

Material Safety Data Sheet

Acc. to EG-Richtlinie 91/155/EWG

Version 1.0 from 01.05.2007

1. Product and Company Identification:

Product identification: ADDO-NANO, Oil Additiv
Art.Nr.: PL-ADDO-200mL, PL-ADDO-1L, PL-ADDO-2.5L, PL-ADDO-60L
Product use: Lubricant
Manufacturer / Distributor:
PlasmaChem GmbH
Rudower Chaussee 29
12489 Berlin
Germany
E-mail: info@plasmachem.com

2. Components

| 2.1 Chemical Ident. | % Content | Symbol | R-Sätze | CAS |
|----------------------|-----------|--------|---------|------|
| Motor oils | > 90 | - | - | n.a. |
| Carbon nanoparticles | < 10 | - | - | n.a. |

3. Hazards Identification

3.1 For humans

See also §§ 11 and 15.

Composition is not hazardous according to 1999/45/EG.

3.2 For environment

See also § 12.

Product can form a film on water surface, which will restrict oxygen diffusion into water.

4. First Aid Measures

4.1 Inhalation

Vapor pressure is very low. Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from hot product, immediately remove from exposure and call a physician. If breathing is irregular or has stopped, start resuscitation; administer oxygen, if available. If overexposed to oil mist, remove from further exposure until excessive oil mist condition subsides.

4.2 Eye contact

If lubricant gets into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

4.3 Skin contact

In case of skin contact, remove any contaminated clothing and wash skin with soap and water. Launder or dry-clean clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

4.4 Ingestion

If ingested, **do not** induce vomiting; call a physician immediately.

5. Fire-Fighting Measures

5.1 Flash point (minium)

Greater than 165°C (329 °F)

5.2 Flammable or explosive limits

n.a.

5.3 Extinguishing media and fire fighting procedures

Foam, water spray (fog), dry chemicals, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists. Minimize breathing of gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

5.3 Decomposition products under fire conditions

Carbon monoxide and carbon dioxide from burning. Oxides of sulfur, sulfur dioxide or hydrogen sulfide, depending upon decomposition conditions, oxides of calcium.

6. Accidental Release Measures

See also §§ 13 and 8.

6.1 Clean water act / oil pollution act

This product may be classified as an oil under Section 311 of the clean water act, and under the oil

pollution act. Discharges of spills into leading surface waters that cause a sheen must be reported to the authorities.

6.2 Steps to be taken in case material is released or spilled.

Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize skin contact. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas.

Assure conformity with applicable governmental regulations.

7. Storage and handling

7.1 Handling precautions

Use product with caution around heat, sparks, pilot lights, static electricity, and open flame.

7.2 „Empty“ container warning

„Empty“ containers retain residue and can be dangerous. DO NOT PRESSURIZE; CUT; WELD; BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Do not attempt to refill or clean containers since residue is difficult to remove. “Empty” drums must be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

8. Exposure Controls / Personal Protection

Exposure limit for total product

5 mg/m³ for oil mist (aerosol) for an 8-hour workday.

8.1 Ventilation: Use local exhaust to capture vapor, mists or fumes, if necessary. Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. No smoking, or use of flame or other ignition sources.

8.2 Respiratory protection:

Use supplied-air respiratory protection in confined or enclosed space, if needed..

8.3 Eye protection: Use splash goggles or face shield when eye contact may occur (EN 166).

8.4 Protective gloves: use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

9. Physical and Chemical Properties

Physical state at room temperature: Liquid

Colour: Black

Odor: Characteristic odor of mineral oil

pH: n.a.

Boiling point: n.a.

Melting Point: n.a.

Molecular weight: n.a.

Specific gravity: 0,88

Vapor density: n.a.

Percent volatile by volume: n.a.

Evaporation rate: n.a.

Solubility in water: Negligible

Viscosity: ca. 95 mm²/s (40°C)

10. Stability and reactivity

10.1 Avoid contact

See also § 7

Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite etc., as this presents a serious explosion hazard.

10.2 Polymerization and other reactions

This product is stable and will not react violently with water. Hazardous polymerization will not occur.

11. Toxicological Information

11.1 Acute toxicity

11.1.1 Peroral, LD50 Rat oral (mg/kg): n.a.

11.1.2 Inhalation, LC50 Rat (mg/l/4h): n.a.

11.1.3 Skin contact, LD50 Rat dermal (mg/kg): n.a.

11.1.4 Eye contact: n.a.

11.2 Prolonged toxicity

11.2.1 Sensibilization: n.a.

11.2.2 Carcinogenic: n.a.

12. Ecological Information

Do not discharge this product into public waters or waterways unless authorized by governmental authorities.

Refer to §§ 6 und 15 for accidental release information.

13. Disposal Considerations

Shipment, storage, disposal, and cleanup actions of waste materials are regulated under local, provincial, and federal rules. Contact the appropriate agencies if uncertain of applicability. Used motor oil must be properly disposed of at oil collection centers or licensed disposal facilities. For general discharge guidance use 15 mg/L for total oil and grease.

14. Transport Information

General remarks

UN-Number: n.a.

Road/Rail transportation (GGVSE/ADR/RID)

Packing group / hazard class: n.a.

LQ: n.a.

Marine transportation

GGVSee/IMDG-Code: n.a. (Packing group / hazard class)

Marine Pollutant: n.a.

Air transportation

IATA: n.a. (Packing group / hazard class)

Additional information:

Not dangerous for transportation acc. to DTO, TDG

15. Regulatory Information

Labeling: -

R-Sätze:-

S-Sätze:-

Zusätze:-

VOC 1999/13/EC n.a.

16. Other Information

All information, recommendations and suggestions appearing herein concerning this product are based upon tests and data believed to be reliable, however, it is the user's responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee expressed or implied is made by PlasmaChem GmbH as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does PlasmaChem GmbH assume any liability arising out of use by others of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or Desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.