



## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 1: IDENTIFICATION

- 1.1 GHS Product identifier:** UNITED SILVER ARROW INJECTOR CLEANER WITH FM
- Other means of identification:**  
Non-applicable
- 1.2 Recommended use of the chemical and restrictions on use:**  
Relevant uses: Gasoline additive  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Manufacturer's or supplier's details:**  
UNITED OIL COMPANY PTE LTD  
14 Tuas Drive 2, Singapore 638647  
638647 Singapore - Singapore - Singapore  
Phone.: +65 6861 1157 - Fax: +65 6861 3101  
enquiry@united-oil.com  
<http://www.united-oil.com/default.aspx?uc=14>
- 1.4 Emergency phone number:** +65 68611157

### SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**  
**SS 586:Part 2:2014:**  
Classification of this product has been carried out in accordance with SS 586 : Part 2 : 2014  
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411  
Asp. Tox. 1: Aspiration hazard, Category 1, H304  
Flam. Liq. 4: Flammable liquids, Category 4, H227  
Skin Irrit. 2: Skin irritation, Category 2, H315  
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336

**2.2 GHS label elements, including precautionary statements:**

**SS 586:Part 2:2014:**

**Danger**



**Hazard statements:**

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.

Flam. Liq. 4: H227 - Combustible liquid.

Skin Irrit. 2: H315 - Causes skin irritation.

STOT SE 3: H336 - May cause drowsiness or dizziness.

**Precautionary statements:**

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P264: Wash thoroughly after use.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P370+P378: In case of fire: Use ABC powder extinguisher to put it out.

P501: Dispose of contents and / or their container according to the separated collection system used in your municipality.

**Substances that contribute to the classification**

Distillates (petroleum), hydrotreated light; Hydrocarbons, C9, aromatics

**2.3 Other hazards which do not result in classification:**

Non-applicable

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances:**

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Non-applicable

#### 3.2 Mixtures:

**Chemical description:** Mixture based on hydrocarbons and additives

#### Components:

In accordance with SS 586:Part 3:2008 (2014), the product contains:

| Identification      | Chemical name/Classification                                                                                                                                         | Concentration |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| CAS: 64742-47-8     | <b>Distillates (petroleum), hydrotreated light</b><br>Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT SE 3: H336 - Danger  | 75 - <100 %   |
| CAS: 64742-95-6     | <b>Hydrocarbons, C9, aromatics</b><br>Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Flam. Liq. 3: H226; STOT SE 3: H335; STOT SE 3: H336 - Danger                      | 2.5 - <10 %   |
| CAS: Non-applicable | <b>Long-chain alkyl amide</b><br>Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning                                                                                   | 2.5 - <10 %   |
| CAS: 95-63-6        | <b>1,2,4-trimethylbenzene</b><br>Acute Tox. 4: H332; Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT SE 3: H335 - Warning | 1 - <2.5 %    |
| CAS: Non-applicable | <b>Alkaryl polyether</b><br>Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning                                                               | 1 - <2.5 %    |

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

### SECTION 4: FIRST-AID MEASURES

#### 4.1 Description of necessary first-aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

##### By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

##### By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

##### By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

##### By ingestion/aspiration:

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

#### 4.2 Most important symptoms/effects, acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1 Suitable extinguishing media:

##### Suitable extinguishing media:

Combustible liquid. If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>).

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 5: FIRE-FIGHTING MEASURES (continued)

#### **Unsuitable extinguishing media:**

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

#### **5.2 Specific hazards arising from the chemical:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

#### **5.3 Special protective actions for fire-fighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

#### **Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### **6.1 Personal precautions, protective equipment and emergency procedures:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

#### **6.2 Environmental precautions:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

#### **6.3 Methods and materials for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

#### **6.4 Reference to other sections:**

See sections 8 and 13.

### SECTION 7: HANDLING AND STORAGE

#### **7.1 Precautions for safe handling:**

##### **A.- Precautions for safe manipulation**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

##### **B.- Technical recommendations for the prevention of fires and explosions**

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Avoid splashes and pulverizations. Consult section 10 for conditions and materials that should be avoided.

##### **C.- Technical recommendations to prevent ergonomic and toxicological risks**

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

##### **D.- Technical recommendations to prevent environmental risks**

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

#### **7.2 Conditions for safe storage, including any incompatibilities:**

##### **A.- Technical measures for storage**

Minimum Temp.: 5 °C  
Maximum Temp.: 30 °C

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 7: HANDLING AND STORAGE (continued)

Maximum time: 6 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

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

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters/Occupational exposure limits:

Substances whose occupational exposure limits have to be monitored in the workplace:

Workplace Safety and Health (General Provisions) Regulations:

| Identification                          | Occupational exposure limits |          |                       |
|-----------------------------------------|------------------------------|----------|-----------------------|
| 1,2,4-trimethylbenzene<br>CAS: 95-63-6  | PEL (Long Term)              | 25 ppm   | 123 mg/m <sup>3</sup> |
|                                         | PEL (Short Term)             |          |                       |
| Mesitylene<br>CAS: 108-67-8             | PEL (Long Term)              | 25 ppm   | 123 mg/m <sup>3</sup> |
|                                         | PEL (Short Term)             |          |                       |
| 2-ethylhexanol<br>CAS: 104-76-7         | PEL (Long Term)              | 50 ppm   | 266 mg/m <sup>3</sup> |
|                                         | PEL (Short Term)             |          |                       |
| 1,2,3-trimethylbenzene<br>CAS: 526-73-8 | PEL (Long Term)              | 25 ppm   | 123 mg/m <sup>3</sup> |
|                                         | PEL (Short Term)             |          |                       |
| Cumene<br>CAS: 98-82-8                  | PEL (Long Term)              | 50 ppm   | 246 mg/m <sup>3</sup> |
|                                         | PEL (Short Term)             |          |                       |
| 2,2'-iminodiethanol<br>CAS: 111-42-2    | PEL (Long Term)              | 0.46 ppm | 2 mg/m <sup>3</sup>   |
|                                         | PEL (Short Term)             |          |                       |

#### 8.2 Appropriate engineering control measures:

A.- Individual protection measures, such as personal protective equipment (PPE)

As a preventative measure it is recommended to use basic Personal Protection Equipment. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

| Pictogram                                                                                                                     | PPE                               | Remarks                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>Mandatory respiratory tract protection | Filter mask for gases and vapours | Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment. |

C.- Specific protection for the hands

| Pictogram                                                                                                        | PPE                                   | Remarks                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>Mandatory hand protection | Protective gloves against minor risks | Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using chemical protection gloves |

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Ocular and facial protection

| Pictogram                                                                                                        | PPE                                           | Remarks                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <br>Mandatory face protection | Panoramic glasses against splash/projections. | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. |

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

#### E.- Bodily protection

| Pictogram | PPE                  | Remarks                                       |
|-----------|----------------------|-----------------------------------------------|
|           | Work clothing        | Replace before any evidence of deterioration. |
|           | Anti-slip work shoes | Replace before any evidence of deterioration. |

#### F.- Additional emergency measures

| Emergency measure                                                                                     | Standards                                       | Emergency measure                                                                                      | Standards                                      |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <br>Emergency shower | ANSI Z358-1<br>ISO 3864-1:2011, ISO 3864-4:2011 | <br>Eyewash stations | DIN 12 899<br>ISO 3864-1:2011, ISO 3864-4:2011 |

#### Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

For complete information see the product datasheet.

##### Appearance:

|                          |                                                                                         |
|--------------------------|-----------------------------------------------------------------------------------------|
| Physical state at 20 °C: | Liquid                                                                                  |
| Appearance:              | Not available                                                                           |
| Color:                   |  Red |
| Odor:                    | Not available                                                                           |
| Odour threshold:         | Non-applicable *                                                                        |

##### Volatility:

|                                        |                  |
|----------------------------------------|------------------|
| Boiling point at atmospheric pressure: | Non-applicable * |
| Vapour pressure at 40 °C:              | Non-applicable * |
| Vapour pressure at 50 °C:              | Non-applicable * |
| Evaporation rate at 40 °C:             | Non-applicable * |

##### Product description:

|                                              |                         |
|----------------------------------------------|-------------------------|
| Density at 40 °C:                            | 784.3 kg/m <sup>3</sup> |
| Relative density at 40 °C:                   | 0.784                   |
| Dynamic viscosity at 40 °C:                  | Non-applicable *        |
| Kinematic viscosity at 40 °C:                | Non-applicable *        |
| Concentration:                               | Non-applicable *        |
| pH:                                          | Non-applicable *        |
| Vapour density at 40 °C:                     | Non-applicable *        |
| Partition coefficient n-octanol/water 40 °C: | Non-applicable *        |
| Solubility in water at 40 °C:                |                         |
| Solubility properties:                       | Non-applicable *        |
| Decomposition temperature:                   | Non-applicable *        |
| Melting point/freezing point:                | Non-applicable *        |

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

|                            |                  |
|----------------------------|------------------|
| Explosive properties:      | Non-applicable * |
| Oxidising properties:      | Non-applicable * |
| <b>Flammability:</b>       |                  |
| Flash Point:               | ~90 °C           |
| Heat of combustion:        | Non-applicable * |
| Flammability (solid, gas): | Non-applicable * |
| Autoignition temperature:  | Non-applicable * |
| Lower flammability limit:  | Non-applicable * |
| Upper flammability limit:  | Non-applicable * |
| <b>Explosive:</b>          |                  |
| Lower explosive limit:     | Non-applicable * |
| Upper explosive limit:     | Non-applicable * |

#### 9.2 Other information:

|                           |                  |
|---------------------------|------------------|
| Surface tension at 40 °C: | Non-applicable * |
| Refraction index:         | Non-applicable * |

\*Not relevant due to the nature of the product, not providing information property of its hazards.

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

#### 10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

#### 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

#### 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight            | Humidity       |
|--------------------|------------------|-------------------------|---------------------|----------------|
| Not applicable     | Not applicable   | Risk of combustion      | Avoid direct impact | Not applicable |

#### 10.5 Incompatible materials:

| Acids              | Water          | Oxidising materials | Combustible materials | Others                        |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact | Not applicable        | Avoid alkalis or strong bases |

#### 10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

#### Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A- Ingestion (acute effect):

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- B- Inhalation (acute effect):
  - Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
  - Corrosivity/Irritability: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
- C- Contact with the skin and the eyes (acute effect):
  - Contact with the skin: Produces skin inflammation.
  - Contact with the eyes: Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
  - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.  
IARC: Hydrocarbons, C9, aromatics (3); Cumene (2B); Distillates (petroleum), hydrotreated light naphthenic , < 3 % IP 346, < 20.5 cSt @ 40°C (3); Distillates (petroleum), hydrotreated light (3); 2,2'-iminodiethanol (2B)
  - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
  - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- E- Sensitizing effects:
  - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
  - Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- F- Specific target organ toxicity (STOT) - single exposure:
 

Exposure in high concentration can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- G- Specific target organ toxicity (STOT)-repeated exposure:
  - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- H- Aspiration hazard:
 

The consumption of a considerable dose can cause pulmonary damage.

#### Other information:

Non-applicable

#### Specific toxicology information on the substances:

| Identification                                                 | Acute toxicity  |                | Genus  |
|----------------------------------------------------------------|-----------------|----------------|--------|
| Hydrocarbons, C9, aromatics<br>CAS: 64742-95-6                 | LD50 oral       | >5000 mg/kg    |        |
|                                                                | LD50 dermal     | >5000 mg/kg    |        |
|                                                                | LC50 inhalation | >20 mg/L (4 h) |        |
| 1,2,4-trimethylbenzene<br>CAS: 95-63-6                         | LD50 oral       | 3400 mg/kg     | Rat    |
|                                                                | LD50 dermal     | 3160 mg/kg     | Rabbit |
|                                                                | LC50 inhalation | 11 mg/L (4 h)  | Rat    |
| Alkaryl polyether<br>CAS: Non-applicable                       | LD50 oral       | >5000 mg/kg    |        |
|                                                                | LD50 dermal     | 2120 mg/kg     | Rabbit |
|                                                                | LC50 inhalation | Non-applicable |        |
| Distillates (petroleum), hydrotreated light<br>CAS: 64742-47-8 | LD50 oral       | >5000 mg/kg    |        |
|                                                                | LD50 dermal     | >5000 mg/kg    |        |
|                                                                | LC50 inhalation | >20 mg/L (4 h) |        |

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**UNITED SILVER ARROW INJECTOR CLEANER WITH FM**

**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

| Identification                                | Acute toxicity  |                | Genus |
|-----------------------------------------------|-----------------|----------------|-------|
| Long-chain alkyl amide<br>CAS: Non-applicable | LD50 oral       | >5000 mg/kg    |       |
|                                               | LD50 dermal     | >5000 mg/kg    |       |
|                                               | LC50 inhalation | Non-applicable |       |

**Acute Toxicity Estimate (ATE mix):**

| ATE mix    |                                        | Ingredient(s) of unknown toxicity |
|------------|----------------------------------------|-----------------------------------|
| Oral       | >5000 mg/kg (Calculation method)       | Non-applicable                    |
| Dermal     | >5000 mg/kg (Calculation method)       | Non-applicable                    |
| Inhalation | 752.92 mg/L (4 h) (Calculation method) | 0 %                               |

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**

| Identification                                                 | Acute toxicity |                     | Species             | Genus      |
|----------------------------------------------------------------|----------------|---------------------|---------------------|------------|
| Distillates (petroleum), hydrotreated light<br>CAS: 64742-47-8 | LC50           | >1 - 10 mg/L (96 h) |                     | Fish       |
|                                                                | EC50           | >1 - 10 mg/L (48 h) |                     | Crustacean |
|                                                                | EC50           | >1 - 10 mg/L (72 h) |                     | Algae      |
| Hydrocarbons, C9, aromatics<br>CAS: 64742-95-6                 | LC50           | >1 - 10 mg/L (96 h) |                     | Fish       |
|                                                                | EC50           | >1 - 10 mg/L (48 h) |                     | Crustacean |
|                                                                | EC50           | >1 - 10 mg/L (72 h) |                     | Algae      |
| 1,2,4-trimethylbenzene<br>CAS: 95-63-6                         | LC50           | 7.72 mg/L (96 h)    | Pimephales promelas | Fish       |
|                                                                | EC50           | 6.14 mg/L (48 h)    | Daphnia magna       | Crustacean |
|                                                                | EC50           | Non-applicable      |                     |            |
| Alkaryl polyether<br>CAS: Non-applicable                       | LC50           | >1 - 10 mg/L (96 h) |                     | Fish       |
|                                                                | EC50           | >1 - 10 mg/L (48 h) |                     | Crustacean |
|                                                                | EC50           | >1 - 10 mg/L (72 h) |                     | Algae      |

**12.2 Persistence and degradability:**

| Identification                         | Degradability |                | Biodegradability |          |
|----------------------------------------|---------------|----------------|------------------|----------|
| 1,2,4-trimethylbenzene<br>CAS: 95-63-6 | BOD5          | Non-applicable | Concentration    | 100 mg/L |
|                                        | COD           | Non-applicable | Period           | 28 days  |
|                                        | BOD5/COD      | Non-applicable | % Biodegradable  | 18 %     |

**12.3 Bioaccumulative potential:**

| Identification                                                 | Bioaccumulation potential |      |
|----------------------------------------------------------------|---------------------------|------|
| Distillates (petroleum), hydrotreated light<br>CAS: 64742-47-8 | BCF                       | 130  |
|                                                                | Pow Log                   | 3.3  |
|                                                                | Potential                 | High |
| 1,2,4-trimethylbenzene<br>CAS: 95-63-6                         | BCF                       | 154  |
|                                                                | Pow Log                   | 3.78 |
|                                                                | Potential                 | High |

**12.4 Mobility in soil:**

| Identification                         | Absorption/desorption |                      | Volatility |                               |
|----------------------------------------|-----------------------|----------------------|------------|-------------------------------|
| 1,2,4-trimethylbenzene<br>CAS: 95-63-6 | Koc                   | 537                  | Henry      | 624.16 Pa·m <sup>3</sup> /mol |
|                                        | Conclusion            | Low                  | Dry soil   | Yes                           |
|                                        | Surface tension       | 2.919E-2 N/m (25 °C) | Moist soil | Yes                           |

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

**12.6 Other adverse effects:**

Not described

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Disposal methods:

##### Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations. In case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See epigraph 6.2.

##### Regulations related to waste management:

Legislation related to waste management:

Environmental Public Health (Toxic Industrial Waste) Regulations.  
Hazardous Waste (Control of Export, Import and Transit) Act.

### SECTION 14: TRANSPORT INFORMATION

#### Transport of dangerous goods by land:

With regard to SS 586-1 (2014):



- |                                                                                       |                                                                                                                         |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>14.1 UN number:</b>                                                                | UN3082                                                                                                                  |
| <b>14.2 UN proper shipping name:</b>                                                  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Alkaryl polyether; Distillates (petroleum), hydrotreated light) |
| <b>14.3 Transport hazard class(es):</b>                                               | 9                                                                                                                       |
| Labels:                                                                               | 9                                                                                                                       |
| <b>14.4 Packing group, if applicable:</b>                                             | III                                                                                                                     |
| <b>14.5 Environmental hazard:</b>                                                     | Yes                                                                                                                     |
| <b>14.6 Special precautions for user</b>                                              |                                                                                                                         |
| Physico-Chemical properties:                                                          | see section 9                                                                                                           |
| <b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</b> | Non-applicable                                                                                                          |

#### Transport of dangerous goods by sea:

With regard to IMDG 39-18:



- |                                                                                       |                                                                                                                         |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>14.1 UN number:</b>                                                                | UN3082                                                                                                                  |
| <b>14.2 UN proper shipping name:</b>                                                  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Alkaryl polyether; Distillates (petroleum), hydrotreated light) |
| <b>14.3 Transport hazard class(es):</b>                                               | 9                                                                                                                       |
| Labels:                                                                               | 9                                                                                                                       |
| <b>14.4 Packing group, if applicable:</b>                                             | III                                                                                                                     |
| <b>14.5 Marine pollutant:</b>                                                         | Yes                                                                                                                     |
| <b>14.6 Special precautions for user</b>                                              |                                                                                                                         |
| Special regulations:                                                                  | 335, 969, 274                                                                                                           |
| EmS Codes:                                                                            | F-A, S-F                                                                                                                |
| Physico-Chemical properties:                                                          | see section 9                                                                                                           |
| Limited quantities:                                                                   | 5 L                                                                                                                     |
| Segregation group:                                                                    | Non-applicable                                                                                                          |
| <b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</b> | Non-applicable                                                                                                          |

#### Transport of dangerous goods by air:

With regard to IATA/ICAO 2021:

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 14: TRANSPORT INFORMATION (continued)



|                                                                                       |                                                                                                                         |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>14.1 UN number:</b>                                                                | UN3082                                                                                                                  |
| <b>14.2 UN proper shipping name:</b>                                                  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Alkaryl polyether; Distillates (petroleum), hydrotreated light) |
| <b>14.3 Transport hazard class(es):</b>                                               | 9                                                                                                                       |
| Labels:                                                                               | 9                                                                                                                       |
| <b>14.4 Packing group, if applicable:</b>                                             | III                                                                                                                     |
| <b>14.5 Environmental hazard:</b>                                                     | Yes                                                                                                                     |
| <b>14.6 Special precautions for user</b>                                              |                                                                                                                         |
| Physico-Chemical properties:                                                          | see section 9                                                                                                           |
| <b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</b> | Non-applicable                                                                                                          |

### SECTION 15: REGULATORY INFORMATION

#### 15.1 Safety, health and environmental regulations specific for the product in question:

##### Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

##### Other legislation:

Environmental Protection and Management (Hazardous Substances) Regulations.  
Environmental Protection and Management Act.  
Environmental Public Health Act.  
Fire Safety Act.  
Workplace Safety and Health Act.  
Workplace Safety and Health (General Provisions) Regulations.

### SECTION 16: OTHER INFORMATION

#### Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with SS 586Part 3:2008 (2014) - Specification for hazard communication for hazardous chemicals and dangerous goods - Part 3 : Preparation of safety data sheets (SDS).

#### Texts of the legislative phrases mentioned in section 2:

H336: May cause drowsiness or dizziness.  
H411: Toxic to aquatic life with long lasting effects.  
H315: Causes skin irritation.  
H304: May be fatal if swallowed and enters airways.  
H227: Combustible liquid.

#### Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

#### SS 586:Part 2:2014:

Acute Tox. 4: H332 - Harmful if inhaled.  
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.  
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.  
Eye Irrit. 2: H319 - Causes serious eye irritation.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
Skin Irrit. 2: H315 - Causes skin irritation.  
STOT SE 3: H335 - May cause respiratory irritation.  
STOT SE 3: H336 - May cause drowsiness or dizziness.

#### Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

#### Principal bibliographical sources:

<http://www.nea.gov.sg>

#### Abbreviations and acronyms:

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## UNITED SILVER ARROW INJECTOR CLEANER WITH FM

### SECTION 16: OTHER INFORMATION (continued)

IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
CL50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol-water partition coefficient  
Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET