



**Makrolon® Silent Sound**  
The Sound of Silence



**makrolon®**  
Silent Sound

# Makrolon® Silent Sound

## The transparent solution for noise protection

### Makrolon® Silent Sound

Bayer MaterialScience is a leading manufacturer of polycarbonate sheets with the trademark Makrolon®. Use our many years of experience in sheet extrusion and make us your partner for noise protection applications! With Makrolon® Silent Sound you can count on the highest quality – you will notice the difference in workmanship. Take a look yourself!

### Less noise, better quality of life

Noise protection barriers reduce the noise level enormously on motorways with heavy traffic, dual carriageways and railways and give the people in the neighbourhood a new feeling of life. Nice and quiet, instead of an annoying noise. Makrolon® Silent Sound sustainably reduces the noise to 37dB and is certified according to DIN EN 1793-2 (Noise protection measures on streets - test procedure for the determination of acoustic properties).

### Makrolon® – pretty strong

Noise protection barriers from Makrolon® meet the sound technical requirements for noise reduction and the demands of road safety, stability such as form and ageing stability.

For example a Makrolon® Silent Sound sheet, 18 mm, with a weight of approx. 22 kg/m<sup>2</sup> reduces noise pollution by a noticeable 34 dB (D<sub>Lr</sub>) (Testing in accordance with DIN EN ISO 717-1, carried out by the Fraunhofer Institute for Building Physics, Stuttgart).

### At its best

Makrolon® can be easily manufactured and makes the hearts of architects beat faster. Makrolon® Silent Sound extended UV can be bent cold and also manufactured flat. There are virtually no limits to its design possibilities.

**The advantage:** You can use the sheets on the building site - without any major machine expenditure. This saves you time and costs. Curved noise barriers also offer a considerably better noise protection than straight barriers which must be built higher, while the sound is broken earlier by a curled edge<sup>1</sup>.

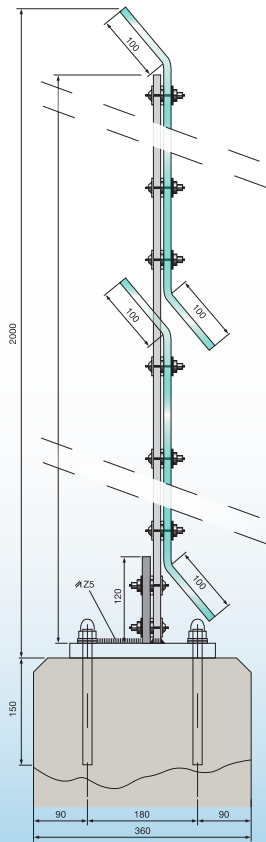
### Lightweight for difficult cases

Makrolon® weighs less than conventional building materials. This makes it particularly ideal for use on bridges. You use the sheets quickly and safely without any additional structures or equipment.

### Colours as you desire

So far noise protection barriers have offered mostly a dreary sight as monotonous, tunnel-like barriers left and right of the motorway. With Makrolon® Silent Sound you bring life and colour on the street and offer the eye a pleasant change - as transparent elements in the noise barrier or as a complete noise barrier, made of highly impact-resistant polycarbonate sheets of the trademark Makrolon®.

Green, yellow, blue or any other colour? You have certainly an idea how the noise protection barrier is to fit the overall picture in colour. Our colour experts will gladly help you to define the proper tone of colour.



Construction details:  
Cross-section of the noise  
protection barrier

1) Source: Institute for Road Construction and Maintenance, TU Vienna





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## An unbeatable security package

### Transparency which endures

By an extensive UV protection Makrolon® Silent Sound sheets have an outstanding resistance to weathering, which ensures high resistance even after years. We give you a limited warranty of 15 years against weathering and breakage.

### Vandalism has not got a chance

Vandals despair with Makrolon®, because the sheets are virtually unbreakable and do not splinter. Violent impacts due to bombardment or other attempts of destruction have only a limited effect on the material. The pendulum and falling dart impact test according to DIN-EN 1794-2:2009 Annex B confirms the high resistance of the material to the incident parts. For you that means: In a collision, no additional collection devices for possible falling objects are necessary.

### Tested quality with safety

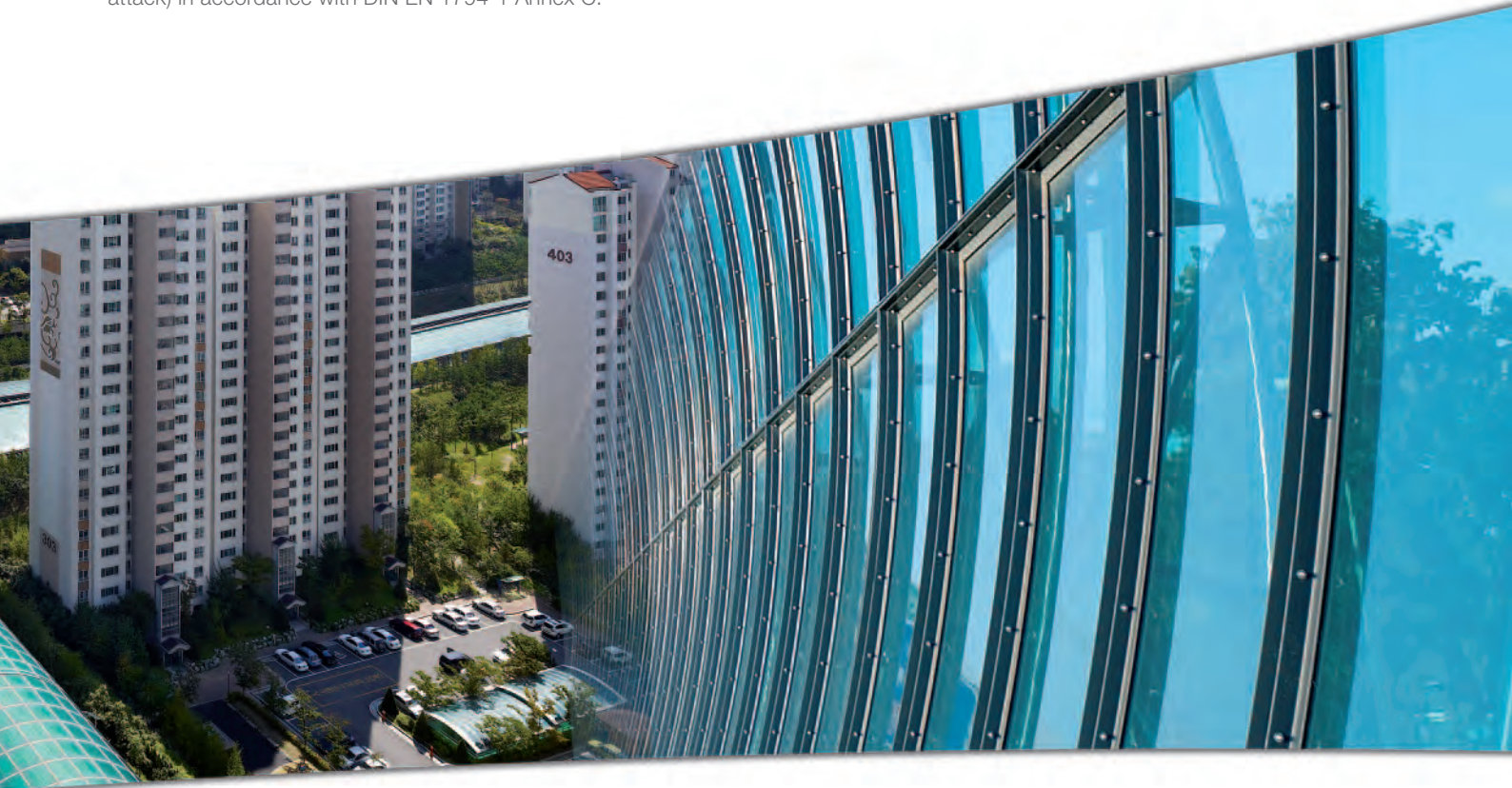
With the Makrolon® Silent Sound solid sheets of Bayer MaterialScience you process a fireproof product according to DIN EN 1794-2 Annex A. We can guarantee that for you, because we have all the essential properties of our sheets constantly certified - the static according to the European guideline ETAG 10, the degree of light transmittance, the hail resistance and mechanical performance (stone attack) in accordance with DIN EN 1794-1 Annex C.

The legal basis for the use of Makrolon® Silent Sound Solid sheets for the applications of noise protection forms are the technical requirements and guidelines for the implementation of noise barriers along roads of the Federal Ministry of Transport ZTV-LSW 06 and to the European guidelines according to EN-14388.

## Silent Sound

### Makrolon® Silent Sound :

- Up to 20 mm tested solid sheet-thickness
- Noise reduction up to 34 dB (DL<sub>R</sub>)
- Extended UV - for cold bending and flat uses
- AR - abrasion resistant coating
- 15 years guarantee
- Tested safety according to: EN-14388/ ZTV-LSW 06
- 100% recyclable



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They all rely on  
**Makrolon®** sheets - already.



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MF 0251e · October 2011