



Fear it!

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Product Info

NanoGrease Extreme 16W/mk thermal grease

The Pictures

Picture 1



Picture 2



Picture 3



The background behind Phobya:

Phobya is no company in the classical sense but a union of multiple companies, manufacturers, designers and technology owners which develop and produce products adhering to uniform and strict quality standards and distribute them.

Therefore Phobya does not have a head office but rather develops and produces products at multiple locations worldwide.

| | Property | Phobya Product Performance | | Unit | Test Method |
|-------------|-----------------------|----------------------------|---------|------------------------|--------------------|
| Physical | Color | Grey | | Visual | |
| | Viscosity | 85000 | | Cps/TF | @25°C |
| | Volatile Content | 0.2-1.0% | | | @120°C/96hr |
| | Operating Temperature | -50 ~ +200 | | °C | |
| Mechanical | Specific Gravity | 2.7 ± 0.2 | | g/cm ³ | ASTM D14175 |
| | Evaporation | 0,01 @ 200°C /96hours | | % | Fed.Std.791 |
| | Content Material | Silicone | 10 - 15 | % | |
| | | Metal Oxide | >50 | % | |
| Metal Power | | 25 -30 | % | | |
| | Dielectric constant | 14.5 @ 1Mhz | | kV/mm | ASTM D150 |
| | Thermal Conductivity | 16.0 | | W/mk | ROCT 8.140-82 |
| | Thermal Impedance | <0,05 | | °C .in ² /w | UL94 |
| | Thixotropic Index | 380 ± 10 | | 1/10mm | GB/T-269 |
| | Shelf Lifetime | 2 | | Years | |
| | RoHS Compliant | Yes | | | Lab. Certification |



Phobya's NanoGrease Extreme is designed to gain the last bit of cooling performance in the high-end sector!

This thermal compound is of course not only well-suited for the high-end sector, the normal user can also profit from this product. It allows better cooling performance for an existing system with little effort. Phobya has developed a product which offers exceptional performance with a thermal conductivity of 16W/mK!.



| Itemcode | Content | Retailpack | EAN |
|----------|---------|------------|---------------|
| 31103 | 3,5 g | Yes | 4049469164577 |



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Material Safety Data sheet

Content of MSDS for following Product **Itemcode** **31104**

| | |
|---|--|
| 1.)Product Name | Phobya HeGrease Standard |
| Synonym | Thermal conductive grease |
| Product Responsible Company Information: | Aquatuning GmbH Beckheide 13 33689 Bielefeld – Germany Tel.: +49 5205-991 98 0 Fax.: +49 5205-991 98 22 Email: info@aquatuning.de |

2.)Composition/information on ingredients

| | | | | | | |
|----------------------|------------------------------|--------|--|-----------|------|----------|
| Common chemical name | Silicone | 10-15% | Treated Filter Standards of Industrial Hygiene Standards | | | |
| Common chemical name | Metal Powder | 25-30% | Hazardous Components (Specific Chemical) | | | |
| Common chemical name | Metal oxide | >50% | OSHA PEL | ACGIH TLV | TWA | Optional |
| Final Result | Hazardous Components Filters | % | % | % | % | |
| List of Content | Silicon dioxide | None | None | None | None | None |
| | Metal Oxides | None | None | None | None | |
| | Zinc Oxides | None | None | None | None | None |
| | Metal Powder | None | None | None | None | None |
| | Formaldehyde | None | None | None | None | None |

3.) Hazards identification

| | | |
|-------|-------------------------------------|---|
| 3.1 | Overall Hazard Classification: | Dangerous for the environment. |
| 3.2 | Hazard Information: | Toxic to aquatic organisms, may cause long-term and adverse effects in the aquatic environment. Avoid Contact with skin and eyes In case of fire and / or explosion do not breathe fumes. Use appropriate container to avoid environmental contamination. This material and its container must be disposed of as hazardous waste. |
| 3.3 | Route of Exposure: | Skin Contact and Accidental Ingestion |
| 3.4 | Possible Health Effects: | |
| Acute | Eyes: | Direct contact may cause mild irritation |
| | Skin: | No significant irritation expected from a single short-term exposure |
| | Inhalation: | No significant effects expected from single short-term exposure |
| | Ingestion: | Low ingestion hazard in normal use |
| | Chronic | Skin: |
| | Inhalation: | No known applicable Information |
| | Ingestion: | Repeated ingestion or swallowing large amounts may injure internally |
| 3.5 | Signs and Symptoms of Overexposure: | No significant adverse effects from a single exposure expected from normal use. |



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4.) First AID Measures

| | | |
|-----|--------------------|--|
| 4.1 | Eyes: | Immediately flush with water for 15 minutes |
| 4.2 | Skin: | No first aid should be needed |
| 4.3 | Inhalation: | No first aid should be needed |
| 4.4 | Ingestion: | Get medical attention |
| 4.5 | Comments: | Treat according to person's condition and specifics of exposure. |
| 4.6 | Note to physicians | Treat symptomatically. |

5.) Fire Fighting Measures

| | | |
|------|---|--|
| 5.1 | Flammability: | Non-flammable. |
| 5.2 | Flash Point: | >200°C (Seta Closed Cup) |
| 5.3 | Auto ignition temperature: | Not determined. |
| 5.4 | Lower Flammability Limit: | Not determined. |
| 5.5 | Upper Flammability Limit: | Not determined |
| 5.6 | Hazardous Properties: | None. |
| 5.7 | Extinguishing Media: | On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO ₂), dry chemical or water spray. Water can be used to cool fire exposed containers. |
| 5.8 | Special Fire Fighting Procedures and Equipment: | Determine the need to evacuate or isolate the area according your local emergency plan. Use water spray to keep fire exposed containers cool. Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. |
| 5.9 | Hazardous Combustion Products: | Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Metal oxides. Formaldehyde. |
| 5.10 | Unsuitable Extinguishing Media: | None established. |

6.) Accidental Release Measures

| | | |
|-----|----------------------------|--|
| 6.1 | Personal Precautions: | Avoid eye contact. Do not take internally. |
| 6.2 | Environmental Precautions: | Prevent from spreading or entering into drain ditches or rivers by using sand, earth or other appropriate barriers. |
| 6.3 | Methods for Cleaning up: | Observe all personal protective equipment recommendations described in this MSDS. If diked material can be pumped, store recovered material in appropriate container. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need determine which laws and regulations are applicable. |



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7.) Handling and Storage

| | | |
|-----|---------------------------------|--|
| 7.1 | Handling Precautions: | Use with adequate ventilation. Avoid eye contact. Do not take internally. Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking. |
| 7.2 | Storage Conditions: | Use reasonable care and store away from oxidizing materials. |
| 7.3 | Unsuitable Packaging Materials: | None established. |

8.) Exposure Controls / Personal Protection

| | | | |
|-----|--|--|--|
| 8.1 | Industrial Hygiene Standards | | |
| | Integredients | CAS No. | Exposure Limits |
| | Treated Filler | | Observe zinc oxide limits. OSHA PEL (final rule): TWA 15mg /m ³ total dust, 5mg/m ³ respirable fraction. ACGIH TLV: TWA 10mg total dust. |
| 8.2 | Engineering Controls | | |
| | Local Ventilation: | None should be needed. | |
| | General Ventilation: | Recommended. | |
| 8.3 | Personal Protective Equipment for Routine Handling | | |
| | Respiratory protection: | No respiratory protection should be needed. | |
| | Suitable Respirator: | None should be needed. | |
| | Eye protection: | Use proper protection – safety glasses as a minimum. | |
| | Hand protection: | No special protection needed. | |
| | Skin protection: | Washing at mealtime and end of shift is adequate. | |
| | Hygiene Measures: | Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking. | |
| 8.4 | Personal Protective Equipment for Spills | | |
| | Respiratory protection: | No respiratory protection should be needed. | |
| | Eye protection: | Use proper protection – safety glasses as a minimum | |
| | Skin protection: | Washing at mealtime and end of shift is adequate | |
| | Precautionary Measures: | Avoid eye contact. Do not take internally. Use reasonable care. | |

9.) Physical and chemical properties

| | | |
|------|---------------------------|---------------------------|
| 9.1 | Physical Form: | Grease. |
| 9.2 | Colour: | Grey. |
| 9.3 | Odour: | Slight odor. |
| 9.4 | pH: | Not determined. |
| 9.5 | Solubility in Water: | Immiscible in water. |
| 9.6 | Boiling Point: | Not determined. |
| 9.7 | Melting Point: | Not determined. |
| 9.8 | Flash Point: | <200°C (Seta Closed Cup). |
| 9.9 | Auto ignition temperature | Not determined. |
| 9.10 | Explosive properties: | No. |



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9.) Physical and Chemical Properties

| | | |
|------|--|-----------------|
| 9.11 | Oxidizing properties: | No. |
| 9.12 | Vapor Pressure @25°C | Not determined. |
| 9.13 | Specific Gravity: | 2.7 |
| 9.14 | Octanol / water partition coefficient: | Not determined. |
| 9.15 | Vapour Density (air=1) | Not determined. |
| 9.16 | Viscosity: | 85,000 @ 25°C |
| 9.17 | Molecular Weight: | Not determined. |

10.) Stability and reactivity

| | | |
|------|-----------------------------------|--|
| 10.1 | Stability: | Stable. |
| 10.2 | Reactivity | |
| | Conditions to Avoid | None |
| | Materials to Avoid | Oxidizing material can cause a reaction. |
| | Hazardous Decompositions Products | Silicon dioxide, Zinc Oxides, Metal Power, Formaldehyde. |
| | Hazardous Polymerization: | Hazardous polymerization will not occur. |

11.) Toxicological Information

| | | |
|------|----------------------------------|--|
| 11.1 | Possible Health Effects: | This material contains zinc oxide. Zinc oxide produced adverse developmental effects when fed to rats at 300 mg/kg/day for 21 days prior to mating and throughout pregnancy. However no adverse effects were observed at a dose of 100mg/kg/day for the same duration. |
| 11.2 | Sensitizing Effects: | None known. |
| 11.3 | Mutagenic Effects: | None known. |
| 11.4 | Reproductive Effects: | None known. |
| 11.5 | Carcinogenic Effects: | None known. |
| 11.6 | Other Health Hazard Information: | Maycause irritation to eyes, respiratory system and skin |

The above listed potential effects of overexposure are based on actual data, the results of studies performed upon similar compositions component data, and/or expert review of the products.

12.) Ecological Information

| | | |
|------|--|--|
| 12.1 | Environmental Fate and Distribution: | Complete information is not yet available. |
| 12.2 | Environmental Effects: | Complete information is not yet available. |
| 12.3 | Fate and Effects in Waste Water Treatment Plants | Complete information is not yet available. |



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13.) Disposal Considerations

| | | |
|------|---------------------|--|
| 13.1 | Product Disposal: | This material must be disposed of as hazardous Waste |
| 13.2 | Packaging Disposal: | Dispose of in accordance with local regulations. |

14.) Transport Information

| | | |
|------|--------------------------|---|
| 14.1 | Road and Rail Transport: | Recommended to Label under UN 3082 Requirements |
| 14.2 | Sea Transport (IMDG): | Recommended to Label under UN 3082 Requirements |
| 14.3 | Air Transport (IATA): | Recommended to Label under UN 3082 Requirements |
| 14.4 | Truck Transport (ADR): | Recommended to Label under UN 3082 Requirements |

15.) Regulatory Information

| | | |
|------|-----------------------------|--|
| 15.1 | Packaging Label Regulatory: | No Special packaging or labelling requirements. |
| 15.2 | EU Addition Classification: | Symbol of Danger : N  UN 3082 Environmentally hazard substance, Liquid . n.o.s. (contains Zinc oxide) 9 III Marine Pollutant:  |
| 15.3 | Indication of Danger: | Not determined. |
| 15.4 | R: 50/53 | Risk Statements: Toxic to aquatic organisms and may cause long-term adverse effects to the aquatic environment. |
| 15.5 | S:60/61 | Safety Statements: This material and its container can be disposed of as hazardous waste. Recommend to avoid release to the environment. Refer to special instructions/Safety data sheets. |

16.) General Information

| | | |
|------|---|--|
| 16.1 | The Information herein is based on data considered to be accurate at date of preparation. No warranty is made as to the accuracy or completeness of the foregoing data and safety resulting from abnormal use from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. | |
| 16.2 | The MSDS is prepared in accordance with ISO 11014-1:1994 | |