Risk Assessment for RAPEX

General Information

Product

Product name:	Children's Kick scooter
Product category:	Toy kick scooter
Description:	This is a PROSAFE risk assessment template for toy kick scooters for children. It describes likely injury scenarios linked to non-conformity with the following clauses of standard EN 71-1 : §§4.15.1.3 & 4.15.5.3 (Tests: §§8.21 & 8.22) - static and dynamic strength : - sharp edges [scenario 1] - sharp points [scenario 2] - crushing risk [scenario 3] - collapse of steering tube [scenario 4] §4.15.5.4 - Adjustable and folding steering tubes : - locking device [scenario 5] - space between moving elements [scenario 6] §4.15.5.5 (Test: §8.26.3) - Brakes [scenario 7] §4.15.5.6 - Front wheel size [scenario 8] §4.15.5.7 - Protruding parts (handle bar ends) [scenario 9] §5.1 (a) - Small parts (kick scooters for children < 36 months) [scenario 10] §4.15.5.2 + §7.18 - Warnings and instructions for use [scenario 11] How to use Users should select the scenario(s) that correspond to the non-compliances identified for the product under assessment. All other scenarios can then be deleted. The scenarios presented in the template are likely scenarios. Users should ensure that the scenario is suitable, that the steps are correct and that the injury level is appropriate. The age group selected for the scenario should be determined in light of the target age-group for the kick scooter concerned. The probability assigned to each step should be determined according to the exact nature of the non-conformity concerned, as recorded in the test report. Disclaimer The template has been developed by PROSAFE to help market surveillance officials to assess the risk(s) associated with the non-conformities of a particular

	product that has been checked and tested during a joint market surveillance action. The template is not authorized or endorsed in any way and is not binding on national market surveillance authorities. The content of the original template is subject to change without notice.
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Product risks - Overview

Scenario 1 :	**Risk to be determined** - A child is riding the kick scooter. Part of the kick scooter breaks, exposing sharp edges. The child comes into contact with a sharp edge and receives a deep cut on the leg.
Scenario 2 :	**Risk to be determined** - A child is riding the kick scooter. A part of the kick scooter breaks, exposing a sharp point. The child loses its balance, comes into contact with the sharp point and receives a deep puncture wound.
Scenario 3 :	**Risk to be determined** - The child is riding the kick scooter. A part of the kick scooter breaks, exposing a gap in which parts of the body may be entrapped. The child foot is caught in the gap and a toe is crushed.
Scenario 4 :	**Risk to be determined** - A child is riding the kick scooter. The steering column collapses during the ride. The child loses control of the kick scooter and falls to the ground. The child's wrist is fractured.
Scenario 5 :	**Risk to be determined** - A child is riding the kick scooter. The locking mechanism, maintaining the steering column in position, becomes disengaged. The child loses control of the kick scooter and falls to the ground. The child receives lacerations to the hands and arms.
Scenario 6 :	**Risk to be determined** - The child tries to fold the kick scooter. One of the child's fingers enters a gap in the folding mechanism and is crushed.
Scenario 7 :	**Risk to be determined** - A child is riding the kick scooter on a slope. The child tries to slow by using the brake. The brake does not work. The speed gets too high. The child falls on the ground and breaks a wrist, an arm or a tooth.

Scenario 8 :	**Risk to be determined** - A child is riding the kick scooter on a rough surface. The front wheel gets caught in a hole in the ground. The child is thrown off the kick scooter and it's head hits the ground.
Scenario 9 :	**Risk to be determined** - A child is riding the kick scooter. The child falls with the kick scooter. The child falls on the end of the handle bar and receives a puncture wound to the abdomen.
Scenario 10 :	**Risk to be determined** - A small part becomes detached from the kick scooter. The child puts the small part in its mouth and chokes.
Scenario 11 :	**Risk to be determined** - The kick scooter does not bear a warning against use in traffic. The child uses the kick scooter on a public road, in traffic. The child collides with a road vehicle and suffers major bruising to it's legs.

Overall risk : **Risk to be determined**

Scenario 1 : Young children - Sharp edge

Product hazard

Hazard Group: Size, shape and surface
Hazard Type: Sharp edge

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 riding the kick scooter. Part of the kick scooter breaks, exposing sharp edges. The child comes into contact with a sharp edge and receives a deep cut on the leg.

Severity of Injury

Injury: Laceration, cut
Level: 2 External (deep) (>10cm long on body) (>5cm long on face) requiring stitches
Tendon or into joint
White of eye or Cornea

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is riding the kick scooter.	1
Step 2:	Part of the kick scooter breaks (to be specified according to the failure recorded in the test report). (The probability depends upn the actual, measured mechanical strenght.)	
Step 3:	The failure exposes sharp edges.	
Step 4:	The child comes into contact with the sharp edge and receives a deep cut on the leg. (Other injuries may be possible, presumably with lower probability.)	

Calculated probability: To be determined
Overall probability: To be determined
Risk of this scenario: Risk to be determined

Scenario 2 : Young children - Sharp corner or point

Product hazard

Hazard Group: Size, shape and surface
Hazard Type: Sharp corner or point

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 riding the kick scooter. A part of the kick scooter breaks, exposing a sharp point. The child loses its balance, comes into contact with the sharp point and receives a deep puncture wound.

Severity of Injury

Injury: Piercing, puncturing
Level: 2 Deeper than skin
Abdominal wall (no organ involvement)

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is riding the kick scooter.	1
Step 2:	A part of the kick scooter breaks (to be specified according to the failure recorded in the test report). (The probability depends upn the actual, measured mechanical strenght.)	
Step 3:	The break exposes a sharp point.	
Step 4:	The child loses its balance and comes into contact with the sharp point.	
Step 5:	The child receives a deep puncture wound. (Other injuries may be possibel, presumably with other probabilities.)	

Calculated probability: To be determined
Overall probability: To be determined
Risk of this scenario: Risk to be determined

Scenario 3 : Young children - Parts moving against one another

Product hazard

Hazard Group: Kinetic energy
Hazard Type: Parts moving against one another

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: The child is riding the kick scooter. A part of the kick scooter breaks, exposing a gap in which parts of the body may be entrapped. The child foot is caught in the gap and a toe is crushed.

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:	The child is riding the kick scooter.	1
Step 2:	A part of the kick scooter breaks (to be specified according to the failure recorded in the test report). (The probability depends upn the actual, measured mechanical strenght.)	
Step 3:	The break exposes a gap in which parts of the body can be entrapped.	
Step 4:	The child's foot is caught in the gap.	
Step 5:	The child's toe is crushed. (Other injuries and injury levels are possible, presumably with different probabilities.)	

Calculated probability:	To be determined
Overall probability:	To be determined
Risk of this scenario:	Risk to be determined

Scenario 4 : Older children - Moving product

Product hazard

Hazard Group: Kinetic energy
Hazard Type: Moving product

Consumer

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

How the hazard causes an injury to the consumer

Injury scenario: A child is riding the kick scooter. The steering column collapses during the ride. The child loses control of the kick scooter and falls to the ground. The child's wrist is fractured.

Severity of Injury

Injury: Fracture
Level: 2 Extremities (finger, toe, hand, foot)
Wrist
Arm
Rib
Sternum
Nose
Tooth
Jaw
Bones around eye

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is riding the kick scooter.	1
Step 2:	The steering tube collapses (the probability can be estimated according to the result of the test). (The probability depends upn the actual, measured mechanical strenght.)	
Step 3:	The child loses it's balance and falls to the ground.	
Step 4:	The child extends it's hands in a reflex protective gesture.	
Step 5:	The child's wrist is fractured. (Other injuries and injury levels are possible, presumably with different probabilities.)	

Calculated probability: To be determined

Overall probability:	To be determined
Risk of this scenario:	Risk to be determined

Scenario 5 : Older children - Moving product

Product hazard

Hazard Group: Kinetic energy
Hazard Type: Moving product

Consumer

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

How the hazard causes an injury to the consumer

Injury scenario: A child is riding the kick scooter. The locking mechanism, maintaining the steering column in position, becomes disengaged. The child loses control of the kick scooter and falls to the ground. The child receives lacerations to the hands and arms.

Severity of Injury

Injury: Laceration, cut
Level: 2 External (deep) (>10cm long on body)
(>5cm long on face) requiring stitches
Tendon or into joint
White of eye or Cornea

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is riding the kick scooter.	1
Step 2:	The locking mechanism becomes disengaged (probability to be estimated according to the result of the test).	
Step 3:	The child loses control of the kick scooter and falls to the ground.	
Step 4:	The child extends it's hands in a reflex protective gesture and receives lacerations to it's hands and arms. (Other injuries and injury levels are possible, with different probabilities.)	

Calculated probability: To be determined
Overall probability: To be determined
Risk of this scenario: Risk to be determined

Scenario 6 : Young children - Gap or opening between elements

Product hazard

Hazard Group:	Size, shape and surface
Hazard Type:	Gap or opening between elements

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:	The child tries to fold the kick scooter. One of the child's fingers enters a gap in the folding mechanism and is crushed.

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:	The child is trying to fold the kick scooter.	1
Step 2:	One of the child's fingers is trapped between moving elements in the folding mechanism. (The probability depends upon the geometry and the distances in the folding mechanism.)	
Step 3:	The child's finger is crushed. (Other injuries and injury levels are possible, with different probabilities.)	

Calculated probability: To be determined

Overall probability: To be determined

Risk of this scenario: Risk to be determined

Scenario 7 : Older children - Moving product

Product hazard

Hazard Group: Kinetic energy
Hazard Type: Moving product

Consumer

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

How the hazard causes an injury to the consumer

Injury scenario: A child is riding the kick scooter on a slope. The child tries to slow by using the brake. The brake does not work. The speed gets too high. The child falls on the ground and breaks a wrist, an arm or a tooth.

Severity of Injury

Injury: Fracture

Level: 2

- Extremities (finger, toe, hand, foot)
- Wrist
- Arm
- Rib
- Sternum
- Nose
- Tooth
- Jaw
- Bones around eye

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is riding the kick scooter down a slope.	1
Step 2:	The child tries to slow by using the brake.	1
Step 3:	The brake does not work (probability to be estimated in accordance with the failure recorded in the test report).	
Step 4:	The chlld loses control of the kick scooter and falls to the ground.	
Step 5:	The child's extends it's hands in a reflex protective gesture and its wrist or arm is fractured. (Other injuries and injury levels are possible, with different probabilities.)	

Calculated probability: To be determined

Overall probability: To be determined

Risk of this scenario: Risk to be determined

Scenario 8 : Young children - Moving product

Product hazard

Hazard Group: Kinetic energy
Hazard Type: Moving product

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 riding the kick scooter on a rough surface. The front wheel gets caught in a hole in the ground. The child is thrown off the kick scooter and it's head hits the ground.

Severity of Injury

Injury: Concussion
Level: 2 Very short unconsciousness (minutes)

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is riding the kick scooter on rough ground.	
Step 2:	The front wheel gets caught in a hole in the ground (the probability depends on the actual diameter of the front wheel).	
Step 3:	The child is thrown off the kick scooter.	
Step 4:	The child's head hits the ground and the child suffers concussion. (Other injuries and injury levels are possible, with different probabilities.)	

Calculated probability: To be determined
Overall probability: To be determined
Risk of this scenario: Risk to be determined

Scenario 9 : Young children - Sharp corner or point

Product hazard

Hazard Group: Size, shape and surface
Hazard Type: Sharp corner or point

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 riding the kick scooter. The child falls with the kick scooter. The child falls on the end of the handle bar and receives a puncture wound to the abdomen.

Severity of Injury

Injury: Piercing, puncturing
Level: 2 Deeper than skin
Abdominal wall (no organ involvement)

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is riding the kick scooter.	1
Step 2:	The child loses it's balance and falls with the kick scooter.	
Step 3:	The child falls on one of the handlebar ends.	
Step 4:	The child receives a puncture injury to the abdomen.	

Calculated probability: To be determined
Overall probability: To be determined
Risk of this scenario: Risk to be determined

Scenario 10 : Very young children - Product is or contains small part

Product hazard

Hazard Group:	Size, shape and surface
Hazard Type:	Product is or contains small part

Consumer

Consumer Type:	Very young children - 0 to 36 months (Very vulnerable consumers)

How the hazard causes an injury to the consumer

Injury scenario:	A small part becomes detached from the kick scooter. The child puts the small part in its mouth and chokes.

Severity of Injury

Injury:	Internal airway obstruction	
Level:	3	Oxygen flow to brain blocked without permanent consequences

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is playing with the kick scooter.	1
Step 2:	A small part becomes detached (probability depends on the result recorded in the test report).	
Step 3:	The child puts the small part in it's mouth.	
Step 4:	The child chokes on the small part.	
Step 5:	The small part gets into the child's airways and causes a temporary block of oxygen flow to the brain. (The probability depends upon the shape and size of the part.)	

Calculated probability: To be determined

Overall probability: To be determined

Risk of this scenario: Risk to be determined

Scenario 11 : Older children - Moving product

Product hazard

Hazard Group: Kinetic energy
Hazard Type: Moving product

Consumer

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

How the hazard causes an injury to the consumer

Injury scenario: The kick scooter does not bear a warning against use in traffic. The child uses the kick scooter on a public road, in traffic. The child collides with a road vehicle and suffers major bruising to it's legs.

Severity of Injury

Injury: Bruising (abrasion/ contusion, swelling, oedema)
Level: 2 Major
>25 cm² on face
>50 cm² on body

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The kick scooter does not bear a warning against use in traffic (to be determined according to the recorded non-conformity of the warnings or instructions).	1
Step 2:	The child uses the kick scooter on a public road, in traffic.	
Step 3:	The child collides with a road vehicle.	
Step 4:	The child suffers major bruising to it's legs.	

Calculated probability: To be determined
Overall probability: To be determined
Risk of this scenario: Risk to be determined