questions, preventive maintenance should have a very clear and strict definition – especially in control sifters/rebolters.
- The event of a piece breaking off from a cleaner is still rare but if this happens in a control sieve then possible recall of the milled flour could be the result

# CONNECTOR SLEEVES & DUST/FOOD CONTACT FILTER BAGS



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# CONNECTOR SLEEVES & DUST/ FOOD CONTACT FILTER BAGS

- While these consumables may seem to have less contact with the flour due to their specific role in the milling process, a committed approach to food safety is still required
- This would also mean that these components should not just be selected by size, filtration capabilities or price.
- Basing a purchasing decision on the food safety compliance of the material should be the priority.

# Danger of Explosions

- In addition to selecting a food contact dust filter bag it is important to remember to specify the conductive type that can prevent bag house explosions.
- In recent years a number of dust bags which were not conductive (non antistatic) have made their way into a number of mills, raising major concerns for the safety within the whole mill.
- Fabric lines do not make a bag conductive.

**ATEX**   
94/9/CE



# ADHESIVES USED IN SCREENING

- **As we all know not every adhesive is suitable or efficient for every application, there can also be differences in their formulation when it comes to potential risks on human health.**
- **One advantage is of course, that adhesives generally only come into contact with flour in a cured or hardened state on the frame after screening.**
- **It is possible however a residue on a ppm scale will remain, thus causing concern.**

# ADHESIVES USED IN SCREENING



## SEFAR NYTAL® Quicktal

5600 Quicktal Adhesive, low viscosity, 50 g, 100 g or 500 g bottle

5602 Quicktal-D-Bonder, 500 ml bottle

5603 Quicktal 77, high viscosity glue, 50 g bottle

5604 Quicktal Metal, 100 g or 500 g bottle

6502 Quicktal Accelerator spray, 200 ml (not FDA-conform)





# COMPLIANCE

- **As with all the consumables highlighted during this presentation compliance with food safety regulations needs to be understood.**
- **Adhesives used all have warnings on the method of use, only a few are FDA and EU Compliant.**

# OUR REPUTATION

- **We in Australia and New Zealand have a reputation around the world for the manufacturing of safe food products.**
- **If we are not careful this reputation will suffer due to non conforming products being used within a Mill; International standards protect us all and our future within our industry.**