

FIRES IN  
ROLLING STOCK  
THREATEN PEOPLE AND  
THE ENVIRONMENT



**BATEGU**



BATEGU rubber/metal components meet the highest quality and safety requirements for more than 70 years. The EN 45545-compliant material types BTG®9713 and BTG®9559 developed by BATEGU allow the production of EN 45545-compliant anti-vibration components (M1 components), in particular for use in bogies.

# BATEGU RUBBER/METAL COMPONENTS FOR BOGIES COMPLY WITH THE R9 TEST REQUIREMENTS ACCORDING TO EN 45545



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By using the BTG®9713 and BTG®9559 materials developed by BATEGU® it is possible for the first time since 2011 to produce rubber/metal components, specifically anti-vibration components (M1 components) that meet the mechanical and dynamic properties required for use in bogies and in addition the fire safety requirements of EN 45545. In case of fire, life-threatening or other serious adverse health effects for people can thus be contained without having to give up the dynamic-mechanical properties, comfort and longevity of the components.

## WORLDWIDE LEADER

BATEGU has worldwide the largest range of EN 45545-compliant elastomer materials (hardness 40 to 85 shore A +/-5), compliant to R9 with a hazard level of 2 or 3. With this variety of materials just about any anti-vibration component (rubber/metal component) used in rail vehicles can be produced, both for Original Equipment Manufacturers and as spare part.

## UPGRADE OF EXISTING BOGIES/VEHICLES

Existing components can be produced 1:1 EN 45545-compliant, maintaining or improving properties and not altering the installation space required. For this purpose, existing vulcanisation tools can be used.

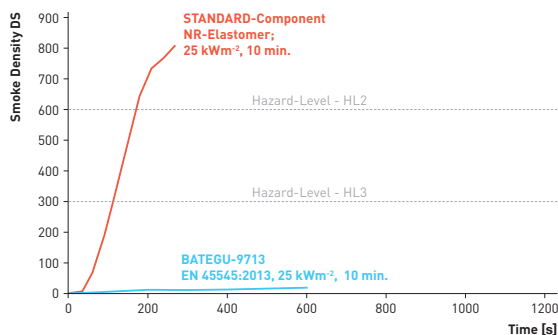
## ADVANTAGES:

- Excellent compression set
- Very low damping (hysteresis) and low self-heating
- High elasticity
- High resistance to the development and growth of cracks
- Excellent ozone, ageing and weather resistance and media resistance (e.g. detergents, salt)
- Heat resistant: -50 °C to + 120 °C (continuous operation)
- No constructive changes required (for existing components)
- Maintenance-free
- Lowest toxicity and smoke density
- No corrosive combustion gases, no dripping
- All BATEGU elastomer materials are tested to EN 45545-2:2013
- RoHS Directive, REACH Regulation and Unife Railway Industry Substance List are fulfilled

## TYPICAL APPLICATIONS:

- Rubber metal springs
- Laminated springs
- Conical springs
- Bushings
- Dog-bone bushings
- Lateral bumpers
- Wheelset springs
- Gaskets
- Spherical bearings

## EN ISO 5659-2, SMOKE DENSITY



Test method/ Test result	BATEGU 9713	BATEGU 9559
ISO 5660-1: Rate of heat release	HL 2/3	HL 2/3
ISO 5659-2: Optical smoke density	HL 2/3	HL 2/3
ISO 5659-2: Toxicity	HL 2/3	HL 2/3

HL 2/3: depending on the shore hardness  
Testing institute: OFI Technologie & Innovation GmbH, Versuchsanstalt TGM Kunststofftechnik

For further information please contact our Application Engineering department. We look forward to receiving your enquiry.

**BATEGU** Gummitechnologie GmbH

Muthgasse 22, 1190 Wien, Austria, Tel. +43 (0) 1 368 21 53-0, office@bategu.at, www.bategu.at