

TEROSON WT 112 DB

Known as Terophon 112 DB
August 2014

PRODUCT DESCRIPTION

TEROSON WT 112 DB provides the following product characteristics:

Technology	Aqueous Synthetic Resin Dispersion
Product Type	Coating
Application	Coating, spray and spatula application
Condition	Low Flammability and Sound-Deadening
Appearance	Beige

TEROSON WT 112 DB is a secondary noise and vibration control mass for spray and spatula application, based on an aqueous synthetic resin dispersion with flame retardant additives. The product is rendered environmentally friendly by the use of low toxicity raw materials (halogen, heavy metal and asbestos free).

TEROSON WT 112 DB demonstrates low flammability according to DIN 4102 Part 1, Class B 1 up to 4.5 mm dry film layer thickness (General Regulation Certificate No.: P-BWU 03-I-16.5.14 OTTO-GRAF-INSTITUT-UNIVERSITÄT STUTTGART).

In addition to high acoustic effectiveness the product also demonstrates thermal insulation properties.

TEROSON WT 112 DB demonstrates reliable adhesion to stainless steel, galvanized steel sheets and anodized aluminium. Non-galvanized sheet steel and raw aluminium surfaces will firstly require application with effective corrosion protection (primer coated or painted). The sag resistance on vertical surfaces, when spray applied, is a minimum of 6 mm, based on one application layer.

TEROSON WT 112 DB can also be applied by hand, e.g. spatula. However, we only recommend this application method for smaller areas or touch-up jobs.

During the drying process, no cracks occur in large, flat coated surfaces. If material is allowed to pile up in grooves or at corners, and if unfavourable drying conditions ensue, e.g. absence of convection, this may give rise to occasional hairline fractures.

After complete drying, the material may also be painted. However, due to the large number of paints available we suggest advance trials. Furthermore, it should be noted that a system of this kind necessitates repetition of the low flammability test in accordance with DIN 4102 B1.

Coatings with TEROSON WT 112 DB must not be subjected to standing water or direct weathering. It is briefly resistant

against water (splashes) and aqueous solutions (swelling = reversible), benzene, oil and grease.

TEROSON WT 112 DB is also used as an anticondensation coating, for which the thickness of the dry layer is determined by the max. humidity load during the time of exposure. During the following drying period the coating regenerates, emitting moisture into the ambient air. This is why sufficient ventilation/exhaust ventilation has to be ensured.

However, permanent exposure to high atmospheric humidity and temperature falls below the dew point may cause water condensation to drip down onto the coating and/or the TEROSON WT 112 DB coating may separate.

Due to natural raw materials (depending on winning areas) variances in colour among various batches may occur.

Application Areas:

TEROSON WT 112 DB is used for (sound deadening or absorption of structure-borne noise) secondary noise and vibration control on thin walled sheet metal constructions in the manufacture of vehicles, railway carriages, shipbuilding as well as plant and equipment building. In addition, the product is also applied to ventilation ducts, fan housings, lifts, waste disposal units, to the rear side of facade elements as well as to container buildings.

TECHNICAL DATA

TEROSON WT 112 DB

Colour:	beige
Odour:	weak alcoholic
Consistency:	pasty
Density:	
wet, g/cm ³ :	~1.4
dry, g/cm ³ :	~1.2
pH-value:	~9
Solids, %:	~66.5
Diluent / Cleaner:	water
Drying time (4 mm wet film)	
at standard climate DIN 50014, hours:	~24
at 40°C convection, hours:	~8
at 80°C convection, hours:	~3
Volume shrinkage, %:	~18
Consumption per 1 mm dry film:	approx. 1.4 kg/m ²
Condensation water absorption capacity of 1 mm dry film:	≥80 g/m ²
Application temperature, °C:	10 to 40
Thermal transmission rate, W/mK: DIN 52612	0.21
Adhesion strength as per ASTM D 3359, 5A	
Fire performance against standard EN 45545	

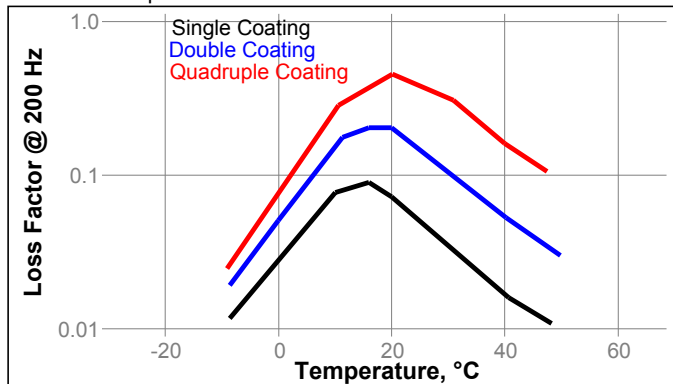
In service temperature range, °C: -50 to 120
 Short exposure (up to 1 hrs.), °C: 160
 (10 hrs. climate 40/100, DIN 50017 + 14 hrs. standard climate 23/50, DIN 50014)

Acoustic Data

Loss factor DIN EN ISO 6721-3: ≥ 0.22
 Temperature, °C: 20
 Frequency, Hz: 200
 Material, steel sheet, mm: 1
 Thickness ratio coating / steel sheet: 2 : 1

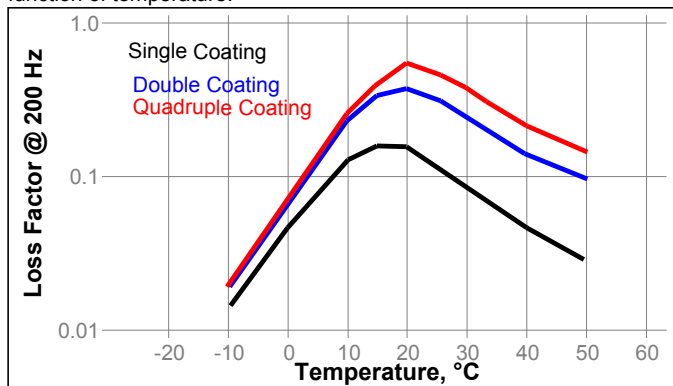
Loss Factor - Graph 1

Loss factor according to DIN EN ISO 6721-3 on steel sheet as a function of temperature



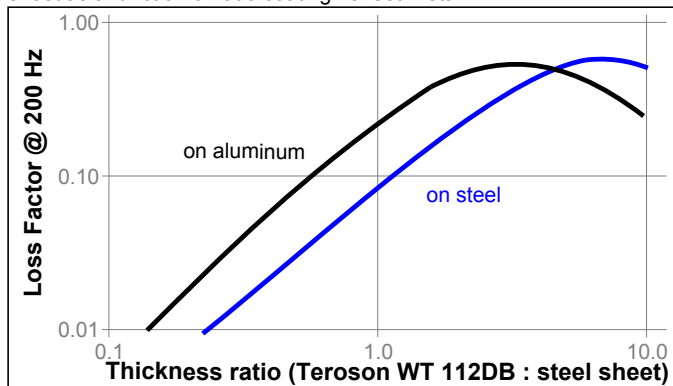
Loss Factor - Graph 2

Loss factor according to DIN EN ISO 6721-3 on aluminium sheet as a function of temperature.



Loss Factor - Graph 3

Loss factor according to DIN EN ISO 6721-3 on aluminium and steel sheet as a function of ratio coating : sheet-metal



Example:
 at a thickness of 2:1 the loss factor
 ~0.22 on steel
 ~0.33 on aluminium

DIRECTIONS OF USE

Preliminary statement:

Prior to application it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed.

Pre-Treatment:

The surfaces to be coated must be dry, free of oil, dust, grease and other contaminants. An adhesion promoter is not necessary. Non-galvanized steel sheet and non-anodized aluminium, however, require coating with a suitable water retardant corrosion protection. If necessary, TEROSON WT 112 DB must be stirred before use when it has been stored between delivery and use for longer period (approx. 3 months).

Application:

TEROSON WT 112 DB is supplied in ready to use condition for application by secondary air spraying using piston pumps. Following values are recommended for spraying:

Conveyance, with a piston pump, ratio	12 : 1
Material pressure, bar	2 to 4
Atomizing air pressure, bar	4 to 6
Nozzle, mm Ø	6

Applications with other spray technologies, e.g. airless pumps is, in principle, also possible. Trials are however, recommended.

The material can be spray applied - even overhead and on vertical surfaces - up to a wet film layer thickness of 6 mm in one step. Application temperature range possible is 10°C to 40°C; optimum temperature is 15°C to 25°C.

Dilution with water (max. 5%) is possible, but should only be conducted in exceptional cases. Possible disadvantages: reduced sag resistance on vertical surfaces, delayed drying, crack formation. Therefore dilution is only recommended for small surfaces and repair work.

Cleaning:

Provided that TEROSON WT 112 DB is not yet dry, application equipment can be cleaned after use with water, with the addition, where necessary, of detergent. Dried material can be removed using Teroson D or mechanically.

For application from hobbicks

Type:	TPH 121-k-6.0-6.0 m
Ratio:	12 : 1
Length of material and air hoses:	1 x set 6.0 m
Pistol for conventional spraying Nozzle, 6 mm Ø:	

For application from drums

Type:	TPH 121-6.0-6.0 m
Ratio:	12 : 1
Length of material and air hoses:	1 x set 6.0 m
Pistol for conventional spraying Nozzle, 6 mm Ø:	

Test certificates

Flammability according to DIN 5510

Combustibility level:	S4
Smoke generation level:	SR2
Dripping level:	ST2

Fire protection according to EN 45545-2**Spread of Flame:**

Fulfills fire protection requirement set R1 and hazard level HL1 to HL3

Test Method: ISO 5658-2

Smoke toxicity & density:

Fulfills fire protection requirement set R1 and hazard level HL3

Test Method: ISO 5659-2

Heat release rate:

Fulfills fire protection requirement set R1 and hazard level HL1 to HL3

Test Method: ISO 5660-1

Approvals

Deutsche Bahn AG: WL551003

Classification:

Please refer to the corresponding **Material Safety Data Sheets** for details on:

Hazardous Information**Transport Regulations****Safety Regulations****STORAGE**

Recommended Storage Temperature, °C	15 to 25
Shelf-life (in unopened original packaging)	9 months
Frost-Sensitive	Yes

ADDITIONAL INFORMATION**Disclaimer****Note:**

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Reference 0.1