Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
ENI ARNICA (ISO VG 68)

OTHER NAMES
"Product Code: IS2533"

PRODUCT USE
■ Used according to manufacturer's directions.

SUPPLIER
Company: ITALCO (Far East) Pte Ltd
Address:
101 Thomson Road, #14-04 United Square, 307591
Singapore
Telephone: +65 6659 1250
Emergency Tel: +800 24 362 255
Emergency Tel: +61 3 9573 3112
Fax: +65 6659 1251
Email: Info@italco.com.sg

Section 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Not hazardous

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAS RN</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>highly refined mineral oil</td>
<td>Not avail.</td>
<td>&gt;60 balance</td>
</tr>
<tr>
<td>ingredients determined to be non- hazardous</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 4 - FIRST AID MEASURES

SWALLOWED
• Immediately give a glass of water.
• First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE
■ If this product comes in contact with eyes:
• Wash out immediately with water.
• If irritation continues, seek medical attention.
• Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
■ If skin or hair contact occurs:
• Flush skin and hair with running water (and soap if available).
• Seek medical attention in event of irritation.

continued...
INHALED
- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN
- Treat symptomatically.
- Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
- High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.
NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis.

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Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD
- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
  Combustion products include: carbon dioxide (CO2), metal oxides, other pyrolysis products typical of burning organic material. May emit poisonous fumes.
  CARE: Water in contact with hot liquid may cause foaming and a steam explosion with wide scattering of hot oil and possible severe burns. Foaming may cause overflow of containers and may result in possible fire.

FIRE INCOMPATIBILITY
- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

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Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
- Slippery when spilt.
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.

MAJOR SPILLS
- Slippery when spilt.
  Moderate hazard.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
  Personal Protective Equipment advice is contained in Section 8 of the MSDS.
Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
• Avoid all personal contact, including inhalation.
• Wear protective clothing when risk of exposure occurs.
• Use in a well-ventilated area.
• Prevent concentration in hollows and sumps.

SUITABLE CONTAINER
• Metal can or drum
• Packaging as recommended by manufacturer.
• Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY
■ CARE: Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire.
• Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS
• Store in original containers.
• Keep containers securely sealed.
• No smoking, naked lights or ignition sources.
• Store in a cool, dry, well-ventilated area.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

MATERIAL DATA
ENI ARNICA (ISO VG 68):
■ Toxicity and irritation data for petroleum-based mineral oils are related to chemical components and vary as does the composition and source of the original crude.
A small but definite risk of occupational skin cancer occurs in workers exposed to persistent skin contamination by oils over a period of years.
Petroleum oils which are solvent refined/extracted or severely hydrotreated, contain very low concentrations of both.

MINERAL OIL:
■ for mineral oils (excluding metal working fluids), pure, highly and severely refined:
Human exposure to oil mist alone has not been demonstrated to cause health effects except at levels above 5 mg/m³ (this applies to particulates sampled by a method that does not collect vapour). It is not advisable to apply this standard to oils containing unknown concentrations and types of additive.

PERSONAL PROTECTION

RESPIRATOR
• Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE
• Safety glasses with side shields
• Chemical goggles.
• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET
■ The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical 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.
The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

continued...
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

• Wear chemical protective gloves, e.g. PVC.
• Wear safety footwear or safety gumboots, e.g. Rubber.

OTHER

• Overalls.
• P.V.C. apron.
• Barrier cream.
• Skin cleansing cream.

ENGINEERING CONTROLS

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Liquid with a characteristic odour; does not mix with water.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Floats on water.

<table>
<thead>
<tr>
<th>State</th>
<th>Liquid</th>
<th>Molecular Weight</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Range (°C)</td>
<td>- 30 pour pt. (ASTM D 97)</td>
<td>Viscosity</td>
<td>64.0- 71.0 (ASTM D 445) cSt@40°C</td>
</tr>
<tr>
<td>Boiling Range (°C)</td>
<td>Not Available</td>
<td>Solubility in water (g/L)</td>
<td>Immiscible</td>
</tr>
<tr>
<td>Flash Point (°C)</td>
<td>&gt;210 (COC) (ASTM D 92)</td>
<td>pH (1% solution)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Decomposition Temp (°C)</td>
<td>Not Available</td>
<td>pH (as supplied)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Autoignition Temp (°C)</td>
<td>Not Available</td>
<td>Vapour Pressure (kPa)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not Available</td>
<td>Specific Gravity (water=1)</td>
<td>0.870- 0.890 (ASTM D 4052)</td>
</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not Available</td>
<td>Relative Vapour Density (air=1)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Volatile Component (%vol)</td>
<td>Not Available</td>
<td>Evaporation Rate</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

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Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

• Presence of incompatible materials.
• Product is considered stable.
• Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

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Section 11 - TOXICOLOGICAL INFORMATION

Health hazard summary table:

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>STOT- single exposure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>STOT- repeated exposure</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

continued...
Aspiration hazard Not applicable

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.

EYE
■ Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN
■ The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis.
The material is unlikely to produce an irritant dermatitis as described in EC Directives.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ The material may accentuate any pre-existing dermatitis condition.
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED
■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
■ Inhalation hazard is increased at higher temperatures.
■ Not normally a hazard due to non-volatile nature of product.
■ Inhalation of oil droplets or aerosols may cause discomfort and may produce chemical inflammation of the lungs.

CHRONIC HEALTH EFFECTS
■ Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of the feet. Exposure to oil mists can cause asthma, pneumonia and scarring of the lungs. Oils have been linked to cancer of the skin and scrotum. Compounds that are less viscous and with smaller molecular weights are more dangerous. There may be liver damage and the lymph nodes may be affected; heart inflammation can also occur at high doses.

TOXICITY AND IRRITATION
■ Not available. Refer to individual constituents.

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Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
<th>Bioaccumulation</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>mineral oil</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
</tr>
</tbody>
</table>

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Section 13 - DISPOSAL CONSIDERATIONS

■ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
A Hierarchy of Controls seems to be common - the user should investigate:
• Reduction.
• DO NOT allow wash water from cleaning or process equipment to enter drains.
• It may be necessary to collect all wash water for treatment before disposal.
• In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
• Where in doubt contact the responsible authority.
Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

REGULATIONS

Regulations for ingredients

No data for ENI ARNICA (ISO VG 68) (CW: 32-2948)
No data for mineral oil (CAS: Not avail)

Section 16 - OTHER INFORMATION

- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at: www.chemwatch.net/references.

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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