Technical Data Sheet

TEROSON® WT 112 DB

September 2024

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 fulfils fire protection requirements in rail with classification HL 3 according to DIN EN 45545-2 (2016-02) and marine with MED 3/18.a – Module B +D certificate based on IMO resolution MSC.307(88) FTPC2010, annex 1, part 5.

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), benzine, 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, ship building 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

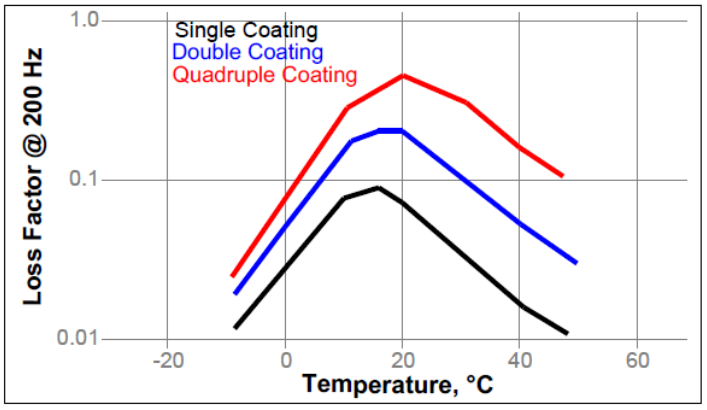
Consistency:	
Density:	
wet, g/cm^3:	~1.4
dry, g/cm^3:	~1.2
pH-value:	~9
Solids, %	~66.5
Diluent / Cleaner:	water
Drying time (4 mm wet film)	
at standard climate DIN 50014, hours:	~24
at 40°C convection, hours:	~8
at 80°C convection, hours:	~3
Volume shrinkage, %:	~18
Consumption per 1 mm dry film, kg/m^2:	approx. 1.4
Condensation water absorption capacity of 1 mm dry film, g/m^2:	≥180
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)

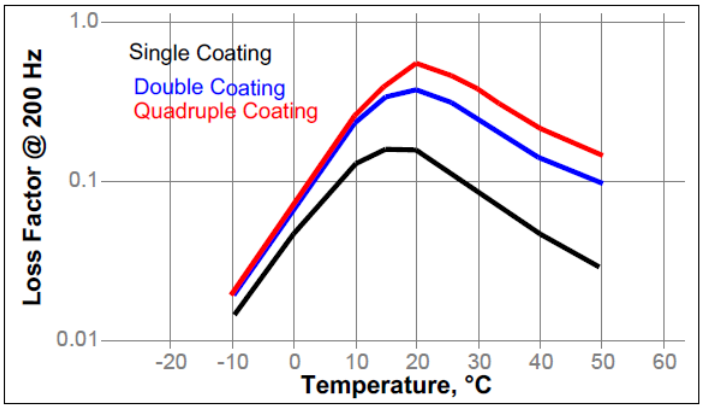
Acoustic Data

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

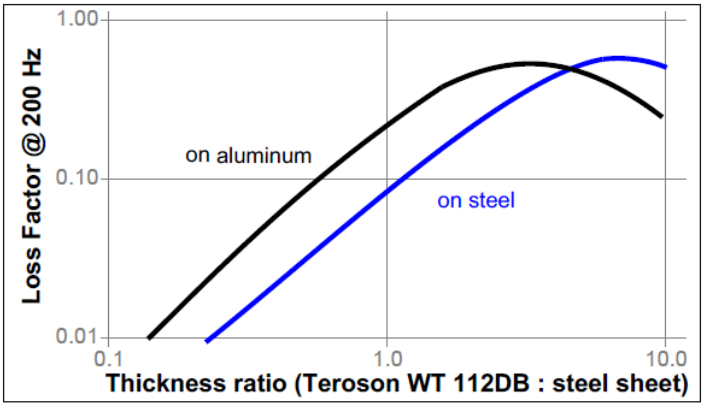
Loss Factor - Graph 1
Loss factor according to DIN EN ISO 6721-3 on steel sheet as a function of temperature



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. 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 hobbocks

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, mm Ø:	6

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, mm Ø:	6

Test certificates

Flammability according to DIN 5510

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

Fire protection according to DIN EN 45545-2
Spread of Flame:
The product fulfils the fire protection requirements R1, R2 and R7 for the Hazard Level HL3.
Test Method: ISO 5658-2

Smoke toxicity & density:
The product fulfils the fire protection requirements R1, R2 and R7 for the Hazard Level HL3.
Test Method: ISO 5659-2

Heat release rate:
The product fulfils the fire protection requirements R1, R2 and R7 for the Hazard Level HL3.
Test Method: ISO 5660-1

Classification:
Please refer to the corresponding **Material Safety Data Sheets** for details on:
Transport Regulations
Hazardous Information
Safety Regulations

Storage

Recommended storage temperature, °C	15 to 25
Shelf-life (in unopened original packaging), months	12
Frost-Sensitive	Yes

Disclaimer
The information provided in this Technical data sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical data sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:
In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, or Henkel Canada Corporation, the following disclaimer is applicable:
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage
Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 3