

TL no 8 ADHESIVES : HEALTH AND SAFETY REGULATIONS

Health and Safety regulations are more and more a part of our daily business environment

In some instances it is even necessary that the self-adhesive product is in agreement with national or international regulations failing which the material would not be accepted by the printer or end-user.

Listed below are the most important regulations on Health and Safety, applicable to certain of the products manufactured by our industry, that you may come across when discussing with printers, end-users or specifiers of self-adhesive materials.



European standard EN 71 part 3, safety toys : migration of certain elements

- EN 71/3 specifies requirements and test methods relating to the migration of certain (8) chemical elements from accessible parts of toy material.
- Toys and toy parts can, due to their function, size or other characteristics include a risk due to sucking, licking or swallowing, bearing in mind the normal behaviour of children. This may of course include labels.



Most MACTac adhesives, face stocks and liners are in agreement with the limits of element migration as described in the EN 71/3 regulation
A Certificate of Conformity is available upon request.



FDA/BGA approvals for use of adhesives on foodstuffs

Foodstuffs can be subdivided in 3 main categories : moist - dry- fat.
Adhesives can either be in direct or indirect contact with foodstuffs.

Indirect contact means that the foodstuff is labelled on the outside of the packaging material. **Direct contact** means that the label is directly applied to the dry or moist foodstuff. Fatty foodstuffs should never be labelled directly i.e. the foodgrade packaging material must always form a barrier in between the foodstuff and the label.

The American FDA (Food and Drugs Administration) and the German BGA (Bundesgesundheitsamt) administrations publish recommendations, codes and test methods for the examination of consumer goods. FDA code § 176-170, 21 CFR ch.I and BGA code 80-30, 1 § 35 deal with the handling of foodstuffs and the determination of the migration in simulant solvents.

Most MACTac adhesives (for Printing Products i.e. MACprint, MACscreen and Medallist products ranges) are approved against the FDA/BA regulations for indirect contact.

Following the Certificates of Conformity an occasional direct contact is also allowed with the cutting edges of the self-adhesive laminate.

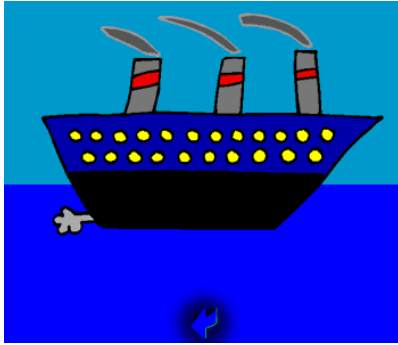
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Eg: the label of a pre-packed food item could be sliced or cut with a knife by the consumer when opening the packaging. Therefore the adhesive could theoretically come in contact with the foodstuff.

Some MACTac adhesives are approved against the FDA/BGA codes for direct contact with dry or moist foodstuffs.

Certificates of Conformity for direct or indirect contact, depending from the type of adhesive are available upon request.

These certificates also exist for some specific face stocks when the guarantee to the end-user must be further extended to the complete laminate.



BS 5609 Pressure sensitive labels for marine use;

Under the provisions of the British Merchant Shipping (Dangerous goods) Regulations it is obligatory for a shipper to durably mark packages that contain dangerous goods for carriage by sea. "Durably marked" means that the label must remain identifiable on packages which have been at sea for at least three months.

Labels manufactured to BS 5609 are regarded by the British Department of Transport as complying with the Regulations and this Department from time to time issues a Merchant Shipping Notice listing firms which are said to supply labels to the standard.



Skin irritation to the rabbit

The purpose of this type of testing, performed by an independent research centre, is to assess eventual dermal reactions that could occur when handling pressure sensitive materials.

The experimental procedure used is based on that prescribed by the Consumer Safety Commission of the USA in the Code of Federal Regulations, Title 16, Section 1500.41 and is performed to the albino rabbit.

After testing, the test substance is classified following a Primary Irritation Index (PII)

| <i>Primary irritation index</i> | <i>Classification</i> |
|---------------------------------|-----------------------------|
| 0 | non-irritant |
| > 0 - 2 | mildly irritant |
| 2.1 - 5.0 | moderate irritant |
| 5.1 - 6.0 | moderate to severe irritant |
| > 6 | severe irritant |



DIN 52900 - Health and Safety data sheet

The German DIN 52900 norm states standardized information on chemicals, papers or films concerning various safety aspects of a product under normal conditions of storage, handling or use.

The norm includes information on the manufacturer, chemical and physical characteristics of the product such as melting point, burning behaviour and chemical decomposition in case of fire, safety measurement for transport and handling and toxicological and ecological information.

A Din 52900 health and safety data sheet on most self-adhesive laminates can be obtained upon request.

In the UK, the legal framework for the provision of information on substances is contained primarily in the Health and Safety at work Act. 1974 , Section 6.

The C.O.S.H.H. Information sheet states a product description, intended use, composition, health and fire hazards and handling precautions.

Although less detailed, the C.O.S.H.H. information sheet is comparable to the German DIN 52900 norm.

MAIN APPROVALS AS FAR AS APPLICATION IS CONCERNED

| Adhesive | Backing NBP = Not Back Printed | Food contact | | Application on toys EAN 71/3 | Skin Irritation Huntington R.C.* | Marine Use BS5609 | ISO 9706 Permanent Paper Acid free (face paper) |
|-------------------------------|---|---|--|------------------------------------|---|----------------------|--|
| | | ISEGA / BGA* | | | | | |
| | | direct contact with dry and moist non fatty foodstuffs | indirect contact with foodstuffs | | | | |
| WHITE – NON COATED | | * Approval of the adhesive | | | | | |
| MACTab White | Permanent | Starliner | Approved | | Approved | Non irritant | Complies |
| | | Secury 9 | Approved | | Approved | Non irritant | Complies |
| | Removable | Starliner | | Approved | Approved | | Complies |
| | | Secury 9 | | Approved | Approved | | Complies |
| Special Perm. | Starliner NBP | | Approved | Approved | | Complies | |
| TAG | Permanent | Secury 9 | Approved | | Approved | Non irritant | |
| WHITE –COATED | | | | | | | |
| MACsnow | Permanent | Starliner | Approved | | Approved | Non irritant | Complies |
| | | Secury 9 | Approved | | Approved | Non irritant | Complies |
| Velvet | Permanent | Starliner | Approved | | Approved | Non irritant | Complies |
| | | Secury 9 | Approved | | Approved | Non irritant | Complies |
| | Removable | Starliner | | Approved | Approved | | Complies |
| | | Secury 9 | | Approved | Approved | | Complies |
| Special Perm. | Starliner NBP | | Approved | Approved | | Complies | |
| MAClux | Permanent | Starliner | Approved | | Approved | Non irritant | Complies |
| | | Secury 9 | Approved | | Approved | Non irritant | Complies |
| | Removable | Starliner | | Approved | Approved | | Complies |
| | | Secury 9 | | Approved | Approved | | Complies |
| Special Perm. | Starliner NBP | | Approved | Approved | | Complies | |
| WHITE –CAST COATED | | | | | | | |
| Supergloss | Permanent | Starliner | Approved | | Approved | Non irritant | |
| | | Secury 9 | Approved | | Approved | Non irritant | |
| | Removable | Starliner | | Approved | Approved | | |
| | | Secury 9 | | Approved | Approved | | |
| Special Perm. | Starliner NBP | | Approved | Approved | | | |
| Supergloss 180 | Permanent | Secury 9 | Approved | | Approved | | |
| COULOURS | | | | | | | |
| MACTab Colour | Permanent | Starliner NBP | Approved | | Approved | Non irritant | |
| MACfluo | Permanent | Starliner NBP | Approved | | Approved | Non irritant | |
| COPIE – LASER – INKJET | | | | | | | |
| STARcopy | Perm. Laser | Secury 6 TCF | Approved | | Approved | | |
| MAClaser | Perm. Laser | Secury 9 | Approved | | Approved | Non irritant | |
| STARset | Permanent | Secury 9 | | Approved | Approved | | |
| SPECIAL FILMS | | | | | | | |
| MAClitho | Perm. Litho | Starliner | Approved | | Approved | | Approved |
| | | Secury 13 | Approved | | Approved | | Approved |
| STARvinyl | Permanent | Starliner | Approved | | | | Approved |
| | | Secury 13 | Approved | | | | Approved |
| Acétate | Perm. transp. | Secury 13 | | Approved | Approved | | |
| METALLISED PRODUCTS | | | | | | | |
| Lam. Foil | Permanent | Secury 9 | Approved | | Approved | | |
| Solid Foil | Permanent | Mercury | | Approved | | | |
| SPECIALITIES | | | | | | | |
| Mattopak Plus | Permanent | Starliner | | | Approved | | |
| | | Secury 9 | | | Approved | | |
| Glossopak | Permanent | Starliner | | | Approved | | |
| | | Secury 9 | | | Approved | | |
| MACsilky | Permanent | Secury 13 | | Approved | | | |

Robinson (smell test) : on request depending on the application.