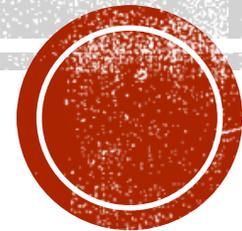


# COLLECTING PLASTIC:

## BASIC GUIDELINES FOR DEALING WITH PLASTIC ARTEFACTS IN SMALL MUSEUMS

Sarah Benson, NKF tekstilkonservator



# WHAT IS PLASTIC?



Plastemballasjen  
skal gjenvinnes



Plastemballasjen skal gjenvinnes



Folien gjenvinnes som plast,  
esken gjenvinnes som kartong

# HOW IS IT FORMED?

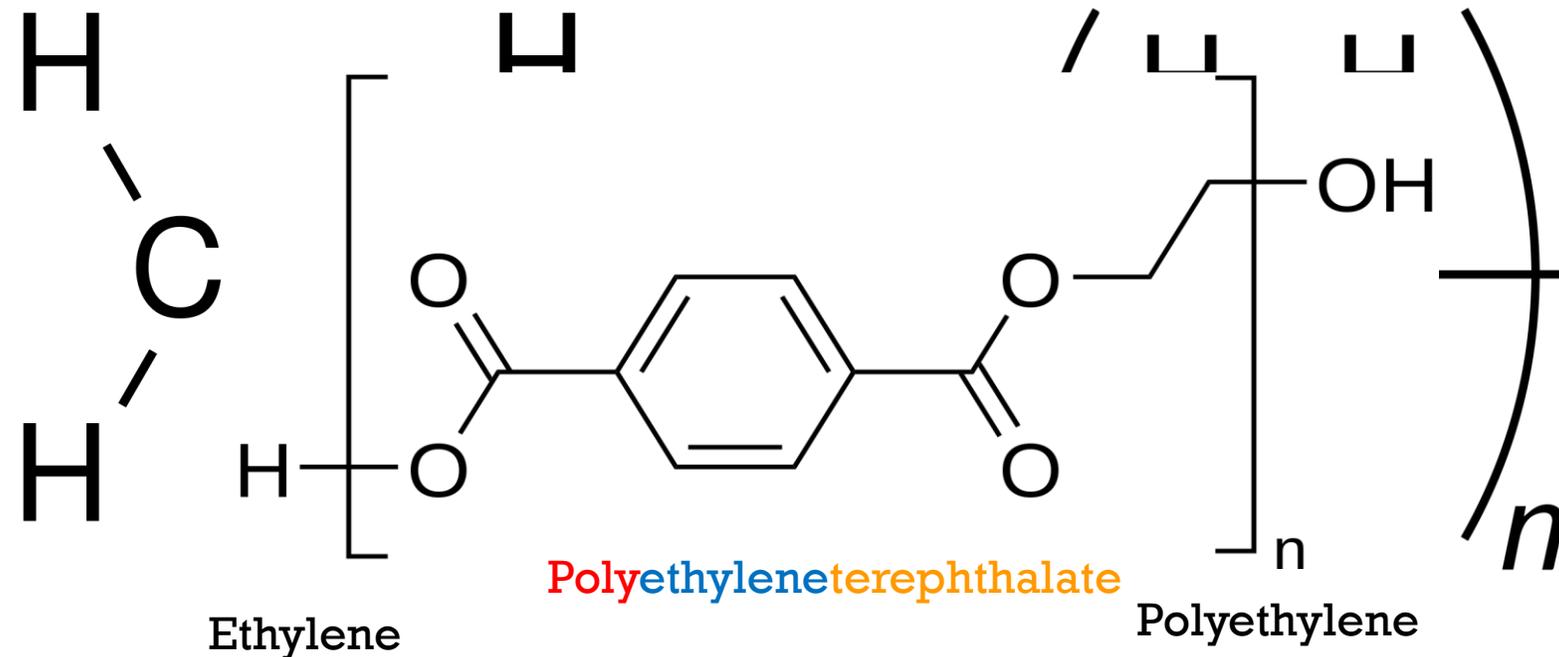


Adhesives/coatings/paints



# HOW IS IT NAMED?

- Mainly:
- A plastic (polymer) to base monomer, uses specific plastic
- ECOPolyethylene polymer with the ester functional group. Most common PET (polyethylene terephthalate, more than one monomer)



# HISTORY OF PLASTIC

- First invention was a semi-synthetic in 1846
  - 'Gun cotton' explosive, cellulose nitrate
- First synthetic was invented in 1907
  - Bakelite, phenol-formaldehyde entirely man made
- Huge increase in technologies and manufacture during WWII
  - Rayon, the replacement for silk
- No going back, plastic is everywhere
  - Dozens of different groups and 1 000 of variables for dye additives, plasticisers, fillers, mixing materials, and on and on (nightmare to ID)
    - One object could easily contain more than 10 different plastics





# PLASTICS AS MUSEUM ARTEFACTS



# HOW DO THEY DEGRADE?

**Blooming and chalking**



**Crazing, crumbling, brittleness**



# HOW DO THEY DEGRADE?

**Warping**



**Discolouration**



# IS IT ALREADY HERE?

- Assuming the plastic object is already in the collection, now what?
- What is most important?
- Identification (useful for historic purposes but mostly for keeping the object and the surrounding collection safe)
  - Basic condition assessment to aid in ID, storage and handling
- Handling
- Registration
- Packing and storage, or exhibition
- Beyond saving and lost all significance, de-accession?



# PLASTIC MATERIAL ID

1. Edge printing: Many, but not all, manufacturers identified the type of film along one border of the film with nitrate or safety. Safety indicates the negative is acetate. It is important to note that some early nitrate does not have edge printing.
2. Notch codes: A notch code is a group of indentations or recesses on the edge of a piece of film to help identify the film type and brand. If there is a 'V' notch code first from the edge of the negative, it is nitrate, and if there is a 'U' notch code first from the edge of the negatives, it is acetate. Notch codes are not always accurate as the photographer may have cut the film sheet for various reasons and removed the notch code closest to the edge.



An example of edge printing and notch codes for a nitrate negative. Photo credit: Amanda Oliver



An example of edge printing and notch codes for an acetate negative. Photo credit: Amanda Oliver

<https://archivesalberta.wordpress.com/tag/identifying-negatives/>

<https://plastic-en.tool.cultureelerfgoed.nl/tool>

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Accession photo from 1995



Photo from 2019 condition assessment

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- Handling
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- **Packing and storage, or exhibition**
- Beyond saving and lost all significance, de-accession?



# PACKING, STORAGE AND EXHIBITION

- Prevention!
- The environment
  - Low to no light
  - Cool is always best, slows chemical reactions
  - Stable!
  - Low humidity is generally best
- Materials
  - Never place absorbing materials in direct contact, e.g. never tissue paper (silke papir)
- Adsorbents for released acids
  - Cellulose Nitrate and Cellulose Acetate



# PLASTICS AS PACKING MATERIALS



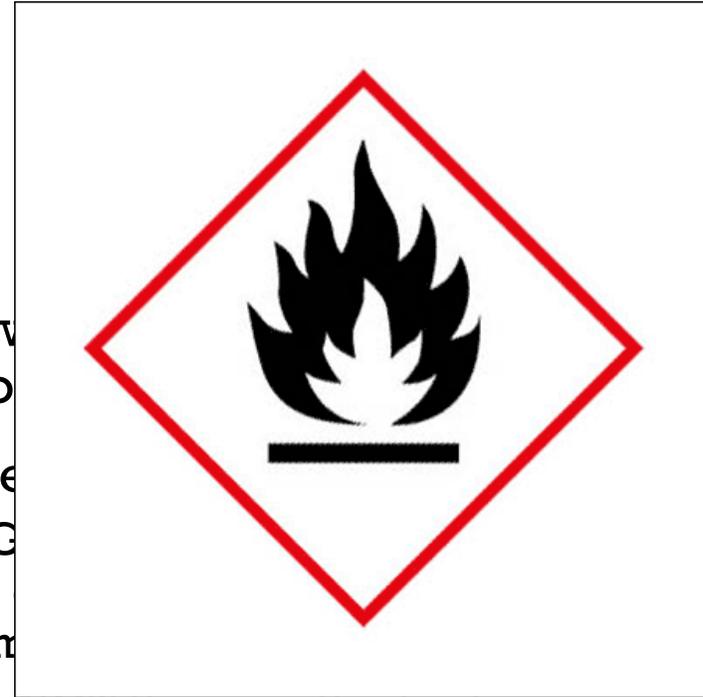
# PROBLEMATIC PLASTICS

- Latex (natural rubber)
  - Hates: oxygen
  - Degradation reaction by oxidation and hydrolysis
  - Shows yellowing, darkening and crumbling; can also be sticky
  - Storage requirements: similar to PU





- Follow proto
- Proper
- E.C be rem



must

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

something else)

**RAGN  SELLS**

**En del av kretsløpet**

# NEW PLASTIC ACQUISITIONS

- Plastics are part of our lives in every sense including art
- No more plastics ever! Unrealistic
- Go through the steps, acquire with full knowledge

Potential acquisitions must meet three basic criteria:

- **Relevance:** the object must support the Museum's mission and fit within its stated collecting goals.
- **Use:** the object must have the capacity for use in exhibitions and/or for research and scholarly purposes.
- **Condition:** the object must be in reasonable condition and **must not require significant expense** for treatment in order to make it relevant or useful unless such funds are provided for by the donor or other sources such as grants or by other special arrangements with another institution or organization.

**Gufram**  
**i multipli**

MARCHIO IN LICENZA D'USO

Edizione numerata

*Certificato di origine e garanzia*

**DARK LADY**

Archivio storico Gufram (Omaggio a Salvador Dali)



n. 22 / 1000

Divano a forma di labbra giganti, in poliuretano espanso a portanza differenziata.

Rivestimento in tessuto elasticizzato.

Piercing in acciaio inox

Misure: cm 212 x 80 x 85.

Non esporre a fiamme libere o superfici incandescenti.

Esposto a fonte di calore può emanare un leggero odore di gomma. Queste caratteristiche non pregiudicano la qualità del prodotto, essendo da considerarsi peculiarità dell'oggetto e non possono dare adito a contestazioni.

Non si riconosce alcun danno per deterioramento dovuto ad uso improprio.

Rivestimento in tessuto elasticizzato 85% poliammide 15% elastomero, prescrizioni per il lavaggio:

Sofa form of giant lips, in cold foamed polyurethane with differentiated load bearing capacity. Cover in elastic fabric.

Piercing in stainless steel

Size: cm 212 x 80 x 85. (inch. 83,46 x 31,50 x 33,46).

Don't expose to fire or incandescent objects.

If exposed to heat may give off a slight smell of rubber. These characteristics are not detrimental to the quality of the product, since they are peculiarities of the object itself; they can not give rise to contestations.

No claim will be accepted for any damage due to improper use.

Upholstered in elasticised fabric covering 85% polyamide 15% elastomer, washing prescription:



# USEFUL RESOURCES

- <https://plastic-en.tool.cultureelerfgoed.nl/tool>
- <https://www.modip.ac.uk/projects/curators-guide>
- <https://samlingsnett.no/bevaring-av-plast>



# STAY CALM AND DO SOMETHING

- Thank you for your attention and to all my colleagues past and present who helped me in understanding the significance of plastics in museums
- Can always contact Bevaringstenestene for advice and help with your plastic artefacts

