



# Continental Stud Technologies IceContact™ 2



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**ContiTechnikForum**2014

## IceContact 2

### Stud Technology

#### Legal requirements of stud approval

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- › Max. 50 studs/ m of tire circumference
- › Max. 1.2 mm stud protrusion
- › Max. 1.1 g stud weight
- › Max. 120 N stud force

#### Legal requirements of road wear approval

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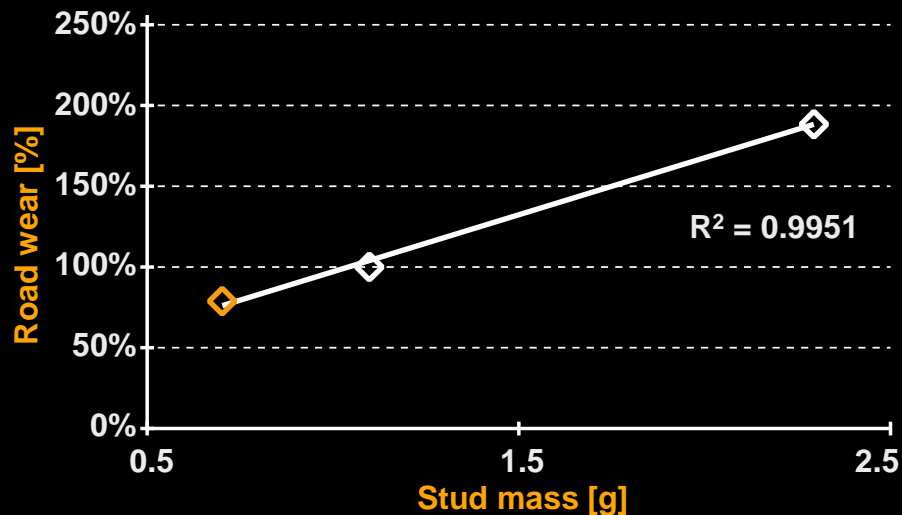


- › Weight difference measurement of granite plates
- › 400 tire roll - over at a speed of 100 km/ h
- › Tire load index categories with different road wear limits to get studded tire approval
- › Stud approval criteria do not need to be considered

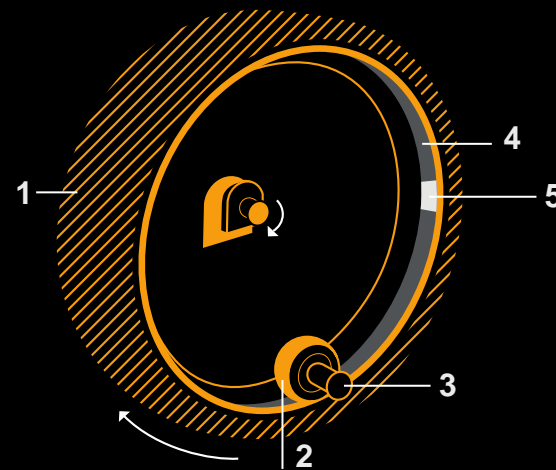
# Indoor Method for Studded Tire Road Wear

Development with Karlsruhe Institute Technology – KIT

## Impact of stud weight on road wear



## Indoor drum KIT



- 1 Drum
- 2 Wheel / Test Tire
- 3 Measuring Hub
- 4 Track
- 5 Stone Specimens

## IceContact 2 Stud Technology



2003

Round stud



2004

Oval stud



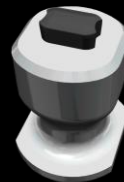
2005

Brilliant stud



2010

Brilliant Plus stud



2013

Hybrid stud



2014

Kristall stud

### Safety

- › Increased number of studs/ meter by 50%

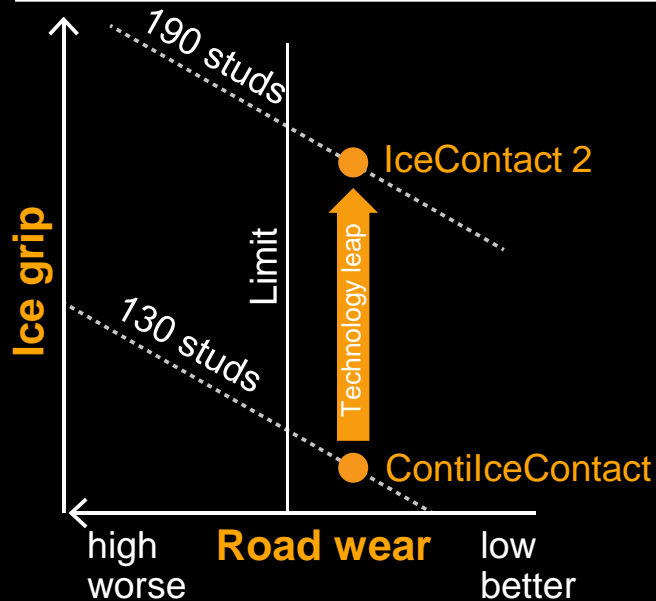
### Driving control

- › Increased stud impact to brake on ice surfaces while decreased road wear abrasion – light weight design
- › Optimized stud tracks for maximum ice grip

# IceContact 2

## Stud Technology

### Target conflict solution



### Features & benefits of Kristall stud

#### Feature

- › New stud design
- › Stud weight -25%
- › Cured studs

#### Benefit

- › Greater transmission of forces between stud and ice
- › Performance leap of ice grip versus road wear
- › Reduced stud loss



# IceContact 2

## Stud Technology

TIKKA Spikes 



### Tikka Spikes:

- › Stud competence in-house since 2008
- › Strong R&D cooperation
- › Aligned innovation process



# IceContact 2

## Retention Technology

### StudOn Retention Technology

