

# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 1 von 11

## 1. Identification of the substance/preparation and company/undertaking

Product name: Busch VE 101  
Use of the substance/preparation: Vacuum pump oil for specific application advice see appropriate Technical Data Sheet of their respective vacuum pumps.  
Supplier: Dr.-Ing. K. Busch GmbH and Busch Produktions GmbH  
Schauinslandstr. 1  
Postfach 1251  
D-79689 Maulburg  
Tel.: +49 (0) 7622 – 681 – 0  
Fax: + 49 (0) 7622 – 5484  
  
Emergency telephone number: Poison Centre Berlin (0) 30 19240  
24-hours-emergency telephone code ++49 (0) 30 19240

## 2. Hazards identification

Generalities: The product is classified as dangerous according to Directive 1999/45/EC and its amendments.  
Classification: R52/53  
Environmental hazards: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 3. Composition/information on ingredients

Substance/preparation: Preparation

Ingredient name	CAS number	%	EC number	Classification
<b>Europe</b>				
Phenol, 4-4'-methylenebis[2,6-bis(1,1-dimethylethyl)-] N-Phenyl-1-naphylamin	118-82-1	0.1 - 1	204-279-1	Xn;R21 [1]
Diphenylamin	90-30-2	0.1 - 1	201-983-0	Xn;R20/22 [1] R43 N; R50/53
	122-39-4	0.1 - 1	204-539-4	T; R23/24/25 [1] [2] R33 N; R50/53
<b>France</b>				
Phenol, 4-4'-methylenebis[2,6-bis(1,1-dimethylethyl)-] N-Phenyl-1-naphylamin	118-82-1	0.1 - 1	204-279-1	Xn;R21 [1]
Diphenylamin	90-30-2	0.1 - 1	201-983-0	Xn;R20/22 [1] R43 N; R50/53
	122-39-4	0.1 - 1	204-539-4	T; R23/24/25 [1] [2] R33 N; R50/53

# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 2 von 11

<b>Netherlands</b>					
Phenol, 4-4'-methylenebis[2,6-bis(1,1-dimethylethyl)-]	118-82-1	1-3	204-279-1	Xn; R21	[1]
N-Phenyl-1-naphthylamin	90-30-2	0.25-1	201-983-0	Xn; R20/22 R43 N; R50/53	[1]
Diphenylamin	122-39-4	0.1-0.25	204-539-4	T; R23/24/25 R33 N; R50/53	[1] [2]
<b>Germany</b>					
Phenol, 4-4'-methylenebis[2,6-bis(1,1-dimethylethyl)-]	118-82-1	1-3	204-279-1	Xn; R21	[1]
N-Phenyl-1-naphthylamin	90-30-2	0.25-1	201-983-0	Xn; R20/22 R43 N; R50/53	[1]
Diphenylamin	122-39-4	0.1-0.25	204-539-4	T; R23/24/25 R33 N; R50/53	[1] [2]
<b>Finland</b>					
Phenol, 4-4'-methylenebis[2,6-bis(1,1-dimethylethyl)-]	118-82-1	1-3	204-279-1	Xn; R21	[1]
N-Phenyl-1-naphthylamin	90-30-2	0.25-1	201-983-0	Xn; R20/22 R43 N; R50/53	[1]
Diphenylamin	122-39-4	0.1-0.25	204-539-4	T; R23/24/25 R33 N; R50/53	[1] [2]
<b>United Kingdom (UK)</b>					
Phenol, 4-4'-methylenebis[2,6-bis(1,1-dimethylethyl)-]	118-82-1	1-3	204-279-1	Xn; R21	[1]
N-Phenyl-1-naphthylamin	90-30-2	0.25-1	201-983-0	Xn; R20/22 R43 N; R50/53	[1]
Diphenylamin	122-39-4	0.1-0.25	204-539-4	T; R23/24/25 R33 N; R50/53	[1] [2]
<b>Spain</b>					
Phenol, 4-4'-methylenebis[2,6-bis(1,1-dimethylethyl)-]	118-82-1	1-3	204-279-1	Xn; R21	[1]
N-Phenyl-1-naphthylamin	90-30-2	0.25-1	201-983-0	Xn; R20/22 R43 N; R50/53	[1]
Diphenylamin	122-39-4	0.1-0.25	204-539-4	T; R23/24/25 R33 N; R50/53	[1] [2]

# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 3 von 11

See section 16 for the full text of the R-phrases declared above.

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in section 8.

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## 4. First-aid measures

Eye contact:	Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Obtain medical attention if symptoms occur.
Skin contact:	Wash with soap and water. Obtain medical attention if symptoms occur.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Notes to physician:	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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## 5. Fire-fighting measures

Extinguishing media:	
- Suitable:	Use an extinguishing agent suitable for the surrounding fire.
- Not suitable:	None known.
Hazardous thermal decomposition products:	The final products of combustion are carbon oxides and water. Nitrogen, sulfur and metal oxides may also be produced in some cases.
Hazardous combustion products:	Decomposition products may include the following materials: - carbon dioxide - carbon monoxide
Special firefighting measures:	No specific data.
Special protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 4 von 11

## 6. Accidental release measures

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Personal precautions:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions:	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.
Methods for cleaning up:	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
large redundant quantity:	see Environmental precautions
small redundant quantity:	see Environmental precautions

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## 7. Handling and storage

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Handling:	Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage:	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
<b>Packaging materials</b>	
Recommended:	Use original container.

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# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 5 von 11

## 8. Exposure controls/personal protection

### Exposure limit values

Ingredient name	Occupational exposure limits
<b>Europe</b> Diphenylamin	ACGIH TLV (United States, 1/2006). TWA: 10 mg/m <sup>3</sup> 8 hour(s).
<b>France</b> Diphenylamin	INRS (France, 6/2006). TWA: 10 mg/m <sup>3</sup> 8 hour(s).
<b>Netherlands</b> Diphenylamin	Nationale MAC-lijst (Netherlands, 7/2006). OEL, 8-h TWA: 0.7 mg/m <sup>3</sup> 8 hour(s).
<b>Germany</b> Diphenylamin	No exposure limit value known.
<b>Finland</b> Diphenylamin	Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 4/2005). STEL: 10 mg/m <sup>3</sup> 15 minute(s). TWA: 5 mg/m <sup>3</sup> 8 hour(s).
<b>United Kingdom (UK)</b> Diphenylamin	EH40-WEL (United Kingdom (UK), 9/2006). WEL 15 min limit: 20 mg/m <sup>3</sup> 15 minute(s). WEL 8 hrs limit: 10 mg/m <sup>3</sup> 8 hour(s).
<b>Spain</b> Diphenylamin	INSHT (Spain, 1/2006). TWA: 10 mg/m <sup>3</sup> 8 hour(s).

### Exposure controls

Recommended monitoring procedures:	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.
Occupational exposure controls:	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
Hygiene measures:	Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. During formulation, follow good industrial hygiene practice.
Environmental exposure controls:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 6 von 11

## Personal protective equipment

Respiratory protection: No specific data.  
Hand protection: Natural rubber (latex).  
Eye protection: Safety glasses with side shields.  
Skin and body: No specific data.

## 9. Physical and chemical properties

### General information/appearance

Physical state: Liquid  
Colour: Amber [Light]  
Odour: Mild

### Important health, safety and environmental information

Flash point: Open cup: >240°C (464°F) (Cleveland.).  
viscosity: No specific data.  
flow limit: No specific data.  
Relative density: 0.96

## 10. Stability and reactivity

Stability: The product is stable. Under normal conditions of storage and use, hazardous polymerisation will not occur.  
Possibility of hazardous reactions: No specific data.  
Conditions to avoid: No specific data.  
Materials to avoid: No specific data.  
Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

### Acute toxicity

Product/ingredient name	Test / Type	Species	Dose	Exposure
Phenol, 4-4'-	LD50 Dermal	Rat	>2 g/kg	-
methylenebis[2,6-bis(1,1-	LD50 Dermal	Rabbit	>1400 mg/kg	-
dimethylethyl)-]	LD50 Oral	Rat	>24 g/kg	-
N-Phenyl-1-naphthylamin	LD50 Oral	Rat	1625 mg/kg	-
Diphenylamin	LD50 Oral	Rat	1120 mg/kg	-

### Potential chronic health effects

Chronic effects: No known significant effects or critical hazards.  
Carcinogenicity: No known significant effects or critical hazards.  
Mutagenicity: No known significant effects or critical hazards.  
Teratogenicity: No known significant effects or critical hazards.  
Developmental effects: No known significant effects or critical hazards.  
Fertility effects: No known significant effects or critical hazards.

# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 7 von 11

## Over-exposure signs/symptoms

Eyes: No specific data.  
Skin: No specific data.  
Inhalation: No specific data.  
Ingestion: No specific data.

## 12. Ecological information

Environmental effects: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Aquatic ecotoxicity

Product/ingredient name	Test	Species	Exposure	Result
Diphenylamin	Intoxication	Daphnia	48 hours	Akute EC50 2 mg/L
	Intoxication	Daphnia	48 hours	Akute EC50 0.31 mg/L
	Mortality	Fish	96 hours	Akute LC50 3.79 mg/L

### Other ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
N-Phenyl-1-naphthylamin	-	-	Readily

## 13. Disposal consideration

### Product

Disposal considerations/waste information: The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste: The classification of the product may meet the criteria for a hazardous waste.

### Unused product

Waste information: European waste catalogue (EWC)

## 14. Transport information

### International transport regulations

UN/ IMDG/ IATA / ADNR/ Not regulated by any transport mode.

ADR:

# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 8 von 11

## 15. Regulatory information

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EU regulations:	Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.
<b>Label requirements</b>	
Risk phrases:	R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Product use:	Industrial applications.
Europe inventory:	All components are listed or exempted.
<b>Other EU-regulations</b>	
Additional warning phrases:	Contains N-Phenyl-1-naphthylamine. May produce an allergic reaction.
The Restriction of :	In compliance.
Hazardous Substances in Electrical and Electronic Equipment (ROHS) Directive (2002/95/EC)	
<b>National regulations France</b>	
Social Security Code, Articles L 461-1 to L 461-7:	Diphenylamine 15, 15bis
Reinforced medical surveillance:	Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: Not applicable.
Germany Hazard class for water:	1 Appendix No. 4

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# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009  
Seite 9 von 11

## 16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Europe:	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R21- Harmful in contact with skin. R20/22- Harmful by inhalation and if swallowed. R43- May cause sensitisation by skin contact. R33- Danger of cumulative effects. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications referred to in sections 2 and 3 - Europe:	T - Toxic Xn - Harmful N - Dangerous for the environment
Full text of R-phrases referred to in sections 2 and 3 - France	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R21- Harmful in contact with skin. R20/22- Harmful by inhalation and if swallowed. R43- May cause sensitisation by skin contact. R33- Danger of cumulative effects. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications referred to in sections 2 and 3 - France:	T - Toxic Xn - Harmful N - Dangerous for the environment
Full text of R-phrases referred to in sections 2 and 3 - Netherlands:	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R21- Harmful in contact with skin. R20/22- Harmful by inhalation and if swallowed. R43- May cause sensitisation by skin contact. R33- Danger of cumulative effects. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications referred to in sections 2 and 3 - Netherlands:	T - Toxic Xn - Harmful N - Dangerous for the environment
Full text of R-phrases referred to in sections 2 and 3 - Germany:	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R21- Harmful in contact with skin. R20/22- Harmful by inhalation and if swallowed. R43- May cause sensitisation by skin contact. R33- Danger of cumulative effects. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications referred to in sections 2 and 3 - Germany:	T - Toxic Xn - Harmful N - Dangerous for the environment

# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009

Seite 10 von 11

Full text of R-phrases referred to in sections 2 and 3 - Finland:	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R21- Harmful in contact with skin. R20/22- Harmful by inhalation and if swallowed. R43- May cause sensitisation by skin contact. R33- Danger of cumulative effects. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications referred to in sections 2 and 3 - Finland:	T - Toxic Xn - Harmful N - Dangerous for the environment
Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK):	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R21- Harmful in contact with skin. R20/22- Harmful by inhalation and if swallowed. R43- May cause sensitisation by skin contact. R33- Danger of cumulative effects. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications referred to in sections 2 and 3 - United Kingdom (UK):	T - Toxic Xn - Harmful N - Dangerous for the environment
Full text of R-phrases referred to in sections 2 and 3 - Spain:	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R21- Harmful in contact with skin. R20/22- Harmful by inhalation and if swallowed. R43- May cause sensitisation by skin contact. R33- Danger of cumulative effects. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications referred to in sections 2 and 3 - Spain:	T - Toxic Xn - Harmful N - Dangerous for the environment

# Safety Data Sheet Busch VE 101

under the terms of 1999/45/EC



24.04.2009

Seite 11 von 11

## History

Date of previous issue: 24.04.2009  
Date of issue / Date of revision: 12.05.1995 / 08.06.2001  
Prepared by: Dr. -Ing. K. Busch GmbH / VCA / Mr. Christiansen  
Company / department / name:

## Notice to reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

Busch shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.