DYE AND CHEMICAL SELECTION

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Why avoid failures?
WHY DO FAILURES OCCUR?

Is it because of:

Bad luck? Test problems?  NO!

Restricted chemicals are used in production? Incorrect processing? Contamination?  YES!
PRODUCTION CONTROL

What you put in is coming out!
WHAT IS INSIDE THE PRODUCT?

- Dyes
- Auxiliaries
- Print paste

- Wet processing

- Pigment
- Plastic
- Metal

- Button
- Zipper
- Sequin

- Accessories

- Garment

- Spinning
- Knitting
- Weaving

- Washing

- Synthetic fibre
- Natural fibre

- Fibre
- Oil
- Size

- Detergents
- Bleach
WHO HAS THE INFORMATION?

Chemical companies must know what their products contain….

BUT, you need to ask!

If they don’t know → don’t use them
Now we know what’s needed to avoid failures

So,

How do we do it?
What tools do we have?
HOW TO AVOID FAILURES?

Production control:

1) Communicate RSL

2) Record of chemical products used

3) Require necessary information about chemical products

4) Person responsible (chemist)

Test products/materials
COMMUNICATE RSL

RSL (Chemical Restrictions)
Compliance declaration
Test reports
NECESSARY INFORMATION

Require for all chemicals:
MSDS (Material Safety Data Sheet)
Compliance declaration to RSL
Labelled containers

What if Chemical Supplier:
Has no MSDS
Won’t sign declaration
Needs to test
They don’t know →
You cannot act responsibly →
Don’t use it!
EXAMPLE 1  
(BAD COMMUNICATION)

APEO in Cotton fabric:

**Reason:** Scouring agent contained APEO

**Action:** Called chemical supplier and asked for confirmation and APEO-free alternative

**Time needed:** 5 min

**Cost:** almost nothing

**BUT nobody asked the question before**
EXAMPLE 2
(BAD COMMUNICATION)

Lead in Polyurethane (PU) fabric:

**Reason:** PU manufacturer received incomplete RSL from garment maker:
- PVC and phthalates only
- not heavy metals

**Action:** Give complete RSL

**Time needed:** 5 min

**Cost:** almost nothing
### EXAMPLE 3
(INCORRECT PROCESSING)

**Formaldehyde in Cotton fabric with crinkle effect:**

**Reason:** Too low curing temperature, and too short curing time

**Consequences:** Crinkle effect disappears after wash, and fabric contains high concentration of formaldehyde

**Action:** Follow chemical supplier’s guidelines
EXAMPLE 4
(CONTAMINATION)

Phthalate (DEHP) in print:

All print chemicals were phthalate-free

Reason: Spray glue was used on the print screen to keep the fabric in place

Consequences: Fabric got contaminated

Action: Called chemical supplier and asked for alternative glue

Time needed: 5 min

Cost: almost nothing
WHY AVOID FAILURES?

Cost avoidance due to:
  - No cancelled orders
  - No delays
Time saving (less testing)
Better:
  - Environment
  - Working conditions
  - Quality
  - Product
  - Trust
SUMMARY

Communicate

Know your production

Require information

Avoid contamination

Use correct processing

Test