



Safe and environmentally friendly toys



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Criteria for the evaluation of toys

- Toys should stimulate the imagination instead of constricting it, as for example speaking dolls do with their few phrases. Every child is able to easily invent more and better words for everything his/her doll says.
- The more diverse the game options, the more stimulating the toy and the longer it remains of interest. For example a cart a toddler can pull.
- The game follows the daily environmental experiences and the most impressive experiences of the child (also when watching TV!). For example, the constriction site in front of the house will stimulate a reenactment and a vacation on a camp site will make the motor home interesting.



Criteria for the evaluation of toys

- Eco friendliness
 - ecological consequences when manufacturing toys (materials from renewable resources, sustainable production methods)
 - Use of non-toxic material components



Toy testing

- **Proven safety creates trust – for the children’s sake.**
- The variety of toys and the global markets require comprehensive, competent and internationally recognized tests according to national and international regulations and standards.



Tests for safety

Examples:

- **Mechanical/physical tests according to EN 71 Part 1**
 - Tensile test
 - Tilt test
 - Load test
 - Durability
 - Noise measurement



Hearing damage through noise





Tests for safety

- **Flammability according to EN 71 Part 2**
- **Chemical examinations according to EN 71 Part 3 – 5**
 - Migration of heavy metals
- **No health hazard according to LMBG**
 - Resistance to spittle and fastness to perspiration
 - Determination of plasticizers
 - Hygienic and microbiological examinations



Tests for safety

- **Electrical safety**
 - Electric toys under the toys directive
 - Transformers in toys
 - Toy lamps
 - Battery chargers
 - Standards: recent developments and transition periods
- **Electromagnetic compatibility (EMC)**
 - Interference emission and interference immunity
- **Radio permit for toys**



Certifications



- With the CE mark (Communauté Européenne), the manufacturer gives a commitment to comply with the minimum of the EU toys directive.
- The sign does not mean that the manufacturer's information was verified. All toys on the German market have to carry the sign.



Certifications



- The GS mark stands for "Tested Safety". In order to be able to use it, the manufacturer has to have the toys examined and monitored yearly by an accredited inspection body.
- Priorities are safety checks under the EU standard (EN – 71) and the Food and Commodities Act.



Certifications



- The Landesgewerbeamt Bayern awards the LGA mark. It ensures the compliance with the EU standard, as well as requirements that go beyond, such as tests for plasticizers and azo dye.



Certifications



- The TÜV Rheinland assigns the TÜV mark.
- Just like the LGA mark, it ensures compliance with the EU standard, as well as further tests, such as tests for plasticizers and azo dye.



Certifications



- Spiel gut („Play well“) tests in families and kindergardens and evaluates the toys for educational, aesthetic and environmental criteria.
- Material characteristics and ingredients are queried from the manufacturer and verified with samples in the laboratory.



Criteria for the evaluation of toys

- Stimulate imagination
- Pay attention to diverse opportunities to play
- Include environmental experiences
- Size of the toy
- The quantity
- Material and durability have to correspond with the objective of the game
- Simple construction and mechanics
- Shape and color
- Safety
- Environmental compatibility
- Price



Tips

- Environmental compatibility: material used, production, usage and disposal, longevity, repairability and reusability.



What do environmentally friendly toys mean?

- Material
 - Toxic ingredients, such as plasticizers, heavy metals, toxic (azo) dyes, formaldehyde, solvents, flame retardants should not be used
 - Use of sustainably produced materials
 - Wood – plastic - metal



Plantation wood – a sustainable material?



- About 30 percent of the world's land area is covered by forest. But the forests are in danger of
 - Toxic fires
 - Climate change
 - Conversion (fields, plantation)
 - Illegal logging



Recyclability

- When many different materials are used for one toy, recycling is no longer possible!

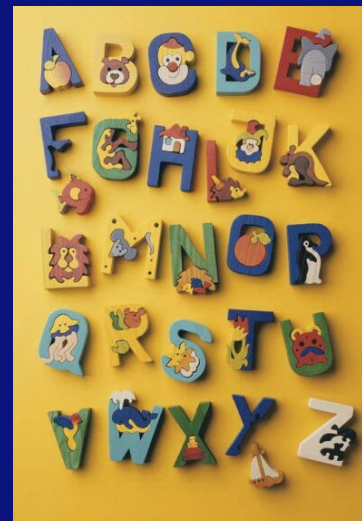




Watch for this label!



- This label guarantees sustainable forestry.





Laminated wood with pitfalls

- Wooden puzzles often contain too much formaldehyde





Contaminants in toys

- Plasticizers in strollers, bicycle handles and other toy materials
- Plasticizers in paints
- Plasticizers in dolls and other PVC toy materials



Lifespan/durability

- Durable toys pollute the environment less than disposable products!
Here, material and workmanship play a vital role!





Tips

- The price:
should always be assessed in proportion
to game possibilities and lifespan.
Less is more!





What else can you do?

- Provide space, time and opportunity to play
- Show genuine interest without intervening continuously or criticizing
- Take advantage of everyday sources of material



Game environment

- Internal spaces are often loaded with:
 - Toxic environmental chemicals from building materials and furnishings (formaldehyde, solvents, plasticizers, wood preservatives, PAHs, asbestos/ glass fibers)
 - Electromagnetic pollution (cell phones)
 - Exaggerated hygiene (disinfectant)
 - Mold



Exposure to formaldehyde degassing furniture in small spaces/rooms





Risk of PAHs (polycyclic aromatic hydrocarbons) in older parquet flooring





Indoor exposure to mold



Aspergillus niger
under a light
microscope at 400x
magnification



Play outside!



Concentration of pollutants outside is at least smaller by factor 10 than indoors.





Let children play!

- Create occasions for games!
- Create alternatives for watching TV!
- Children must experience their environment with all senses.



Thank you for your attention!