

# Risk Assessment for RAPEX

## General Information

---

### Product

Product name: Robotic lawn mower

Product category: Lawn mowers

Description: This is a PROSAFE risk assessment template for robotic lawn mowers. It describes one likely injury scenario for the most common and risky non-compliance for such mowers.

The scenarios consider the non-compliance where the sensing system doesn't work when the lawn mower is lifted.

#### How to use

Users should analyse the given scenario to check if it corresponds to the non-compliance identified in the product under assessment.

If it does, the probabilities are estimated in the remaining scenarios.

Users are reminded that the scenario presented in the template is a likely scenario. Users should always assure that the scenario does 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 robotic lawn mower is running on unattended in a garden. The sensing system does not comply with the safety regulations. A young child playing in the garden is attracted to the lawn mower. The child puts its fingers under the protective shield and begins to lift the lawn mower. The sensing system doesn't work so the rotating blades do not stop. A finger is amputated.

Overall risk : **Risk to be determined**

## Scenario 1 : 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 robotic lawn mower is running on unattended in a garden. The sensing system does not comply with the safety regulations. A young child playing in the garden is attracted to the lawn mower. The child puts its fingers under the protective shield and begins to lift the lawn mower. The sensing system doesn't work so the rotating blades do not stop. A finger is amputated.

### Severity of Injury

Injury: Amputation  
Level: 3    Finger(s)  
                    Toe(s)  
                    Hand  
                    Foot  
                    (Part of) Arm  
                    Leg  
                    Eye

### Probability of the steps to injury

Step(s) to Injury	Probability
Step 1: A robotic lawn mower is running on unattended in a garden. The sensing system does not comply with the safety regulations.	1
Step 2: A young child playing in the garden is attracted to the lawn mower. (The probability depends upon the looks of the lawn mower, but it would generally be high as children generally are curious.)	
Step 3: The child puts its fingers under the protective shield and begins to lift the lawn mower. (The probability depends upon the geometry of the shield and the cutting knives, in particular the position of the knives under the shield and distance between the edge of the shield and the grass.)	

Step 4: The sensing system doesn't work so the rotating blades do not stop.

Step 5: A finger is amputated. (The probability depends upon the mass and speed of the rotating knives.)

**Calculated probability:**

**To be determined**

**Overall probability:**

**To be determined**

**Risk of this scenario:**

**Risk to be determined**