MATERIAL SAFETY DATA SHEET
(91/155/EC)

WASH OIL / NEUTRAL OIL

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the substance
Trade name: Wash Oil, Neutral Oil
Molecular formula: N/A

1.2. Use of the substance/preparation
Coke oven gas cleaning

1.3. Company/undertaking identification
Industrial Química del Nalón, S.A.
Avda. Galicia 31
E-33005 Oviedo
Spain
Tel: +34 98.598.26.00
Fax: +34 98.598.26.26
(See item 16.2 – Contact –)

1.4. Emergency information
Tel: +34 98.598.26.61
Fax: +34 98.598.26.66
2. **COMPOSITION / INFORMATION ON INGREDIENTS**

2.1. Chemical Description

A complex combination of hydrocarbons produced by the distillation of coal tar and boiling in the range of approximately 230 °C to 280 °C. Composed primarily of, naphthalene, quinoline, alkyl naphthalenes, biphenyl, acenaphthene, dibenzofurane, and fluorene.

2.2. IUPAC Name

N/A

2.3. CAS Number

90640-84-9 Creosote oil, acenaphthene fraction, wash oil

2.4. Identification Number (s)

EINECS Number: 292-605-3
Index Number: 648-098-00-X

2.5. Dangerous Components

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Name</th>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>91-20-3</td>
<td>202-049-5</td>
<td>Naphthalene, pure</td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>134-32-7</td>
<td>205-138-7</td>
<td>1-naphthylamine</td>
<td>&lt; 100 ppm</td>
</tr>
<tr>
<td>91-59-8</td>
<td>202-080-4</td>
<td>2-naphthylamine</td>
<td>&lt; 150 ppm</td>
</tr>
</tbody>
</table>

3. **HAZARDS IDENTIFICATION**

3.1. Hazard designation:

- T: Toxic (Carc. Cat. 2)
- N: Dangerous for the environment

3.2. Information concerning particular hazards for human and environment

R45: May cause cancer
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

*The classification is according to the latest editions of the EU-lists, and extended by company and literature data.*
4. **FIRST-AID MEASURES**

SEEK MEDICAL ATTENTION IMMEDIATELY IF ANY SYMPTOMS ARISE.
REMOVE IMMEDIATELY ANY CONTAMINATED CLOTHING.
REMOVE SUBJECT FROM ANY EXPOSURE SOURCE.

After inhalation: Remove subject from exposure area to fresh air. Administer oxygen or artificial respiration in severe cases.

After skin contact: Remove all contaminated clothing. Wash exposed area with non abrasive soap and water.

After eye contact: Flush open eyes immediately with plenty of water for at least 15 minutes. Then consult doctor.

After ingestion: If conscious, first try to induce vomiting and then give copious quantities of water. Do not give anything by mouth to an unconscious person. Get medical help immediately.

5. **FIRE-FIGHTING MEASURES**

5.1. - Extinguishing media:

- **Suitable**: Dry chemicals, carbon dioxide, sand, foam, steam or water fog.
- **Not Suitable**: Water jet (may spread fire).

5.2. - Special hazards caused by the material, its products of combustion or resulting gases

Incomplete combustion in a fire may result in a release of toxic carbon monoxide.

5.3. - Protective equipment

Full-body protective clothing, including breathing apparatus.
Do not inhale combustion gases.

5.4. - Additional information

Cool storage containers with water spray jet.

6. **ACCIDENTAL RELEASE MEASURES**

6.1. - Personal precautions:

Wear full-body, industrial-type work clothing, including chemical resistant gloves, boots and goggles.
Avoid breathing vapours or contact with skin and eyes. Ventilate the area if the spill occurs indoors.
Keep away from ignition sources.

6.2. - Environmental precautions:

Keep away from drains, surface- and ground-water and soil.
Inform respective authorities in case of seepage into water course/sewage system.
6.3.- Cleaning up methods:

Adsorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust), collect mechanically and place in containers for safe disposal. Containers should be sealed and labelled.
 Dispose of contaminated material and waste according to item 13.1.
Ensure adequate ventilation.

7.- HANDLING AND STORAGE

7.1.- Handling:
When loading/unloading the product, use pump or nitrogen injection.
Ensure adequate ventilation and guard against ignition sources and static electricity.
Prevent the formation of vapours.
Use chemical resistant gloves and safety glasses.
Keep self-contained breathing equipment ready.

7.2.- Storage:
Store at room temperature in a dry container and keep away from open fire and ignition sources. Guard against static electricity. Keep away from strong oxidizing substances.
Storage tanks and pipes can be constructed of mild steel.
Storage class: dangerous for the environment. Store according to local and/or national regulations.

8.- EXPOSURE CONTROLS / PERSONAL PROTECTION

TRAIN WORKERS AND USERS IN SAFETY MEASURES

8.1.- Additional information about design of technical facilities
General or local exhaust ventilation may be necessary (see section 7)

8.2.- Components with limit values that require monitoring at the workplace

<table>
<thead>
<tr>
<th>Substance</th>
<th>Short term value</th>
<th>Long term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>91-20-3 naphthalene, pure</td>
<td>80 mg/m³, 15 ppm</td>
<td>53 mg/m³, 10 ppm</td>
</tr>
</tbody>
</table>

Polycyclic Aromatic Hydrocarbons (PAHs): TLV is 0.2 mg/m³ (OSHA PEL / ACGIH)
8.3.- General protective and hygienic measures
- Keep away from foodstuffs, beverages and feed.
- Wash hands before breaks and toilet visits.
- Avoid contact with eyes and skin.
- Do not drink, eat, smoke or sniff while working.
- Shower or take a bath at the end of work. Steam baths are recommended.
- Take off immediately all contaminated clothing.
- Store protective clothing separately.

8.4.- Respiratory protection
- In case of brief exposure or low pollution use breathing filter apparatus (filter ABEK). In case of intensive or longer exposure use (self-contained) breathing equipment.

8.5.- Protection of hands
- Impermeable and chemical resistant gloves.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

8.6.- Material of gloves
- Butyl rubber, BR
- Nitrile rubber, NBR
- Neoprene

8.7.- 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.
- Discard gloves as soon as any signs of degradation are noticed (e.g. swelling).

8.8.- Eye protection
- Tightly sealed safety glasses or chemical grade goggles.

8.9.- Body protection
- Wear full-body, industrial-type work clothing.
- Do not use contaminated clothing.
9.- **PHYSICAL AND CHEMICAL PROPERTIES**

9.1.- General information
Form: Liquid
Colour: Dark brown
Odour: Characteristic

9.2.- Change in conditions
Boiling range: 230-320°C
Melting range: < 0°C

9.3.- Flash point: > 90 °C (Method ASTM D93).

9.4.- Ignition temperature: > 500 °C

9.5.- Self-flammability: The product is not self igniting

9.6.- Explosion limits: Product does not present an explosion hazard

9.7.- Vapour pressure at 20 °C: < 100 Pa

9.8.- Density at 20 °C: 1.025 - 1.040 Kg/m³

9.9.- Solubility in / miscibility with water at 20 °C: approx. 30 mg/l

10.- **STABILITY AND REACTIVITY**

10.1.- Conditions to avoid
Sources of ignition.
Thermal decomposition, do not overheat.

10.2.- Materials to avoid
Contact with strong oxidizing agents.

10.3.- Hazardous decomposition products
No decomposition if used according to specifications. The substances arising from thermal decomposition cannot be accurately predicted. Any fumes/vapours are potentially irritant/toxic and suitable protective equipment should be worn.
11. - **TOXICOLOGICAL INFORMATION**

11.1. - Acute toxicity. LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>Compound</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalative LC50/4h</th>
</tr>
</thead>
<tbody>
<tr>
<td>91-20-3 naphthalene, pure</td>
<td>&gt;2000 mg/kg (rat)</td>
<td>&gt;2500 mg/kg (rat)</td>
<td>&gt;100 mg/l (rat)</td>
</tr>
<tr>
<td>90640-84-9 Creosote Oil, acenaphthene fraction</td>
<td>&gt;3500 mg/kg (rat)</td>
<td>&gt;3500 mg/kg (rat)</td>
<td></td>
</tr>
</tbody>
</table>

11.2. - Primary irritant effect

**On the skin:** May be irritant to skin and mucous membranes

**On the eye:** May have irritating effect

**Sensitisation:** When working in strong sunlight, skin irritation may occur equivalent to sunburn (photosensitivity). Use cream with a high protection factor (10-20) against sunlight.

11.3. - Additional toxicological information

Inhalation of vapours may result in headache; in severe cases, in unconsciousness.

12. - **ECOLOGICAL INFORMATION**

12.1. - General notes

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Poisonous for fish and plankton.

Toxic for aquatic organisms.

The product biodegrades very slowly.

13. - **DISPOSAL CONSIDERATIONS**

13.1. - Product

Must be in accordance with local authority and national legislation. Dispose of as Toxic and Hazardous Waste (Directive 78 / 319 / EC).

Must not be disposed together with household garbage or strong oxidizing agents. Do not allow product to reach sewage system.

13.2. - Uncleaned packaging

Same as for product
14. **TRANSPORT INFORMATION**

14.1. **Land transport ADR/RID (cross-border)**

- **ADR/RID class:** 9 Miscellaneous dangerous substances and articles
- **Hazard index number:** 90
- **Packaging group:** III
- **UN no.:** 3082
- **Hazard label:** 9
- **Item:** 11c
- **Description of goods:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains: complex aromatic hydrocarbons mixture)

14.2. **Maritime transport**

- **IMDG class:** 9
- **UN number:** 3082
- **Label:** 9
- **Packaging group:** III
- **Marine pollutant:** Yes
- **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains: complex aromatic hydrocarbons mixture)

14.3. **Air transport ICAO-TI and IATA-DGR**

- **ICAO/IATA class:** 9
- **UN/ID number:** 3082
- **Packaging group:** III
- **Correct technical name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains: complex aromatic hydrocarbons mixture)

15. **REGULATORY INFORMATION**

The product has been classified and marketed in accordance with EU Directives/Ordinance on Hazardous Materials (67/478/EEC and 1999/45/EC) and their implementations

15.1. **Code letter and hazard designation of product**

- **T:** Toxic
- **N:** Dangerous for the environment

15.2. **Hazard determining components of labelling**

See item 2.5
15.3.- Risk phrases
R45:   May cause cancer
R51/53: Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

15.4.- Safety phrases
S53:   Avoid exposure. Obtain special instructions before use.
S45:   In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

15.5.- Information about limitations of use
For professional users only.
Employment restrictions concerning young persons must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

15.6.- Water hazard class
Hazard class 2 (assessment by list): hazardous for water

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.

16.1.- Department Issuing MSDS: R&D Department

16.2.- Contact: Juan José Fernández