Risk Assessment for RAPEX

General Information

Product

Product name:	Kick scooters for children
Product category:	Sports kick scooters
Description:	This is a PROSAFE risk assessment template for sports kick scooters for children. It describes likely accident scenarios linked to non-conformity with the following clauses of standard EN 14619:2004 : §4.2.2 - Parts moving against each other [scenario 1] §5.4.2 - Steering column [scenario 2] §5.5 - Drop test [scenario 3] §5.6 - Impact against front wheel [scenario 4] §5.7 - Endurance test [scenario 5] §§ 6&7 - Markings and instructions for use [scenario 6] How to use Users of the template should select the scenario(s) corresponding to the non-conformities 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 should be selected according to the target age group for the kick scooter concerned. The probability assigned to each step in the scenario must be determined in accordance with the result recorded in the test report. Disclaimer This 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 authorised 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** - While folding or unfolding the kick scooter, a child inadvertantly puts a finger into the gap between one part moving against another part. The child's finger is crushed.

Scenario 2 : **Risk to be determined** - During use of the kick scooter, the steering column breaks and collapses. The child loses control of the kick scooter, falls to the ground and fractures it's wrist.

Scenario 3 : **Risk to be determined** - When riding down a step such as the edge of a pavement, the deck of the kick scooter breaks. The child loses it's balance and falls to the ground, receiving deep lacerations to the arm.
(Other scenarios may result from this non-conformity, in accordance with the result recorded in the test report).

Scenario 4 : **Risk to be determined** - During use on uneven ground, the front wheel is deformed and becomes locked. The child is projected forward over the handlebar. The child's head hits the ground and the child suffers concussion.
(Other scenarios may result from this non-conformity, according to the result of the test recorded in the test report).

Scenario 5 : **Risk to be determined** - During use on rough ground, the welding of the forks breaks. The child loses control of the kick scooter and sprains it's ankle.
(Other scenarios may be appropriate for this non-conformity, depending on the result recorded in the test report).

Scenario 6 : **Risk to be determined** - The instructions do not include a warning not to touch the brake after continuous use. After using the brake to stop the kick scooter on a slope, the child touches the hot brake and it's fingers are burned.
(Other scenarios may be appropriate, depending on the non-conformity of the warnings or instructions).

Overall risk : **Risk to be determined**

Scenario 1 : 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: While folding or unfolding the kick scooter, a child inadvertantly puts a finger into the gap between one part moving against another part. The child's finger is crushed.

Severity of Injury

Injury: Entrapment/ pinching
Level: 3 (refer to the final outcomes bruising, crushing, fracture, dislocation, amputation, as applicable)

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child is folding or unfolding the kick scooter.	1
Step 2:	The child's finger is caught in a gap between parts of the kick scooter moving relative to each other. (The probability depends upon the geometry and the distances in the folding mechanism.)	
Step 3:	The child's finger is crushed. (The injury and the propability depends upon the geometry of the folding mechanism, in particular the sharpness of the edges, the distances and the force that can be applied when the mechanism is engaged.)	

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

Scenario 2 : 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: During use of the kick scooter, the steering column breaks and collapses. The child loses control of the kick scooter, falls to the ground and fractures it's wrist.

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 column breaks and collapses. (The probability depends upon the actual, measured mechanical strength.)	
Step 3:	The child loses control of the kick scooter and falls to the ground.	
Step 4:	The child fractures it's wrist. (More severe injuries are also possible, presumably with a lower probability.)	

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

Scenario 3 : 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: When riding down a step such as the edge of a pavement, the deck of the kick scooter breaks. The child loses it's balance and falls to the ground, receiving deep lacerations to the arm.
(Other scenarios may result from this non-conformity, in accordance with the result recorded in the test report).

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 rides the kick scooter down a step such as the edge of a pavement.	
Step 2:	The deck of the kick scooter breaks. (The probability depends upon the actual, measured mechanical strength.)	
Step 3:	The child loses it's balance and falls to the ground.	
Step 4:	The child receives deep lacerations to the arm. (More severe injuries are also possible, presumably with a lower probability.)	

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: During use on uneven ground, the front wheel is deformed and becomes locked. The child is projected forward over the handlebar. The child's head hits the ground and the child suffers concussion.
(Other scenarios may result from this non-conformity, according to the result of the test recorded in the test report).

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 uneven ground.	
Step 2:	The front wheel becomes deformed and locks. (The probability depends upon the actual, measured mechanical strength.)	
Step 3:	The child is projected forward over the handlebars.	
Step 4:	The child's head hits the ground and the child suffers concussion. (More severe injuries are also possible, presumably with a lower probability.)	

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: During use on rough ground, the welding of the forks breaks. The child loses control of the kick scooter and sprains it's ankle.
(Other scenarios may be appropriate for this non-conformity, depending on the result recorded in the test report).

Severity of Injury

Injury: Sprain, strain, musculoskeletal disorder
Level: 1 Extremities
Joints
Spine (no dislocation or fracture)

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 welding of the forks breaks. (The probability depends upon the actual, measured mechanical strength.)	
Step 3:	The child loses control of the kick scooter.	
Step 4:	The child sprains it's ankle. (More severe injuries are also possible, presumably with a lower probability.)	

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

Scenario 6 : Older children - Hot surfaces

Product hazard

Hazard Group: Extreme temperatures
Hazard Type: Hot surfaces

Consumer

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

How the hazard causes an injury to the consumer

Injury scenario: The instructions do not include a warning not to touch the brake after continuous use. After using the brake to stop the kick scooter on a slope, the child touches the hot brake and it's fingers are burned.
(Other scenarios may be appropriate, depending on the non-conformity of the warnings or instructions).

Severity of Injury

Injury: Burn/ Scald (by heat, cold, or chemical substance)
Level: 1 1º, up to 100% of body surface
2º, <6% of body surface

Probability of the steps to injury

	Step(s) to Injury	Probability
Step 1:	The child uses the brake to stop the kick scooter on a slope.	
Step 2:	The child touches the hot brake.	
Step 3:	The child's fingers are burned.	

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