

# Risk Assessment for RAPEX

## General Information

---

### Product

Product name: Product type

Product category: Category

Description: This is a PROSAFE risk assessment template for cords and drawstrings in children's clothing. It describes likely injury scenarios for the most common and risky non-compliances for such clothes according to EN 14682.

The scenarios consider the following non-compliances according to the standard:

§3.1.2 Toggles at the end of elastic cords or drawstrings

§3.2 Cords or drawstrings in the hood and neck area on clothes for small children (below 7 years)

§3.3 Cords or drawstrings in the hood and neck area on clothes for older children (7 - 14 years)

§3.5 Cords or drawstrings at the lower hems of garments that hang below the crotch

§3.6 Cords or drawstrings on the back of clothes

The template offers two different scenarios for each of §3.2 and §3.5.

### How to use

Users should select those scenarios that correspond to the non-compliances identified in the product under assessment.

All other scenarios are deleted.

The probabilities are estimated in the remaining scenarios.

Users are reminded that the scenarios presented in the template are likely scenarios. Users should always assure that the scenarios do indeed give a good representation of the situation that is being assessed.

This includes among other things checking that the scenario is suitable, that the steps are correct and that the injury level is appropriate.

### Disclaimer

The template has been developed by a PROSAFE working group composed of market surveillance experts. The intention is to support market surveillance officials assessing the risk with a particular product as part of a market surveillance case.

The template is not authorized or endorsed in any way and it is not binding for Member State market surveillance authorities.

The contents of the original template is subject to change without notice.

### **Risk assessor**

First name: PROSAFE Risk Assessment Template  
Last name:  
Organisation: PROSAFE  
Address: PROSAFE Secretariat  
Avenue des Arts/Kunstlaan 41, 2nd floor  
B-1040 Brussels,  
Belgium  
Tel: +32 2 8080 996/997  
E-mail: info@prosafe.org

### **Product risks - Overview**

---

- Scenario 1 : **Risk to be determined** - A child wears a garment with an elastic (decorative) cord in the neck area. The child pulls the elastic cord. The elastic cord bounces back and hits the child's eye. The eye is (temporarily) damaged.
- Scenario 2 : **Risk to be determined** - A young child is wearing a hoodie while playing on a slide on a playground. The hoodie has long drawstrings around the neck. One end of the drawstrings gets entangled on the top of the slide. The child moves down the slide and the hoodie tightens around the throat of the child. The oxygen flow is blocked and the child is strangled.
- Scenario 3 : **Risk to be determined** - A young child is wearing a hoodie while climbing a bunk bed. The hoodie has long drawstrings around the neck. One end of the drawstrings gets entangled on the top of the bunk bed. The child slips and falls down and the hoodie tightens around the throat of the child. The oxygen flow is blocked and the child is strangled.
- Scenario 4 : **Risk to be determined** - An older child wears a hoodie. It has drawstrings around the neck. The child climbs a high fence. One end of the drawstring gets entangled to the top of the fence. The child falls down and the string tightens around the child's neck. The child is strangled.
- Scenario 5 : **Risk to be determined** - A child is travelling an escalator wearing a tracksuit bottom. The tracksuit has toggles hanging below the lower end of the tracksuit legs. The toggle gets jammed between the edge of the escalator and the moving step. The child is unable to alight from the escalator and gets suck in as the escalator continues to rotate. The child sustains injury to the leg area before the emergency stop is activated.
- Scenario 6 : **Risk to be determined** - A child is passes through a revolving door wearing a tracksuit bottom. The trascksuit has toggles hanging below the lower end of the tracksuit legs. The toggle gets jammed in the door. The child is unable to get away and is caught in the door. The child sustains chrushing of fingers before the emergency stop is activated.

Scenario 7 : **Risk to be determined** - An older child is riding a bicycle wearing a dress. The dress is designed to be tied at the back with a ribbon. The ribbon is hanging loose below the lower end of the dress. The ribbon becomes entangled in rotating parts of the bicycle. The child falls from the bicycle and sustains a head injury.

Overall risk :

**Risk to be determined**

## Scenario 1 : Older children - Elastic element or spring

### Product hazard

Hazard Group: Potential energy  
Hazard Type: Elastic element or spring

### Consumer

Consumer Type: Older children - 8 to 14 years (Vulnerable consumers)

### How the hazard causes an injury to the consumer

Injury scenario: A child wears a garment with an elastic (decorative) cord in the neck area. The child pulls the elastic cord. The elastic cord bounces back and hits the child's eye. The eye is (temporarily) damaged.

### Severity of Injury

Injury: Eye injury, foreign body in eye  
Level: 2 Temporary loss of sight

### Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	A child wears a garment with an elastic (decorative) cord in the neck area.	1
Step 2:	The child pulls the elastic cord.	
Step 3:	The elastic cord bounces back and hits the child's eye.	
Step 4:	The eye is (temporarily) damaged. (Other severity levels are possible depending upon the length of the cord.)	

**Calculated probability:**

To be determined

**Overall probability:**

To be determined

**Risk of this scenario:**

Risk to be determined

## Scenario 2 : Young children - High position of user

### Product hazard

Hazard Group: Potential energy  
Hazard Type: High position of user

### Consumer

Consumer Type: Young children - Older than 36 months and younger than 8 years (Vulnerable consumers)

### How the hazard causes an injury to the consumer

Injury scenario: A young child is wearing a hoodie while playing on a slide on a playground. The hoodie has long drawstrings around the neck. One end of the drawstrings gets entangled on the top of the slide. The child moves down the slide and the hoodie tightens around the throat of the child. The oxygen flow is blocked and the child is strangled.

### Severity of Injury

Injury: Suffocation / Strangulation  
Level: 4 Fatal suffocation / strangulation

### Probability of the steps to injury

Step(s) to Injury	Probability
Step 1: A young child is wearing a hoodie while playing on a slide on a playground.	1
Step 2: The hoodie has long drawstrings around the neck.	1
Step 3: One end of the drawstrings gets entangled on the top of the slide. (The probability depends upon e.g. the free length of the drawstring and how well it is fixed to the garment.)	
Step 4: The child moves down the slide and the hoodie tightens around the throat of the child.	
Step 5: The oxygen flow is blocked and the child is strangled. (The severity and the probability depends upon the garment, the mechanical strength of the drawstring and the presence of adults that can help the child.)	

**Calculated probability:**

To be determined

**Overall probability:**

To be determined

**Risk of this scenario:**

Risk to be determined



## Scenario 3 : Young children - High position of user

### Product hazard

Hazard Group: Potential energy  
Hazard Type: High position of user

### Consumer

Consumer Type: Young children - Older than 36 months and younger than 8 years (Vulnerable consumers)

### How the hazard causes an injury to the consumer

Injury scenario: A young child is wearing a hoodie while climbing a bunk bed. The hoodie has long drawstrings around the neck. One end of the drawstrings gets entangled on the top of the bunk bed. The child slips and falls down and the hoodie tightens around the throat of the child. The oxygen flow is blocked and the child is strangled.

### Severity of Injury

Injury: Suffocation / Strangulation  
Level: 4 Fatal suffocation / strangulation

### Probability of the steps to injury

Step(s) to Injury	Probability
Step 1: A young child is wearing a hoodie while climbing a bunk bed.	1
Step 2: The hoodie has long drawstrings around the neck.	1
Step 3: One end of the drawstrings gets entangled on the top of the bunk bed. (The probability depends upon the length of the drawstring.)	
Step 4: The child slips and falls down and the hoodie tightens around the throat of the child.	
Step 5: The oxygen flow is blocked and the child is strangled. (The severity and the probability depends upon the garment, the mechanical strength of the drawstring and the presence of adults that can help the child.)	

**Calculated probability:**

To be determined

**Overall probability:**

To be determined

**Risk of this scenario:**

Risk to be determined

## Scenario 4 : Older children - High position of user

### Product hazard

Hazard Group: Potential energy  
Hazard Type: High position of user

### Consumer

Consumer Type: Older children - 8 to 14 years (Vulnerable consumers)

### How the hazard causes an injury to the consumer

Injury scenario: An older child wears a hoodie. It has drawstrings around the neck. The child climbs a high fence. One end of the drawstring gets entangled to the top of the fence. The child falls down and the string tightens around the child's neck. The child is strangled.

### Severity of Injury

Injury: Suffocation / Strangulation  
Level: 4 Fatal suffocation / strangulation

### Probability of the steps to injury

Step(s) to Injury	Probability
Step 1: An older child is wearing a hoodie.	1
Step 2: It has drawstrings around the neck.	1
Step 3: The child climbs a high fence.	
Step 4: One end of the drawstring gets entangled to the top of the fence. (The probability depends upon the length of the drawstring.)	
Step 5: The child falls down and the string tightens around the child's neck.	
Step 6: The child is strangled. (The severity and the probability depends upon the height of the child, the height of the fence, the strenght of the drawstring and the presence of adults.)	

**Calculated probability:**

To be determined

**Overall probability:**

To be determined

**Risk of this scenario:**

Risk to be determined



## Scenario 5 : Young children - Failure to stop

### Product hazard

Hazard Group: Product operating hazards  
Hazard Type: Failure to stop

### Consumer

Consumer Type: Young children - Older than 36 months and younger than 8 years (Vulnerable consumers)

### How the hazard causes an injury to the consumer

Injury scenario: A child is travelling an escalator wearing a tracksuit bottom. The tracksuit has toggles hanging below the lower end of the tracksuit legs. The toggle gets jammed between the edge of the escalator and the moving step. The child is unable to alight from the escalator and gets suck in as the escalator continues to rotate. The child sustains injury to the leg area before the emergency stop is activated.

### Severity of Injury

Injury: Bruising (abrasion/ contusion, swelling, oedema)  
Level: 2 Major  
>25 cm<sup>2</sup> on face  
>50 cm<sup>2</sup> on body

### Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	A child is travelling an escalator wearing a tracksuit bottom.	1
Step 2:	The tracksuit has toggles hanging below the lower end of the tracksuit legs.	1
Step 3:	The toggle gets jammed between the edge of the escalator and the moving steps. (The probability depends upon the length of the string and the geometry of the toggle.)	
Step 4:	The child is unable to alight from the escalator and gets suck in as the escalator continues to rotate.	
Step 5:	The child sustains injury to the leg area before the emergency stop is activated.	

**Calculated probability:**

To be determined

**Overall probability:**

To be determined

**Risk of this scenario:**

**Risk to be determined**

## Scenario 6 : Young children - Inability to stop

### Product hazard

Hazard Group: Product operating hazards  
Hazard Type: Inability to stop

### Consumer

Consumer Type: Young children - Older than 36 months and younger than 8 years (Vulnerable consumers)

### How the hazard causes an injury to the consumer

Injury scenario: A child is passes through a revolving door wearing a tracksuit bottom. The trascksuit has toggles hanging below the lower end of the tracksuit legs. The toggle gets jammed in the door. The child is unable to get away and is caught in the door. The child sustains chrushing of fingers before the emergency stop is activated.

### Severity of Injury

Injury: Crushing  
Level: 3 Extremities (fingers, toe, hand, foot)  
Elbow  
Ankle  
Wrist  
Forearm  
Leg  
Shoulder  
Trachea  
Larynx  
Pelvis

### Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	A child is passes through a revolving door wearing a tracksuit bottom.	1
Step 2:	The trascksuit has toggles hanging below the lower end of the tracksuit legs.	1
Step 3:	The toggle gets jammed in the door. (The probability depends upon the lenght of the drawstring and the size of the toggle.)	
Step 4:	The child is unable to get away and is caught in the door.	

Step 5: The child sustains crushing of fingers before the emergency stop is activated.

**Calculated probability:**

**To be determined**

**Overall probability:**

**To be determined**

**Risk of this scenario:**

**Risk to be determined**

## Scenario 7 : Older children - Rotating parts

### Product hazard

Hazard Group: Kinetic energy  
Hazard Type: Rotating parts

### Consumer

Consumer Type: Older children - 8 to 14 years (Vulnerable consumers)

### How the hazard causes an injury to the consumer

Injury scenario: An older child is riding a bicycle wearing a dress. The dress is designed to be tied at the back with a ribbon. The ribbon is hanging loose below the lower end of the dress. The ribbon becomes entangled in rotating parts of the bicycle. The child falls from the bicycle and sustains a head injury.

### Severity of Injury

Injury: Fracture  
Level: 3 Ankle  
Leg (femur and lower leg)  
Hip  
Thigh  
Skull  
Spine (minor compression fracture)  
Jaw (severe)  
Larynx  
Multiple rib fractures  
Blood or air in chest

### Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	An older child is riding a bicycle wearing a dress.	1
Step 2:	The dress is designed to be tied at the back with a ribbon.	1
Step 3:	The ribbon is hanging loose below the lower end of the dress.	
Step 4:	The ribbon becomes entangled in rotating parts of the bicycle. (The probability depends upon the length and strength of the ribbon.)	
Step 5:	The child falls from the bicycle and sustains a head injury. (Other injuries are possible with other probabilities.)	

---

**Calculated probability:**

**To be determined**

**Overall probability:**

**To be determined**

**Risk of this scenario:**

**Risk to be determined**