Safety Data Sheet: K NATE (NLGI 2)
According to EC Regulation 1907/2006/EC - revision 453/2010 (REACH)

1.1. Product identifier
Product Name: K NATE (NLGI 2)
Product Code: 0768G

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use: Grease.

1.3. Details of the supplier of the safety data sheet
NCH European Technical Centre
Codnor Gate Business Park
Ripley, Derbyshire, DE5 3NW, UK
Tel.: 01902 510401
E-mail address: reach@nch.com
Website address: www.ncheurope.com

1.4. Emergency telephone number
01902 510401 (available during Office Hours)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 (CLP/GHS) and its adaptations
This mixture is not classified according to EU Regulation No 1272/2008
Safety data sheet available on request.

Classification according to EU Directive 67/548EEC - 1999/45 EC
This mixture is not classified according to EU Directive 1999/45/EC

2.2. Label elements
Labelling according to Regulation (EC) No 1272/2008 (CLP/GHS)
Supplemental Hazard Information (EU)
Safety data sheet available on request.
For industrial and institutional use only.
Keep out of reach of children.

2.3. Other hazards
No additional hazards identified
The components in this formulation do not meet the criteria for classification as PBT or vPvB. As defined under the regulation EC 1907/2006.

SECTION 3. COMPOSITION / INFORMATION OF INGREDIENTS

3.2. Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC No.</th>
<th>EU - REACH Reg Number</th>
<th>Weight %</th>
<th>Classification EU - GHS/CLP</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUBRICATING OILS</td>
<td>74869-22-0</td>
<td>278-012-2</td>
<td>01-2119495601-36</td>
<td>25 - &lt; 50</td>
<td></td>
<td>L</td>
</tr>
<tr>
<td>CALCIUM PHOSPHATE</td>
<td>7758-23-8</td>
<td>231-837-1</td>
<td>01-2119490065-39</td>
<td>1 - &lt; 3</td>
<td>Xi; R36/37/38</td>
<td></td>
</tr>
</tbody>
</table>

This mixture contains substances with a Community workplace exposure limit. For any H statements and R phrases mentioned in this section, see the full text in section 16. The GHS/CLP classification for substances are listed once they have been harmonised according to the REACH Regulation No 1907/2006.

EU Notes
Note L - The classification as a carcinogen does not apply as the substance contains less than 3% DMSO extract (IP 346)

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures
General advice
Get medical attention immediately if symptoms occur.

**Eye Contact**
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**
Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Do not use solvents or thinners. Get medical attention if irritation develops and persists.

**Ingestion**
Do NOT induce vomiting. Rinse mouth with water. Get medical attention if symptoms occur.

### 4. Most important symptoms and effects, both acute and delayed

**Sensitization**
No information available.

**Eye contact**
May cause irritation as itching and redness.

**Skin contact**
Unlikely to be irritant on brief or occasional exposure.

### 4.3. Indication of any immediate medical attention and special treatment needed

**Notes to physician**
Treat symptomatically.

### SECTION 5. FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing media

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use: Dry powder. Alcohol-resistant foam. Carbon dioxide (CO2). Water spray.

**Extinguishing media which must not be used for safety reasons**
Water jet.

#### 5.2. Special hazards arising from the substance or mixture

When exposed to high temperatures, the preparation may release dangerous decomposition products such as carbon monoxide and dioxide, smoke and/or nitrogen oxide.

Material can create slippery conditions.

#### 5.3. Advice for firefighters

Firefighters should wear a self-contained breathing apparatus and full protective gear.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes, and clothing. Use personal protective equipment. Refer to protective measures listed in sections 7 and 8. Use care as spills may be slippery.

#### 6.2. Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

#### 6.3. Methods and material for containment and cleaning up

**Methods for Containment**
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). If using a cloth to wipe up a small spillage, properly dispose of the used cloth to avoid a fire risk.

**Methods for Cleaning up**
Pick up and transfer to properly labelled containers. Clean preferably with a detergent, do not use solvents.

#### 6.4. Reference to other sections

Refer to sections 7, 8 and 13

### SECTION 7. HANDLING AND STORAGE

#### 7.1. Precautions for safe handling

Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation.

#### 7.2. Conditions for safe storage, including any incompatibilities

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.

#### 7.3. Specific end use(s)

No information available

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1. Control parameters

Exposure limits
TWA (8hrs): 5mg/m$^3$ / STEL(15mins):10mg/m$^3$.

8.2. Exposure controls

Engineering Measures
Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment
Use personal protection equipment as per Directive 89/686/EEC.

Respiratory Protection
If excessive mist formation is likely wear suitable respiratory protection. Conforming to EN 143 eg P2 / P3 Particle filters.

Hand Protection
Wear suitable protective gloves conforming to EN 374. Type of gloves suggested: Neoprene gloves (0.4mm), Nitrile rubber (0.4 mm), Solvent-resistant gloves (butyl-rubber). Suitability and durability of a glove is dependent upon usage factors such as frequency, duration of use, temperature and chemical resistance. The use of a chemical-protective glove may in practice be much shorter than the permeation time determined through testing. For break through times, refer to glove manufacturers recommendations.

Eye Protection
Safety glasses if the method of use presents the likelihood of eye contact. Approved to EN 166.

General Hygiene Considerations
Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Information below relates to typical values and does not constitute a specification

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Blue green</td>
</tr>
<tr>
<td>Physical State</td>
<td>Grease</td>
</tr>
<tr>
<td>Odor</td>
<td>Petroleum distillates</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>&gt; 250 °C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 220 °C</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limits in Air %:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt; 0.01 kPa (20°C)</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.05</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>&gt; 300 °C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Viscous</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>2</td>
</tr>
<tr>
<td>NLGI</td>
<td>0</td>
</tr>
<tr>
<td>Dropping Point</td>
<td>&gt; 290 °C</td>
</tr>
<tr>
<td>Drying Point</td>
<td></td>
</tr>
</tbody>
</table>

9.2. Other information

No other information available

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

Not considered as highly reactive. See further information below.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

The mixture itself will not dangerously react or polymerise to create hazardous conditions in normal use

10.4. Conditions to avoid

No conditions to be specially mentioned.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

None under normal storage conditions and use.

When exposed to high temperatures, the preparation may release dangerous decomposition products such as carbon monoxide and dioxide, smoke and/or nitrogen oxide.
SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information
The product itself has not been tested

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral (mg/kg)</th>
<th>LD50 Dermal (mg/kg)</th>
<th>LC50 Inhalation (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUBRICATING OILS</td>
<td>&gt; 5000</td>
<td>&gt; 2000</td>
<td>= 2.18</td>
</tr>
<tr>
<td>CALCIUM PHOSPHATE</td>
<td>&gt; 17500</td>
<td>&gt; 2</td>
<td></td>
</tr>
</tbody>
</table>

Sensitization
No information available.

Skin contact
Unlikely to be irritant on brief or occasional exposure.

Eye contact
May cause irritation as itching and redness.

Carcinogenicity
There are no known carcinogenic substances in this product.

Mutagenic Effects
There are no known mutagenic substances in this product.

Reproductive Effects
There are no known substances in this product with effects on reproduction.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

Product Information
The product itself has not been tested.

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to Fish</th>
<th>Water Flea</th>
<th>Toxicity to Algae</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUBRICATING OILS</td>
<td>LC50 &gt; 5000</td>
<td>1000: 48</td>
<td>Daphnia magna EC50</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
Persistence and degradability are substance specific, no test data is available on the constituents of this mixture to degrade or persist in the environment, either through biodegradation or other processes, such as oxidation or hydrolysis.

12.3. Bioaccumulative potential
No information available.

12.4. Mobility in soil
The product is insoluble and sinks in water.

12.5. Results of PBT and vPvB assessment
The components in this formulation do not meet the criteria for classification as PBT or vPvB. As defined under the regulation EC 1907/2006.

12.6. Other adverse effects
No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products
Dispose of in accordance with local regulations.

Contaminated Packaging
Empty remaining contents. Empty containers should be taken for local recycling, recovery or waste disposal. Recycle according to official regulations.

EWC waste disposal No
The following EWC/ AVV waste codes may be applicable:
12 01 12* spent waxes and fats.

Other Information
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

SECTION 14. TRANSPORT INFORMATION

Not classified for transport as dangerous goods

14.5. Environmental hazards
The mixture is not environmentally hazardous for transport.

14.6. Special precautions for user
No special precautions.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Packaged product, not typically transported in IBC's
Additional information
The above information is based on latest transport regulations i.e. ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport.

SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
This mixture was classified in compliance with EC Regulation 1272/2008 (CLP) and its adaptations.
This mixture is not classed as hazardous by Directive 1999/45/EC. In addition, Directive 2009/2/EC with the 31st Adaptation of Directive 67/548/EEC (Hazardous substances) has been taken into account.
WGK Classification
Water-endangering (WGK 2), Classification according VwVwS

15.2. Chemical safety assessment
No chemical safety assessment has been carried out for this mixture by the supplier

SECTION 16. OTHER INFORMATION

Text of R phrases mentioned in Section 3
.R36/37/38 - Irritating to eyes, respiratory system and skin.

Prepared By Austen Pimm
Creation Date 02/02/2015
Revision date 02/02/2015
Revision Summary
CLP update.

Abbreviations
REACH: Registration Evaluation Authorisation Restriction of Chemicals
EU: European Union
EC: European community
EEC: European Economic Community
UN: United Nations
CAS: Chemical Abstracts Service
PBT: Persistent Bioaccumulative Toxic
vPvB: very Persistent very Bioaccumulative
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
EC50: Effective concentration, 50 percent
LogPow: LogP octanol/water
VvWvS: Verwaltungsvorschrift wassergefährdende Stoffe (Administrative order relating to substances hazardous to water - Germany)
WGK: Wassergefahrdungsklasse (Water Hazard Class - Germany).
AVV: Abfallverzeichnis-Verordnung (Waste Code - Germany)
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European agreement governing the international carriage of dangerous goods by road)
IMDG: International Maritime Dangerous Goods
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International carriage of Dangerous goods by rail)
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
ERG: Emergency Response Guidebook
IUCLID / RTECS: International Uniform Chemical Information Database / Registry of Toxic Effects of Chemical Substances
EINECS: European Inventory of Existing Commercial Chemical Substances
VOC: Volatile Organic Chemical
w/w: weight for weight
DMSO: Dimethyl sulphoxide
OECD: Organization for Economic Cooperation and Development
STEL: Short Term Exposure Limit
TWA: Time Weighted Average

Further Information
It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations. Component test results displayed in sections 11 and 12 are typically supplied by Chemadvisor and assembled from publicly available literature sources e.g. IUCLID / RTECS.

Disclaimer
The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet