

# MATERIAL SAFETY DATA SHEET

## ERG UFA UNIVERSAL FLUSHING AGENT

**Date of Issue June 2009**

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**2 PRODUCT AND IDENTIFICATION**  
PRODUCT NAME: **ERG UFA Universal Flushing Agent**  
MANUFACTURER CODE: ERG UFA  
**UN Number 1268** **Hazchem Code 3(Y) E**  
Worksafe Classification: Harmful by Worksafe Criteria

**3 COMPOSITION / INFORMATION ON INGREDIENTS**  
GENERIC COMPOSITION: PETROLEUM HYDROCARBONS  
INGREDIENTS CONSIDERED HAZARDOUS TO HEALTH:

Substance Name	Wt %	EU Classification
LIGHT ALIPHATIC PETROLEUM SOLVENT (64742-89-8)	80-90%	F;R11 Xn;R65 Xi;R38 R52/53
TOLUENE (108-88-3)	5-8%	F; R11 Xn; R20
LIGHT FLUSHING OIL	10%	

THIS PRODUCT CONTAINS THE FOLLOWING COMPONENT(S):  
N-HEXANE (110-54-3) 2-4% F;R11 Xn;R48/20  
Notes: EC Symbol(s); F Highly flammable, Xn Harmful, Xi Irritant  
See Section 15 for European Label Information.

**4 HAZARDS IDENTIFICATION**  
EFFECTS OF OVEREXPOSURE:  
Overexposure to n-Hexane may cause effects on the peripheral nerves, resulting in weakness or numbness of lower limbs. Prolonged overexposure may result in damage to the central nervous system. Low viscosity material-if swallowed may enter the lungs and cause lung damage. Skin irritation, respiratory irritation, dizziness, nausea, loss of consciousness. Prolonged, repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

**5 FIRST AID MEASURES**  
EYE CONTACT:  
Flush thoroughly with water. If irritation persists, call a doctor.  
SKIN CONTACT:  
Wash contact areas with water. Remove contaminated clothing. Launder contaminated clothing before re-use.  
INHALATION:  
Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with bag-valve-mask device or use mouth-to-mouth resuscitation.  
INGESTION:  
Seek immediate medical attention. Do not induce vomiting.  
NOTE TO PHYSICIANS:  
Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately.

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### **6 FIRE-FIGHTING MEASURES**

#### **EXTINGUISHING MEDIA:**

Foam, dry chemical, CO<sub>2</sub> and water fog.

#### **SPECIAL FIRE FIGHTING PROCEDURES:**

Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop leak. Water spray may be used to flush Spills away from exposures. Prevent run off from fire control or dilution from entering waterways, sewers or drinking water supply.

#### **SPECIAL PROTECTIVE EQUIPMENT:**

For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

#### **UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTREMELY FLAMMABLE.**

Vapour accumulation could flash and/or explode if in contact with open flame.

Flash Point C (F): -22°(-8°) (ASTM D-56). Flammable limits -LEL 1.0%, UEL 6.0%.

NFPA HAZARD ID: Health: 1, Flammability: 3, Reactivity: 0

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.

### **7 ACCIDENTAL RELEASE MEASURES**

#### **NOTIFICATION PROCEDURES:**

Report spills as required to appropriate authorities such as the local Environmental Health Officer or Fire Brigade. If spills are likely to enter any drain, waterway or ground water, contact the Area Water Authority. In case of accident or road spill, contact the Police and Fire Brigade and, if appropriate, the Area Water Authority.

#### **PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:**

Eliminate all ignition sources. Contain and adsorb on suitable chemical absorbent material, etc. Shovel up and dispose of at an appropriate licensed waste disposal site in accordance with current applicable laws and regulations and product characteristics at time of disposal. Remove leaking containers to detached area.

#### **ENVIRONMENTAL PRECAUTIONS:**

Prevent spills from entering storm sewers or drains and contact with soil.

**PERSONAL PRECAUTIONS: See Section 8**

### **8 HANDLING AND STORAGE**

#### **HANDLING:**

Avoid contact with skin. Avoid inhalation of vapours or mists. Use in well ventilated area away from all ignition sources. Avoid sparking conditions. Ground and bond all transfer equipment.

#### **STORAGE:**

Drums must be grounded and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters. Store away from all ignition sources in a cool area equipped with an automatic sprinkling system. Outside or detached storage preferred. Storage containers should be grounded and bonded.

See Section 15 for Regulatory information when storing this product.

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### **9 EXPOSURE CONTROLS / PERSONAL PROTECTION**

#### VENTILATION:

Use in well ventilated area with local exhaust ventilation. Ventilation required and equipment must be explosion proof. Use away from all ignition sources.

#### RESPIRATORY PROTECTION:

Approved respiratory protective equipment **MUST** be used when vapour or mist concentrations exceed applicable standards.

#### EYE PROTECTION:

Normal industrial eye protection practices should be employed.

#### SKIN PROTECTION:

Impervious gloves should be worn.

#### EXPOSURE LIMITS:

---TWA--- ----STEL--- NOTE

Substance Name (CAS-No.)      Source   ppm   mg/m3   ppm   mg/m3

TOLUENE (108-88-3)              WNES   100   377   N-HEXANE (110-54-3)

n-Hexane                              WNES   50   176

Other Isomers                        WNES   500   1760   1000   3500

WNES = Worksafe Australia National Exposure Standard

NOTE: Limits shown for guidance only. Follow applicable regulations.

PRODUCT EXPOSURE LIMIT: 5.00 5 mg/m3 is suggested for oil mist (NOSHC)

### **10 PHYSICAL AND CHEMICAL PROPERTIES**

Typical physical properties are given below.

PHYSICAL STATE:                      Liquid

COLOUR:                                  Clear / straw

ODOUR:                                    Mild

ODOUR THRESHOLD (ppm):            NE

pH: NA

Boiling Point C (F):                   55°(131°)

Melting Point C (F):                   NA

Flash Point C(F):                      -22°(-8°) (ASTM D-56)

FLAMMABILITY:                        NE

AUTO FLAMMABILITY:                NE

EXPLOSIVE PROPERTIES:              NA

OXIDIZING PROPERTIES:              NA

Vapour Pressure-mm Hg 20 C:        <35.0

VAPOUR DENSITY:                      4.8

EVAPORATION RATE:                    NE

Relative Density, 15/4 C:             0.694

Solubility in Water:                    Negligible

PARTITION COEFFICIENT:              NE

Viscosity at 40° C, cSt:              <7.0

Viscosity at 100° C, cSt:             NE

Pour Point C: NE

FREEZING POINT C(F):                NE

NA = Not Applicable, NE = Not Established, D = Decomposes

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### **11 STABILITY AND REACTIVITY**

**STABILITY** (Thermal, Light, etc.): Stable.  
**CONDITIONS TO AVOID:** Heat, sparks, flame and build up of static electricity.  
**INCOMPATIBILITY** (Materials to Avoid): Strong oxidisers.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide.  
**HAZARDOUS POLYMERISATION:** Will not occur.

### **12 TOXICOLOGICAL DATA**

#### **ACUTE TOXICOLOGY**

**ORAL TOXICITY:** Practically non-toxic (LD50: greater than 2000 mg/kg).

Based on testing of similar products and/or the components.

**DERMAL TOXICITY:** Practically non-toxic (LD50: greater than 2000 mg/kg).

Based on testing of similar products and/or the components.

**INHALATION TOXICITY:** Harmful Based on testing of similar products and/or the components.

**EYE IRRITATION:** Practically non-irritating.

(Draize score: greater than 6, but 15 or less). Based on testing of similar products and/or the components.

**SKIN IRRITATION:** Irritant. (Primary Irritation Index: 3 or greater, but less than 5). Based on testing of similar products and/or the components.

#### **GENETIC TOXICOLOGY (SUMMARY)**

Overall negative in a series of assays on similar materials.

#### **NEUROTOXICOLOGY (SUMMARY)**

This material contains n-Hexane which has been reported to cause peripheral neuropathy.

#### **REPRODUCTIVE TOXICOLOGY (SUMMARY)**

No adverse effects in teratogenic studies with similar materials at 400 ppm.

#### **CHRONIC TOXICOLOGY (SUMMARY)**

Chronic inhalation studies with rats exposed to chemicals, which may be components of this solvent, resulted in kidney tumours in male rats only. These effects are not considered relevant to humans. Certain straight run middle distillates have been found to produce skin tumours in laboratory studies, but these have usually been associated with a high level of irritation. Tests determined that the irritation produced the tumours.

Therefore, if precautions outlined in this bulletin are followed to minimise repeated or prolonged skin contact which could cause irritation, these oils should pose no carcinogenic hazard to humans. Prolonged, repeated skin contact with low viscosity materials may de fat the skin resulting in possible irritation and dermatitis.

### **13 ECOLOGICAL INFORMATION**

**ENVIRONMENTAL FATE AND EFFECTS:** Not established.

### **14 DISPOSAL CONSIDERATIONS**

#### **WASTE DISPOSAL:**

The product is suitable for processing by an approved recycling facility or can be disposed of at any licensed waste disposal site. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

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#### **15 TRANSPORT INFORMATION**

AUSTRALIAN ACTDG:

Shipping Name: Petroleum Distillates, N.O.S.  
(Contains LIGHT ALIPHATIC PETROLEUM SOLVENT & TOLUENE)

UN Number: 1268  
HAZCHEM Code: 3(Y)E  
IMO:  
HAZARD CLASS & DIV: 3.1  
PACKING GROUP: PG II  
LABEL(s): Flammable Liquid  
MARPOL III STATUS: NA  
ICAO/IATA  
SUBSIDIARY RISK: NA

#### **16 REGULATORY INFORMATION**

Governmental Inventory Status: All components comply with European EINECS/ELINCS, US TSCA and Australian AICS.

Australian Classifications:

UN Number: 1268  
HAZCHEM Code: 3(Y)E  
Dangerous Goods Class/Subsidiary Risk: 3  
Packaging Group: PG II  
AS 1940 Class: PGII  
Poisons Schedule: S5

EC Labelling:

Symbol: F Xn Highly flammable, Harmful.

Risk Phrase(s): R11-48/20-65-38.

Highly flammable. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Harmful: may cause lung damage if swallowed. Irritating to skin.

Safety Phrase(s): S9-16-24/25-51-62.

Keep container in a well ventilated place. Keep away from sources of ignition - No Smoking.

Avoid contact with skin and eyes. Use only in well ventilated areas.

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Contains: Low Boiling Point Naphtha; n-Hexane.

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
TOLUENE	108-88-3	6
N-HEXANE (Component analysis)	110-54-3	6
LIGHT ALIPHATIC PETROLEUM SOLVENT	64742-89-8	6

REGULATORY LISTS SEARCHED

1=IARC 1 2=IARC 2A 3=IARC 2B 4=NTP CARC 5=NTP SUS

6=ACGIH 7=ACGIH CARC 8=ACGIH SUS

CARC=CARCINOGEN; SUS=SUSPECTED CARCINOGEN; TERAT=TERATOGENIC

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**17 OTHER INFORMATION**

**USE: SOLVENT**

**NOTE: ERG PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.**

This MSDS meets Worksafe Australia accepted format requirements.

**SYNONYM TRADE NAMES: ERG - UFA**

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control. All risks of use of the are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

Date of last Review June 2009