**SAFETY DATA SHEET - ADOSTRIKE**

## *1. Product Identifier*

Product name: ADOSTRIKE
REACH Registration Number:

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

**Identified uses** Industrial uses / professional uses – construction formwork chemical release agent

**Uses advised against** Any other use than described above.

**1.3 Details of supplier of safety data sheet**

Company name: **Adomast Manufacturing Ltd**
**Engine Lane,**
**Shafton,**
**Barnsley, S72 8SP**
**Tel**: **01226 707863 fax 01226 718051**

**1.4 Emergency Contact Number**
**01226 707863** between 08:00 and 17:00 Monday to Friday
**07887 416399** any other time

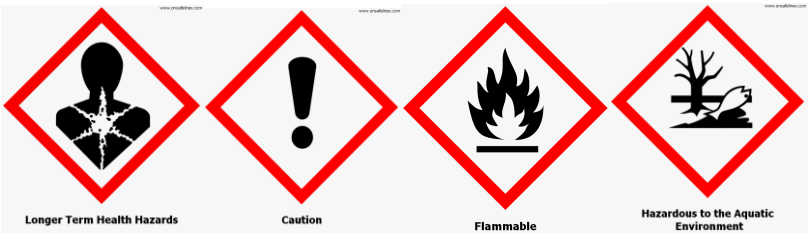
## *2. HAZARDS IDENTIFICATION*

**2.1 Classification of the substance or mixture**

**CLP Classification**
**CLP Classification (EC No 1272/2008):**
**H226 – Flammable liquids – Category 3**
**H315 – Skin corrosion/irritation – Category 2**
**H304 – Aspiration Hazard – Category 1**
**H336 – Specific target organ toxicity (single exposure) – Category 3**
**H411 – Hazardous to the aquatic environment, chronic toxicity – Category 2**

**Superseded DSD Classification (67/548/EEC and 1999/45/EC):**
**R10, Xi; R38, Xn; R65, R67, N; R51/53**

| | |
|---|---|
| Physical and Chemical Hazards | Flammable liquids Category 3 - H226 |
| Human health | May be fatal if swallowed & enters airways - H304,<br>Causes Skin Irritation - H315,<br>May cause drowsiness or dizziness - H336<br>Causes serious eye irritation – H319 |
| Environment | Aquatic Chronic 2 – H411 |




Signal word: Danger

**3. COMPOSITION / INFORMATION ON INGREDIENTS**
Hazardous ingredients: KEROSENE (PETROLEUM) 20-35%
EINECS: 232-366-4 CAS: 8008-20-6

H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H336: May cause drowsiness or dizziness.
H411: Toxic to aquatic life with long lasting effects.

P102: Keep out of reach of children.
P210: Keep away from heat/sparks/open flames/hot surfaces/ No smoking.
P280: Wear protective gloves / protective clothing / eye protection / face protection.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P331: Do NOT induce vomiting.
P501: Dispose of contents/container to approved disposal facility.

**Other Hazards:**
Does not meet the criteria for persistent, bio-accumulative and toxic (PBT) or very persistent, very bio-accumulative (vPvB) substances.

**4. FIRST AID MEASURES (SYMPTOMS)**
**4.1 Description of first aid measures**:
**Eye Contact**: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.
**Skin Contact:** Remove contaminated shoes and clothing and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before re-use.
**Inhalation (Breathing):** If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.
**Ingestion (Swallowing):** Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If the victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**4.2 Most important symptoms and effects**:
Acute: Minor respiratory irritation at high vapour concentrations.
Delayed: Dry skin and possible irritation with repeated or prolonged exposure.
4**.3 Indication of immediate medical attention and special treatment needed:**
Other comments: None

**5. FIRE-FIGHTING MEASURES**

**5.1 Extinguishing media**: Dry chemical, carbon dioxide or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Water may be ineffective for extinguishment unless used under favourable conditions by experienced fire-fighters.

**5.2 Special hazards arising from the substance or mixture:**
**Unusual fire & explosion hazards: Flammable**. This material can be ignited by heat, sparks, flames or other sources of ignition (eg static electricity, pilot lights, mechanical/electrical equipment and electronic devices such as cell phones, computers, calculators and pagers which have not been certified as intrinsically safe). Vapours may travel considerable distances to a source of ignition where they can ignite, flash back or explode. The material may create vapour/air explosion hazards indoors, in confined spaces, outdoors or in sewers. This product will float and can be re-ignited on surface water.


**Engine Lane, Shafton, Barnsley, S72 8SP Tel**: **01226 707863**
**Fax: 01226 718051 www.adomast.co.uk**

Vapours are heavier than air and can accumulate in low areas. If the container is not properly cooled, it can rupture in the heat of a fire.
**Hazardous combustion products:** Combustion may yield smoke, carbon monoxide and other products of incomplete combustion. Oxides of nitrogen and sulphur may also be formed.

**5.3 Special protective actions for fire-fighters**: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorised personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapours and to protect personnel. Avoid spreading burning liquid with water used for cooling purposes. Cool equipment exposed to fire with water, if it can be done safely.

**See Section 9. for Flammable Properties including Flash Point and Flammable (Explosive) Limits**

**6. ACCIDENTAL RELEASE MEASURES**
**6.1 Personal precautions, protective equipment and emergency procedure**s: Flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons downwind of the spill/release, isolate immediate hazard area and keep unauthorised personnel out. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).
See Sections 3 and 7 for additional information on hazards and precautionary measures.

**6.2 Environmental precautions**: Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorised drainage systems and natural waterways. Use foam on spills to minimise vapours. Use water sparingly to minimise environmental contamination and to reduce disposal requirements. If spill occurs on water, notify appropriate authorities and advise shipping of any hazard.
**6.3 Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate clean-up of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite and place in suitable container for disposal. If spilled on water, remove with appropriate methods (eg skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.
Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions and regulations may influence or limit the choice of appropriate actions to be taken

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling:** Take precautionary measures against static discharge. Non-sparking tools should be used. Keep away from ignition sources such as heat/sparks/open flame – No Smoking. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment. Wear protective gloves.

Flammable. May vapourise easily at ambient temperatures. The vapour is heavier than air and may create an explosive mixture of vapour and air. Beware of accumulation in confined spaces and low-lying areas. Open container slowly to relieve any pressure. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes for specific bonding/grounding requirements). Do not enter confined spaces such as tanks or pits without following proper entry procedures. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.
The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of incomplete combustion products (eg carbon monoxide, oxides of sulphur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels.

**7.2 Conditions for safe storage, including any incompatibles:** Keep container(s) tightly closed and properly labelled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame". Keep away from any incompatible material (see Section 10.) Protect container(s) against physical damage. "Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged and promptly shipped to the supplier or a drum re-conditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to appropriate guidance pertaining to cleaning, repairing, welding or other contemplated operations. Outdoor or detached storage is preferred. Indoor storage should meet Country or Committee standards and appropriate fire codes.

**7.3 Specific end use(s): Refer to supplemental exposure scenarios if attached.**

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**8.1 Control parameters:**

Occupational Exposure Limits:
Component: Kerosene ..C9-16 US-ACGIH: TWA: 200 mg/m3 Skin
UK-EH40: None Other: None (STEL = Short Term Exposure Limit (15 minutes); TWA = Time Weighted Average (8 hours);
None = No Occupational Exposure Limit.)
Biological Limit Values: Component: Kerosene ..C9-16 US-ACGIH: None
EU 98/24/EC: None UK-EH40: None
(None = No Biological Limit Value)
Relevant DNEL and PNEC: Pending


**Engine Lane, Shafton, Barnsley, S72 8SP Tel: 01226 707863**
**Fax: 01226 718051 www.adomast.co.uk**

**8.2 Exposure controls**:
Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.
Eye/Face Protection: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation or injury. Depending on conditions of use, a face shield may be necessary.

Skin/Hand Protection: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products.
Respiratory Protection: Where there is potential for airborne exposure above the exposure limit, an approved air purifying respirator equipped with Type A, organic gases and vapour filters (as specified by the manufacturer) may be used.
A respiratory protection programme that follows recommendations for the selection, use, care and maintenance of respiratory protective devices in EN 529:2005 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, orunder conditions that are immediately dangerous to life and health.
Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before re-use.
Environmental Exposure Controls: Refer to Sections 6, 7, 12 and 13.
Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment.
Specific situations may require consultation with industrial hygiene, safety or engineering professionals.

**9. PHYSICAL AND CHEMICAL PROPERTIES**
**Initial Boiling Point/Range: 140-300°C**
**Flash Point: >38°C**
**Evaporation Rate (nBuAc=1): N/D**
**Flammability (solid, gas): Flammable**
**Upper Explosive Limits (vol % in air): 6.0**
**Lower Explosive Limits (vol % in air): 0.5**
**Vapour Pressure: 3 kPa @ 20°C**
**Relative Vapour Density (air=1): >1**
**Relative Density (water=1): 0.77-0.82 @ 15°C**
**Solubility (ies): Solubility in water: Negligible @ 20°C**
**Partition Coefficient (n-octanol/water) (Kow): N/D**
**Auto-ignition Temperature: 250°C**
**Decomposition Temperature: N/D**
**Viscosity: 1.3-2.9 mm2/s @ 20°C**
**Explosive Properties: N/A**
**Oxidising Properties: N/A**

**10. STABILITY AND REACTIVITY**
**10.1 Reactivity:** Not chemically reactive.
**10.2 Chemical stability:** Stable under normal ambient and anticipated conditions of use.
**10.3 Possibility of hazardous reactions:** Hazardous reactions not anticipated.
**10.4 Conditions to avoid:** Avoid high temperatures and all sources of ignition. Prevent vapour **accumulation.**
**10.5 Incompatible materials**: Avoid contact with strong oxidising agents and strong reducing agents.
**10.6 Hazardous decomposition products:** Not anticipated under normal conditions of use.

**11. TOXICOLOGICAL INFORMATION**
**11.1 Information on Toxicological Effects of Substance/Mixture:**
Acute Toxicity Hazard Additional Information LC50/LD50 Data
Inhalation Unlikely to be harmful - >5.2 mg/L (mist)
Skin absorption Unlikely to be harmful - >2 g/kg
Ingestion (swallowing) Unlikely to be harmful - >5 g/kg
Aspiration Hazard: May be fatal if swallowed and enters airways.
Skin Corrosion/Irritation: Causes skin irritation. Repeated exposure may cause skin dryness or cracking.
Serious Eye Damage/Irritation:Causes mild eye irritation.
Signs and Symptoms: While significant vapour concentrations are not likely, high concentrations can cause minor respiratory irritation, headache, drowsiness, dizziness, loss of co-ordination, disorientation and fatigue. Ingestion can cause irritation of the digestive tract, nausea, diarrhoea and vomiting.

Skin Sensitisation: Not expected to be a skin sensitiser.
Respiratory Sensitisation: No information available.
Specific Target Organ Toxicity (Single Exposure): May cause drowsiness and dizziness.
Specific Target Organ Toxicity (Repeated Exposure): Not expected to cause organ defects from repeated exposure.
Carcinogenicity: Not expected to cause cancer. Petroleum middle distillates have been shown to cause skin tumours in mice following repeated and prolonged skin contact. Follow-up studies have shown that these tumours are produced through a non-genotoxic mechanism associated with frequent cell damage and repair and that they are not likely to cause tumours in the absence of prolonged skin irritation. Middle distillates with low polynuclear aromatic hydrocarbon content have not been identified as a carcinogen by IARC.
Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.
Reproductive Toxicity: Not expected to cause reproductive toxicity

**12. ECOLOGICAL INFORMATION**
**12.1 Toxicity**: Acute aquatic toxicity studies on samples of jet fuel and kerosene streams show acute toxicity values greater than 1 mg/L and mostly in the range 1-100 mg/L. These tests were carried out on water accommodated fractions in closed systems to prevent evaporative loss. Results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon composition. Kerosenes should be regarded as toxic to aquatic organisms with the potential to

cause long term adverse effects in the aquatic environment. Classification: H411; Chronic Cat 2.

**12.2 Persistence and Degradability:**

The hydrocarbons in this material are not readily biodegradable but are regarded as inherently biodegradable since their hydrocarbon components can be degraded by micro-organisms.
Persistence per IOPC Fund definition: Non-Persistent

**12.3 Bioaccumulative Potential:**

Hydrocarbon constituents of kerosene show measured or predicted Log Kow values ranging from 3 to 6 and above and therefore would be regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bio-concentration.

**12.4 Mobility in Soil and Environmental Fate:**

On release to water, hydrocarbons will float on the surface and, since they are sparingly soluble, the only significant loss is volatilization to air. It is possible that some of the higher molecular weight hydrocarbons will be adsorbed on sediment. Biodegradation in water is a minor loss process. In air, these hydrocarbons are photodegraded by reaction with hydroxyl radicals with half lives varying from 0.1 to 0.7 days.

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

Not a PBT or vPvB substance.

**12.6 Other Adverse Effects: None anticipated.**

## 13. DISPOSAL CONSIDERATIONS

**13.1 Waste Treatment Methods**

European Waste Code: 13 07 03 other fuels (including mixtures).
This material, if discarded as produced, would be considered as hazardous waste pursuant to Directive 91/689/EEC on hazardous waste, and subject to the provisions of that Directive unless Article 1(5) of that Directive applies. This code has been assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use.
Waste generators/producers are responsible for assessing the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code.
Disposal must be in accordance with Directive 2006/12/EC and other applicable national or regional provisions and based upon material characteristics at time of disposal.
For incineration of waste, follow Directive 2000/76/EC.
For landfill of waste, follow Directive 1999/31/EC.
Empty Containers: Container contents should be completely used and containers emptied prior to discard. Empty drums should be properly sealed and promptly returned to a drum re-conditioner. All containers should be disposed of in an environmentally safe manner and in accordance with applicable regulations.

## 14. TRANSPORT INFORMATION

**14.1 UN Number: UN1223**
**14.2 UN proper shipping name: KEROSENE**
**14.3 Transport hazard class(es): 3**
**14.4 Packing group: III**
**14.5 Environmental hazards: Marine pollutant**
**14.6 Special precautions for user: If transported in bulk by marine vessels in international waters, product**

**is being carried under the scope of MARPOL Annex I.**
**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not Applicable

## 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture.
EC 1272/2008 - Classification, labeling and packaging of substances and mixtures.
EN 166:2002 - Eye protection.
EN 529:2005 - Respiratory protective devices.
BS EN 374-1:2003 Protective gloves against chemicals and micro-organisms.
Workplace Exposure Limits, EH40/2005 - Control of substances hazardous to health.
Directive 91/689/EEC on hazardous waste (European Waste Codes).
Directive 2000/76/EC on incineration of waste.
Directive 1999/31/EC on landfill of waste.
Export Rating: NLR (No licence required).

## 16. OTHER INFORMATION

List of relevant hazard statements:
H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H336: May cause drowsiness or dizziness.
H411: Toxic to aquatic life with long lasting effects.
R10: Flammable.
R38: Irritating to skin.
R65: Harmful: may cause lung damage if swallowed.
R67: Vapours may cause drowsiness and dizziness.
R51/53: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
Guide to Abbreviations:
ACGIH: American Conference of Governmental Industrial Hygienists.
ADR: Agreement on Dangerous Goods by Road.
BMGV: Biological Monitoring Guidance Value.
CASRN: Chemical Abstracts Service Registry Number.
CEILING: Ceiling Limit (15 minutes).
EINECS: European Inventory of Existing Commercial Chemical Substances.
EPA: [US] Environmental Protection Agency.
TRGS: [Germany] Technical Rules for Dangerous Substances.
IARC: International Agency for Research on Cancer.
ICAO/IATA: International Civil Aviation Organisation / International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
Ireland-HSA: Ireland's National Health & Safety Authority.
LEL: Lower Explosive Limit.
N/A: Not Applicable.
N/D: Not Determined.
NTP: [US] National Toxicological Program.


**Engine Lane, Shafton, Barnsley, S72 8SP Tel: 01226 707863**
**Fax: 01226 718051 www.adomast.co.uk**

PBT: Persistent, Bio-accumulative and Toxic.
RID: Regulations concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure Limit (15 minutes).
TLV: Threshold Limit Value.
TWA: Time Weighted Average (8 hours).
UEL: Upper Explosive Limit.
UK-EH40: United Kingdom EH40/2005 Workplace Exposure Limits.
vPvB: very Persistent, very Bio-accumulative.

This safety data sheet serves to complete but not to replace the technical product sheets. The Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.