1 Identification

- Product identifier
- Trade name: BioPlus
  Biodegradable chain lubricant
- Article number: 0781 516 30..
- Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.
- Application of the substance / the mixture Chain lubrication oil based on vegetable oils.
- Details of the supplier of the safety data sheet
  Manufacturer/Supplier:
  ANDREAS STIHL AG & Co.KG
  Badstr. 115
  D-71336 Waiblingen
  Tel: +49(0)7151-26-3237
  Fax: +49(0)7151-26-8-3237
  Email: info@stihl.com
  Distributed by:
  STIHL Incorporated
  536 Viking Drive
  Virginia Beach, VA 23452
  (757) 486-9100
- Information department:
  Produktmanagement Forsttechnik
  Tel: +49(0)7151-26-3237
  Fax: +49(0)7151-26-83237
- Emergency telephone number:
  Giftnotruf Berlin +49 30 30686 790
  Auskünfte zum Transport: Tel.: +49-621-60-43333  Fax: +49-621-60-92664

2 Hazard(s) identification

- Classification of the substance or mixture
  The product is not classified according to the Globally Harmonized System (GHS).
- Classification according to Directive 67/548/EEC or Directive 1999/45/EC Void
- Label elements
- Labelling according to EU guidelines:
  The product is not subject to identification regulations according to directives on hazardous materials.
- Classification system:
- NFPA ratings (scale 0 - 4)
  Health = 0
  Fire = 1
  Reactivity = 0

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Trade name: BioPlus
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- HMIS-ratings (scale 0 - 4)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Health = 0
Fire = 1
Reactivity = 0

- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Chain lubrication oil based on vegetable oils, additivated.
- Dangerous components: Void
- Additional information: For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

- Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
  - Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Do not induce vomiting; immediately call for medical help.
- Most important symptoms and effects, both acute and delayed
  - No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
  - No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
  - In case of fire, the following can be released:
    - Carbon monoxide (CO)
- Advice for firefighters
- Protective equipment: Wear breathing protection if necessary.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Particular danger of slipping on leaked/spilled product.
  - The usual precautionary measures should be adhered to general rules for handling chemicals.
- Environmental precautions:
  - Do not allow to enter sewers/ surface or ground water.
  - Inform respective authorities in case of seepage into water course or sewage system.
7 Handling and storage

- Precautions for safe handling: No special precautions are necessary if used correctly.
- Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities:
  - Storage:
  - Requirements to be met by storerooms and receptacles: Prevent any seepage into the ground.
  - Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Storage in a collecting room is required.
- Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Control parameters
- Components with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    The usual precautionary measures for handling chemicals should be followed.
  - Breathing equipment: Not required.
  - Protection of hands:
    Not required.
    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Material of gloves
    The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - Penetration time of glove material
    The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Goggles recommended during refilling.
- Body protection: Protective work clothing
**9 Physical and chemical properties**

- **General Information**
  - **Appearance:** Fluid
  - **Color:** Brown
  - **Odor:** Specific type

- **Change in condition**
  - **Melting point/Melting range:** -2 bis-10 °C (28 bis 14 °F)
  - **Boiling point/Boiling range:** Undetermined.

- **Flash point:** > 230 °C (> 446 °F) (DIN ISO 2592)

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Density at 15 °C (59 °F):** 0.92 g/cm³ (7.677 lbs/gal) (DIN 51757)

- **Solubility in / Miscibility with**
  - Water: Not miscible or difficult to mix.

- **Viscosity**
  - **Dynamic:** Not determined.
  - **Kinematic at 40 °C (104 °F):** 37 mm²/s (ASTM D 7042)

- **Solvent content:**
  - Organic solvents: 0.0%
  - VOC content: 0.0%

- **Other information**
  - No further relevant information available.

**10 Stability and reactivity**

- **Reactivity**
- **Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
  - **Possibility of hazardous reactions** No dangerous reactions known.
  - **Conditions to avoid** No further relevant information available.
  - **Incompatible materials** No further relevant information available.
  - **Hazardous decomposition products** No dangerous decomposition products known.

**11 Toxicological information**

- **Information on toxicological effects**
  - **Acute toxicity:**
    - **on the skin:** No irritant effect.
    - **on the eye:** No irritating effect.
  - **Sensitization:** No sensitizing effects known.
  - **Additional toxicological information:**
    - The product is not subject to classification according to internally approved calculation methods for preparations.
12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **Persistence and degradability:** No further relevant information available.
  - **Other information:**
    The product is readily biodegradable (OECD 301B / EU C.4-C).
    Award to the environmental label "Blauer Engel" for quickly biodegradable chain lubricants used for power saws by the German Institute for Quality Assurance and Labelling (RAL).
  - **Bioaccumulative potential:** No further relevant information available.
  - **Mobility in soil:** No further relevant information available.
  - **Additional ecological information:**
    - **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water
    - **Results of PBT and vPvB assessment**
      - **PBT:** Not applicable.
      - **vPvB:** Not applicable.
    - **Other adverse effects:** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:**
    The waste code numbers mentioned are recommendations based on the probable use of the product.
    The product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility.

- **Uncleaned packagings**
  - **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

- **UN-Number**
  - DOT, ADR, ADN, IMDG, IATA: Void

- **UN proper shipping name**
  - DOT, ADR, ADN, IMDG, IATA: Void

- **Transport hazard class(es)**
  - **DOT**
    - **Class:** Void
    - No hazardous good
  - **ADR, ADN, IMDG, IATA**
    - **Class:** Void

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- Packing group
  - DOT, ADR, IMDG, IATA
  - Void

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user: Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

- Transport/Additional information: Not dangerous according to the above specifications.

- UN "Model Regulation": -

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara

  - Section 355 (extremely hazardous substances):
    None of the ingredients is listed.

  - Section 313 (Specific toxic chemical listings):
    None of the ingredients is listed.

  - TSCA (Toxic Substances Control Act):
    All ingredients are listed.

  - Proposition 65

    - Chemicals known to cause cancer:
      None of the ingredients is listed.

    - Chemicals known to cause reproductive toxicity for females:
      None of the ingredients is listed.

    - Chemicals known to cause reproductive toxicity for males:
      None of the ingredients is listed.

    - Chemicals known to cause developmental toxicity:
      None of the ingredients is listed.

  - Cancerogenity categories

    - EPA (Environmental Protection Agency)
      None of the ingredients is listed.

    - TLV (Threshold Limit Value established by ACGIH)
      None of the ingredients is listed.

    - AGW (German Maximum Workplace Concentration)
      None of the ingredients is listed.

    - NIOSH-Ca (National Institute for Occupational Safety and Health)
      None of the ingredients is listed.

    - OSHA-Ca (Occupational Safety & Health Administration)
      None of the ingredients is listed.
Trade name: BioPlus
Biodegradable chain lubricant

Product related hazard informations:
The product is not subject to identification regulations according to directives on hazardous materials.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:
The safety data sheets were drawn up in cooperation with the Umweltkanzlei Dr. Rhein Beratungs- und Prüfgesellschaft mbH, Phone: +49(0)5066-900990.

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
* Data compared to the previous version altered.