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

1.1. Product identifier

Product name: AZOLLA AF 46
Number: 0XR

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Hydraulic oil.

1.3. Details of the supplier of the safety data sheet

Supplier: TOTAL LUBRIFIANTS
562 Avenue du Parc de L’île
92029 Nanterre Cedex
Tel: +33 (0)1 41 35 40 00
Fax: +33 (0)1 41 35 84 71

For further information, please contact:

Contact Point: HSE
E-mail Address: rm.msds-lubs@total.com

1.4. Emergency telephone number

+33 1 49 00 00 49 (24h/24, 7d/7)
France - ORFILA (INRS) Tel : +33 (0)1 45 42 59 59
In France - PARIS : Hôpital Fernand Widal 200, rue du Faubourg Saint-Denis 75475 Paris Cédex 10 , Tel : 01.40.05.48.48. - MARSEILLE : Hôpital Salvator, 249 bd Ste Marguerite 13274 Marseille cedex, Tel : 04.91.75.25.25. - LYON : Hôpital Edouard Herriot, 5 place d’Arsonvcl, 69437 Lyon cedex 3, Tel : 04.72.11.69.11. - NANCY : Hôpital central, 29 Av du Mal De Lattre de Tassigny, 54000 Nancy, Tel : 03.83.32.36.36 ou le SAMU : Tel ( 15 )

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008
For the full text of the H-Statements mentioned in this Section, see Section 2.2.

DIRECTIVE 67/548/EEC or 1999/45/EC
For the full text of the R-phrases mentioned in this Section, see Section 16
2.2. Label elements

Labelled according to: Not classified/No labelling required

R-phrase(s): none

S-phrase(s): none

2.3. Other hazards

Physical-Chemical Properties: Contaminated surfaces will be extremely slippery.

Environmental properties: Should not be released into the environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Hazardous ingredients: Do not contain hazardous substance nor substance with European workplace exposure limits in concentration above regulatory thresholds.

Additional information: Product containing mineral oil with less than 3% DMSO extract as measured by IP 346.

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1. Description of first-aid measures

General advice: IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Eye contact: Rinse thoroughly with plenty of water, also under the eyelids.
4.2. Most important symptoms and effects, both acute and delayed

Skin contact
Remove contaminated clothing and shoes. Wash skin with soap and water. Wash contaminated clothing before reuse. High pressure jets may cause skin damage. In this case, the casualty should be sent immediately to hospital.

Inhalation
Move to fresh air.

Ingestion
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Carbon dioxide (CO₂). ABC powder. Foam. Water spray or fog.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special Hazard
Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

5.3. Advice for fire-fighters

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit.

Other information
Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General Information
Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

6.2. Environmental precautions

General Information
Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up
Dam up. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Personal Protective Equipment
See Section 8 for more detail.

Waste treatment
See section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Prevention of fire and explosion
Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment.

Hygiene measures
Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

7.2. Conditions for safe storage, including any incompatibilities

Version EU
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

8.2. Exposure controls

Engineering Measures

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Personal Protective Equipment

General Information

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN 14387). The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

Eye Protection

If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing.

Hand Protection

Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves.
Environmental exposure controls

The product should not be allowed to enter drains, water courses or the soil.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>yellow To amber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical State @20°C</td>
<td>liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °C</td>
<td></td>
<td>Cleveland Open Cup (COC)</td>
</tr>
<tr>
<td></td>
<td>&gt; 392 °F</td>
<td></td>
<td>Cleveland Open Cup (COC)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>860 - 882 kg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td></td>
<td>Insoluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>logPow</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>46 mm²/s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 9.2. Other information

#### 10. STABILITY AND REACTIVITY

#### 10.1. Reactivity

General Information  
No information available.

#### 10.2. Chemical stability

Stability  
Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

No information available.

Remarks  
No information available
Hazardous Reactions
None under normal processing.

10.4. Conditions to Avoid
Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.

10.5. Incompatible Materials
Strong oxidizing agents.

10.6. Hazardous Decomposition Products
None under normal use.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity - Local effects Product Information

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitization</td>
<td>Not classified as a sensitizer.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>This product does not present any known or suspected reproductive hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Not classified. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Not classified.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.</td>
</tr>
</tbody>
</table>

Carcinogenicity
This product is not classified carcinogenic.

Mutagenicity
This product is not classified as mutagenic.

Reproductive toxicity
This product does not present any known or suspected reproductive hazards.

Subchronic toxicity
No information available.

Target Organ Effects (STOT)
Target Organ Effects (STOT)  No information available.

Other adverse effects  Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Not classified.

Acute aquatic toxicity - Product Information  No information available.

Chronic aquatic toxicity - Component Information  No information available.

Effects on terrestrial organisms  No information available.

12.2. Persistence and degradability

General Information  No information available.

12.3. Bioaccumulative potential

Product Information  No information available.

logPow  No information available

Component Information  No information available.

12.4. Mobility in soil

Soil  Given its physical and chemical characteristics, the product generally shows low soil mobility.

Air  Loss by evaporation is limited.
12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- **Waste from Residues / Unused Products**: Should not be released into the environment. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
- **Contaminated packaging**: Empty containers should be taken to an approved waste handling site for recycling or disposal.

**EWC Waste Disposal No.**

The following Waste Codes are only suggestions: 13 01 10. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

14. TRANSPORT INFORMATION

- **ADR/RID**: Not regulated
- **IMDG/IMO**: Not regulated
- **ICAO/IATA**: Not regulated
- **ADN**: Not regulated

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**European Union**
International Inventories

EINECS/ELINCS  -  European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA  -  United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL  -  Canadian Domestic Substances List/Non-Domestic Substances List
ENCS  -  Japan Existing and New Chemical Substances
IECSC  -  China Inventory of Existing Chemical Substances
KECL  -  Korean Existing and Evaluated Chemical Substances
PICCS  -  Philippines Inventory of Chemicals and Chemical Substances
AICS  -  Australian Inventory of Chemical Substances
NZIoC  -  New Zealand Inventory of Chemicals

Legend
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

Further information

15.2. Chemical Safety Assessment

Chemical Safety Assessment  No information available

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3
No information available

Abbreviations, acronyms

Legend  Section 8
+  Sensitizer  *  Skin designation
**  Hazard Designation  C:  Carcinogen
M:  Mutagen  R:  Toxic to reproduction

Revision Date:  2013-02-18
Revision Note  *** Indicates updated section.
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfill his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the safety data sheet