

Testing institute : Product Technology Service (Ningbo) Co., Ltd.  
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Applicant : Dilemma Games Ltd  
201, The Empire Business Center, 22/3 Nimmanhaemin  
Rd. T. Suthep, A. Muang Chiang Mai 50200 Thailand

Product name : Wooden puzzles and games

Model/type : /

Sample Description : /

Material : Wood

Sample receive date : Dec. 26, 2013  
Completes date : Dec. 31, 2013

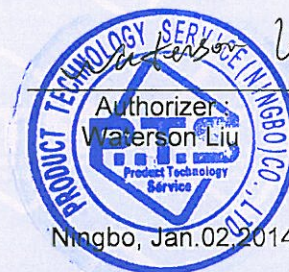
Testing location : Product Technology Service (Ningbo) Co., Ltd.

Test specification(s) : 1. EN71-Part 1: 2011 Mechanical and Physical Properties  
Excluding Labeling Requirement of Clause 7.1 & 7.2  
2. EN71-Part 2: 2011 Flammability  
3. EN71 - Part 3: 2013 -- Migration of certain elements

Conclusion : Pass

Della Wang  
Originator:  
Della Wang

Jason Li  
Verifier:  
Jason Li



The test results exclusively refer to the samples examined. This report shall not be reproduced except in full without written approval and does not authorize the use of Product Technology Service (Ningbo) Co., Ltd. label. The report is invalid without signature and seal of Product Technology Service (Ningbo) Co., Ltd.



Product name:

| Name                           | No. | Name                                     | Part No. | Part Name                        |
|--------------------------------|-----|------------------------------------------|----------|----------------------------------|
| Wooden<br>puzzles and<br>games | 1   | Sudoku 2 Sides Colored, IQ999B           |          |                                  |
|                                | 2   | Magic Squares, IQ954                     |          |                                  |
|                                | 3   | Connect Four, IQ212                      |          |                                  |
|                                | 4   | Strategy, IQ206                          |          |                                  |
|                                | 5   | SUDOKU-KID,HITORI,2sides colored, IQ4444 |          |                                  |
|                                | 6   | Switch 16, IQ304                         |          |                                  |
|                                | 7   | Snakes& Ladders, IQ208                   |          |                                  |
|                                | 8   | King Puzzle, IQ339                       |          |                                  |
|                                | 9   | T TO T, IQ343                            |          |                                  |
|                                | 10  | Guess My Number, IQ351                   |          |                                  |
|                                | 11  | Mini Nails Cube, IQ108C                  |          |                                  |
|                                | 12  | Match 15, IQ957                          |          |                                  |
|                                | 13  | Round Solitaire, IQ414                   |          |                                  |
|                                | 14  | Tangram, IQ955                           |          |                                  |
|                                | 15  | Hexiamond Puzzle, IQ312                  |          |                                  |
|                                | 16  | Throw the Dices-Yatzi, IQ965             |          |                                  |
|                                | 17  | Shut the box, IQ963                      |          |                                  |
|                                | 18  | TIK-TAK-TOE, IQ222                       |          |                                  |
|                                | 19  | Mini Kalaha, IQ202                       |          |                                  |
|                                | 20  | Broken Heart-60 2d puzzles, IQ418        |          |                                  |
|                                | 21  | Egg Puzzle-60 2D puzzles, IQ405          |          |                                  |
|                                | 22  | Barricade, IQ619                         |          |                                  |
|                                | 23  | Horse Race, IQ207                        |          |                                  |
|                                | 24  | Hexiamond<br>Puzzle, IQ312               | 24-1     | Parallelogram building<br>blocks |
|                                |     |                                          | 24-2     | Body Box                         |



## 1. EN71 - Part1: Mechanical and Physical Properties

|                                                 |   |                                                                                                        |
|-------------------------------------------------|---|--------------------------------------------------------------------------------------------------------|
| Test specification                              | : | EN71-Part1:2011 Mechanical and Physical Properties<br>Excluding Labeling Requirement of Clause 7.1&7.2 |
| Test item                                       | : | See below                                                                                              |
| Requirement                                     | : | See below                                                                                              |
| Labeled age grading:                            | : | Not stated                                                                                             |
| Applicant's specified age group<br>for testing: | : | 3+ years                                                                                               |
| Age grading for test:                           | : | Over 3 years                                                                                           |

### Test Results

#### Clause

#### Assessment

#### 4. General requirements

|                                      |             |
|--------------------------------------|-------------|
| 4.1 Material                         | <u>Pass</u> |
| 4.7 Edges                            | <u>Pass</u> |
| 4.8 Points and wires                 | <u>Pass</u> |
| 4.10 Parts moving against each other | <u>Pass</u> |
| 4.10.3 Hinges                        | <u>Pass</u> |

#### 7. Warnings, markings and instructions for use

Tracking information [CE mark, importer / manufacturer mark (name, address), product identification]

See Remark

(REMARK: It is drawn to your attention that the product identification number, name and address of manufacturer and importer in EEC country together with CE-marking should appear as specified in Directive-2009/48/EC-Safety of toys)

7.1 General See Remark 1

7.2 Toys not intended for children under 36 months See Remark 1

#### Remark:

1: The applicant certified that they would print the warning statement and symbol as specified in clause 7.1&7.2 of EN71 part1 on the product or its packaging.

N.B.: Only applicable clauses were shown.



**2. EN71 - Part2: Flammability**

Test specification : EN71-Part2: 2011 Flammability

Test item : See below

Requirement : See below

**Test Results****Clause****Assessment****4.1 General**Pass

- The following materials shall not be used in the manufacture of toys  
Cellulose nitrate and materials with the same behaviour in fire  
Materials with a piled surface which produce surface flash on the approach of a flame
- Toys shall not contain flammable gases, flammable liquids and flammable solids

**Remark :**

N.B.: Only applicable clauses were shown.

Main test instruments used for this method:

| Instrument               | Manufactory | Model / Type |
|--------------------------|-------------|--------------|
| Flammability tester-EN71 | Tonny       | TNC14        |



**3. EN71 - Part 3:2013 -- Migration of certain elements**

Test method : EN71 - Part 3:2013 -- Migration of certain elements

Test item : Migration of 19 Elements – with reference to 2009/48/EC and its amendment 2012/7/EU

Requirement : See below

| Test Product No.      |       |      |                                      | No.24-1 | No.24-2 |
|-----------------------|-------|------|--------------------------------------|---------|---------|
| Parameter             | Unit  | RL   | Regulatory Requirement <sup>#3</sup> | Result  | Result  |
| Aluminium (Al)        | mg/kg | 50   | 70000                                | ND      | ND      |
| Barium (Ba)           | mg/kg | 50   | 18750                                | ND      | ND      |
| Boron (B)             | mg/kg | 50   | 15000                                | ND      | ND      |
| Manganese (Mn)        | mg/kg | 50   | 15000                                | ND      | ND      |
| Strontium (Sr)        | mg/kg | 50   | 56000                                | ND      | ND      |
| Tin (Sn)              | mg/kg | 50   | 180000                               | ND      | ND      |
| Zinc (Zn)             | mg/kg | 50   | 46000                                | ND      | ND      |
| Copper (Cu)           | mg/kg | 50   | 7700                                 | ND      | ND      |
| Antimony (Sb)         | mg/kg | 1    | 560                                  | ND      | ND      |
| Arsenic (As)          | mg/kg | 0.5  | 47                                   | ND      | ND      |
| Cadmium (Cd)          | mg/kg | 0.3  | 17                                   | ND      | ND      |
| Cobalt (Co)           | mg/kg | 0.5  | 130                                  | ND      | ND      |
| Lead (Pb)             | mg/kg | 0.5  | 160                                  | ND      | ND      |
| Mercury (Hg)          | mg/kg | 0.5  | 94                                   | ND      | ND      |
| Nickel (Ni)           | mg/kg | 10   | 930                                  | ND      | ND      |
| Selenium (Se)         | mg/kg | 5    | 460                                  | ND      | ND      |
| Chromium III (CrIII)* | mg/kg | 5    | 460                                  | ND      | ND      |
| Chromium VI (CrVI)    | mg/kg | 0.02 | 0.2                                  | ND      | ND      |
| Organic tin           | mg/kg | 5    | 12                                   | ND      | ND      |
| Conclusion            |       |      |                                      | PASS    | PASS    |

**Remark:**

ND= Not Detected (< RL), RL = Reporting Limit  
 mg/kg denotes milligram per kilogram

\*: Chromium III (CrIII) content equal to the content of total chromium minus hexavalent chromium content

#3: Regulatory Requirement for scraped-off materials

Main test instruments used for this method:

| Parameter                                | Instrument | Manufactory | Model / Type        |
|------------------------------------------|------------|-------------|---------------------|
| Al, Ba, B, CrIII, Cu, Mn, Ni, Se, Sr, Zn | ICP-OES    | PerkinElmer | 5300DV              |
| Sb, As, Cd, Co, Pb, Hg, Sn               | ICP-MS     | Agilent     | 7700                |
| CrVI                                     | LC- ICP-MS | Agilent     | 1100-7700           |
| Organic tin                              | GC-MS      | Agilent     | GC (6890)-MS (5975) |

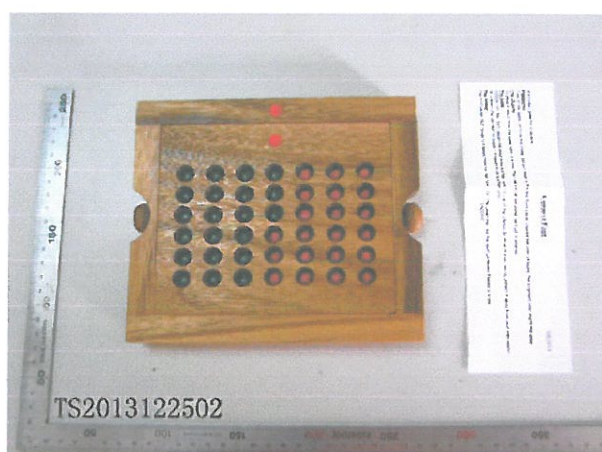
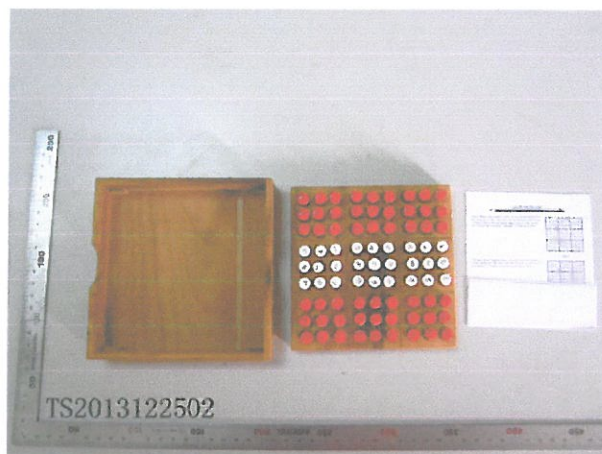
Sample photo(s), see annex 1

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## ANNEX 1

Sample photos, Consists of 9 pages











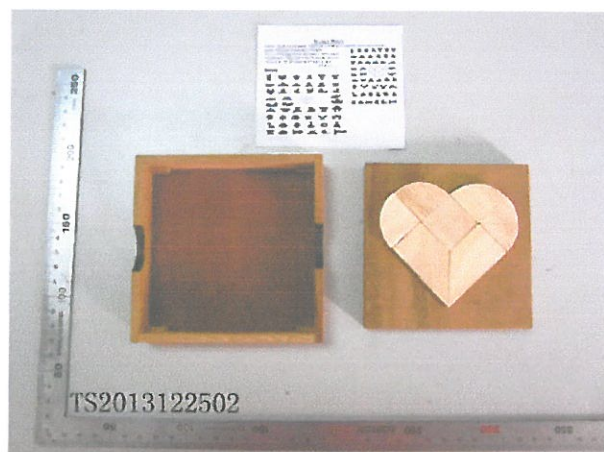




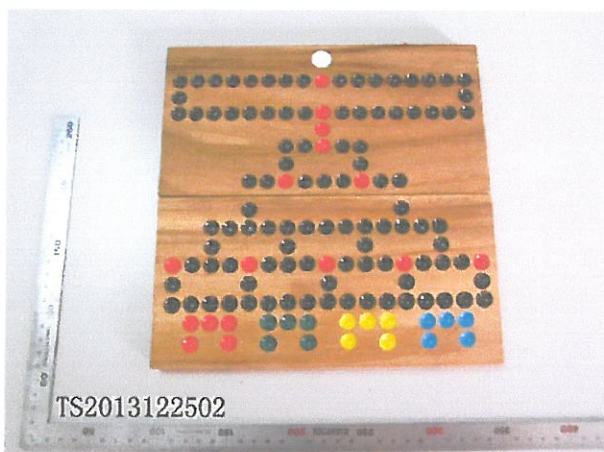
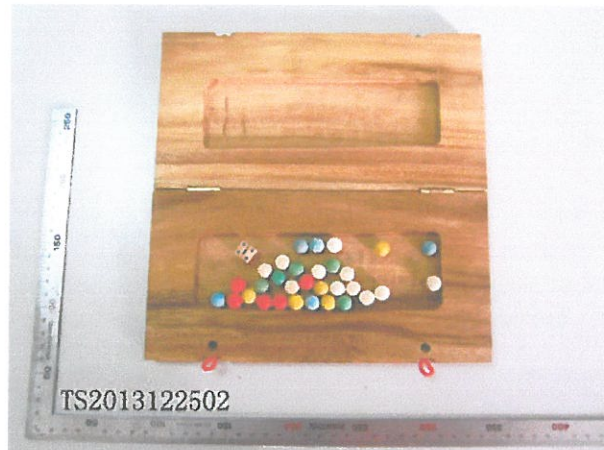
















Wooden puzzles and games