



## SAFETY DATA SHEET

### Torlon AI-10LM

#### 1. Identification

##### Product identifier

**Product name** Torlon AI-10LM

**Chemical name** Polyamide-imide(PAI)

**Product number** TORL-AI-10LM-70KG

##### Recommended use of the chemical and restrictions on use

**Application** Industrial use.

**Uses advised against** This product is designed for use by technically competent persons. Any use of this product, other than for its stated use, should not be attempted without expert review.

##### Details of the supplier of the safety data sheet

**Supplier** Kurt J Lesker Company

**Manufacturer** Kurt J Lesker Company  
1925 Route 51  
Jefferson Hills, PA 15025  
+1 412-387-9200

Kurt J Lesker Company LTD  
United Kingdom  
Austin House  
Sidney Little Road  
Churchfields Industrial Estate  
St Leonards on Sea, East Sussex, TN38 9PU, United Kingdom  
Customer Service: +44 (0) 1424 458100  
msds@lesker.com

##### Emergency telephone number

**Emergency telephone** Emergency Numbers  
North America [USA, Canada, Mexico]: 1-866-519-4752  
Mainland China: (+86) 4001 2001 74  
Europe: {int'l call prefix}-1-760-476-3961  
Asia Pacific: {int'l call prefix}-1-760-476-3960  
Middle East & Africa: {int'l call prefix}-1-760-476-3959  
South Korea: +080-880-0455  
Philippines: (+63) 2 83953471

#### 2. Hazard(s) identification

##### Classification of the substance or mixture

**Physical hazards** Combustible Dust - USH01

**Health hazards** Repr. 1B - H360

**Environmental hazards** Not Classified

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## Label elements

### Hazard symbols



<b>Signal word</b>	Danger
<b>Hazard statements</b>	USH01 May form combustible dust concentrations in air. H360 May damage fertility or the unborn child.
<b>Precautionary statements</b>	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P308+P313 If exposed or concerned: Get medical advice/ attention. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.
<b>Contains</b>	2-Pyrrolidinone, 1-methyl

## 3. Composition/information on ingredients

### Mixtures

Poly(amide-imide) polymer CAS number: —	<b>95%</b>
2-Pyrrolidinone, 1-methyl CAS number: 872-50-4	<b>5.0%</b>

## 4. First-aid measures

### Description of first aid measures

<b>General information</b>	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel. Get medical attention if a large quantity has been ingested.
<b>Skin Contact</b>	Wash skin thoroughly with soap and water or use an approved skin cleanser. Wash contaminated clothing before reuse. Cool skin rapidly with cold water after contact with hot polymer. Do not peel polymer from the skin. Get medical attention.
<b>Eye contact</b>	Rinse with water. Continue to rinse for at least 15 minutes and get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

### Most important symptoms and effects, both acute and delayed

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	No specific symptoms known.
<b>Ingestion</b>	No specific symptoms known.

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**Skin contact** Prolonged contact may cause dryness of the skin. Contains components which may penetrate the skin. May cause defatting of the skin but is not an irritant. Mild dermatitis, allergic skin rash.

**Eye contact** No specific symptoms known. May be slightly irritating to eyes.

### 5. Fire-fighting measures

#### Extinguishing media

**Suitable extinguishing media** The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

#### Special hazards arising from the substance or mixture

**Specific hazards** Combustible Material In a fire, the polymer melts, producing droplets which may propagate fire. Heating may cause a fire or explosion.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO). Toxic gases or vapors.

#### Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk.

#### Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

#### Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13. Avoid generation and spreading of dust. Avoid spreading dust or contaminated materials.

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

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**Usage precautions** Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. May damage fertility. May damage the unborn child. Pregnant or breastfeeding women should not work with this product if there is any risk of exposure. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. Static electricity and formation of sparks must be prevented. Ground/bond container and receiving equipment.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage precautions** Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Avoid dust formation. Do not store near heat sources or expose to high temperatures.

**Storage class** Chemical storage.

## 8. Exposure controls/Personal protection

### Exposure controls

#### Protective equipment



**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection** Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Dust-resistant, chemical splash goggles. Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated.

**Hand protection** Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

**Other skin and body protection** Wear appropriate clothing to prevent any possibility of skin contact.

**Hygiene measures** Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

**Respiratory protection** Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

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**Environmental exposure controls** Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Solid. Powder.
<b>Color</b>	Yellow.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	No specific test data are available.
<b>pH</b>	Not applicable.
<b>Melting point</b>	280°C/536°F
<b>Initial boiling point and range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	May form combustible dust concentrations in air.
<b>Upper/lower flammability or explosive limits</b>	Dust may form explosive mixture with air.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Bulk density</b>	Not available.
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition Temperature</b>	Not available. 500°C/932°F
<b>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	No specific test data are available.
<b>Oxidizing properties</b>	No specific test data are available.
<b>Molecular weight</b>	Not available.

### 10. Stability and reactivity

<b>Reactivity</b>	No test data specifically related to reactivity available for this product or its ingredients.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	No potentially hazardous reactions known. Will not polymerize.

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<b>Conditions to avoid</b>	Avoid generation and spreading of dust. Avoid heat, flames and other sources of ignition.
<b>Materials to avoid</b>	No data available.
<b>Hazardous decomposition products</b>	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors. Carbon dioxide (CO <sub>2</sub> ). Nitrous gases (NO <sub>x</sub> ).

### 11. Toxicological information

#### Information on toxicological effects

<b>Toxicological effects</b>	This product has low toxicity.
<b><u>Acute toxicity - oral</u></b>	
<b>Summary</b>	This product has low toxicity.
<b>Notes (oral LD<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b><u>Acute toxicity - dermal</u></b>	
<b>Summary</b>	May be slightly irritating to skin and eyes.
<b>Notes (dermal LD<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	
<b>Summary</b>	Irritating to eyes.
<b>Serious eye damage/irritation</b>	Based on available data the classification criteria are not met.
<b><u>Respiratory sensitization</u></b>	
<b>Summary</b>	Not sensitizing.
<b>Respiratory sensitization</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitization</u></b>	
<b>Summary</b>	Not sensitizing.
<b>Skin sensitization</b>	Based on available data the classification criteria are not met.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Summary</b>	A4 = Not Classifiable as a Human Carcinogen.
<b>Carcinogenicity</b>	Based on available data the classification criteria are not met.
<b>IARC carcinogenicity</b>	Not listed.
<b>NTP carcinogenicity</b>	Not listed.
<b>OSHA Carcinogenicity</b>	Not listed.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	May damage fertility.
<b>Reproductive toxicity - development</b>	May damage the unborn child.

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### Specific target organ toxicity - single exposure

**STOT - single exposure** A single exposure may cause the following adverse effects: Chronic inflammation of nose, throat and bronchial tubes. Defatting, drying and cracking of skin.

**Target organs** Respiratory tract Skin Gastro-intestinal tract, liver, immune system

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Not classified as a specific target organ toxicant after repeated exposure.

**Target organs** No specific target organs known.

### Aspiration hazard

**Aspiration hazard** Not relevant. Solid.

### **General information**

Avoid contact during pregnancy/while nursing. May damage fertility. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation** No specific symptoms known.

**Ingestion** No specific symptoms known.

**Skin Contact** Prolonged contact may cause dryness of the skin.

**Eye contact** No specific symptoms known.

**Route of exposure** Ingestion Inhalation Skin and/or eye contact

**Target Organs** No specific target organs known.

## 12. Ecological information

**Ecotoxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

**Toxicity** Based on available data the classification criteria are not met.

### Acute aquatic toxicity

**Summary** Not considered toxic to fish.

**Acute toxicity - fish** LC<sub>50</sub>, 96 hour: >500 mg/l, Oncorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 24 hour: >1000 mg/l, Daphnia magna, Freshwater invertebrates, Marinewater invertebrates

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hour: 600.5 mg/l, Desmodemus subspicatus

**Acute toxicity - microorganisms** Not available.

**Acute toxicity - terrestrial** LC<sub>50</sub>, 5 days: >74.81 mg/kg, Anas Platyrhynchos (Mallard duck)

### Chronic aquatic toxicity

**Summary** No specific test data are available.

### Persistence and degradability

**Persistence and degradability** Rapidly degradable

**Biodegradation** Rapidly degradable

### Bioaccumulative potential

**Bio-Accumulative Potential** The product is not bioaccumulating.

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**Partition coefficient** Not applicable.

### Mobility in soil

**Mobility** No data available.

**Adsorption/desorption coefficient** Not available.

### Other adverse effects

**Other adverse effects** None known.

## 13. Disposal considerations

### Waste treatment methods

**General information** The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal methods** Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

## 14. Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

**Road transport notes** Not regulated.

**Rail transport notes** Not regulated.

**Sea transport notes** Not regulated.

**Air transport notes** Not regulated.

**DOT transport notes** Not regulated.

### UN Number

**UN No. (International)** Not applicable.

**UN No. (DOT)** Not applicable.

### UN proper shipping name

**Proper shipping name (International)** Not applicable.

**Proper shipping name (DOT)** Not applicable.

### Transport hazard class(es)

**Transport Labels (International)** No transport warning sign required.

**DOT transport labels** No transport warning sign required.

### Packing group



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**Packing group (International)** Not applicable.

**DOT packing group** Not applicable.

### Environmental hazards

#### **Environmentally Hazardous Substance**

No.

### Special precautions for user

Not applicable.

**DOT reportable quantity** Not applicable.

**DOT TIH Zone** Not applicable.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

### US Federal Regulations

#### **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

Present.

Some of the ingredients are listed or exempt.

#### **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

None of the ingredients are listed or exempt.

#### **SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None of the ingredients are listed or exempt.

#### **SARA 313 Emission Reporting**

Not listed.

#### **CAA Accidental Release Prevention**

None of the ingredients are listed or exempt.

#### **FDA - Essential Chemical**

None of the ingredients are listed or exempt.

#### **FDA - Precursor Chemical**

None of the ingredients are listed or exempt.

#### **SARA (311/312) Hazard Categories**

Combustible Dust

Reproductive toxicity

#### **OSHA Highly Hazardous Chemicals**

None of the ingredients are listed or exempt.

### US State Regulations

#### **California Proposition 65 Carcinogens and Reproductive Toxins**

WARNING

This product can expose you to 2-Pyrrolidinone, 1-methyl, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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### California Proposition 65 Labelling



#### WARNING

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#### California Air Toxics "Hot Spots" (A-I)

None of the ingredients are listed or exempt.

#### California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed or exempt.

#### California Directors List of Hazardous Substances

None of the ingredients are listed or exempt.

### Label Prop 65 data

#### Inventories

##### EU - EINECS/ELINCS

All the ingredients are listed or exempt.

##### Canada - DSL/NDSL

All the ingredients are listed or exempt.

##### US - TSCA

All the ingredients are listed or exempt.

##### US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

##### Australia - AICS

All the ingredients are listed or exempt.

##### Japan - ENCS

Some of the ingredients are listed or exempt.

##### Korea - KECI

All the ingredients are listed or exempt.

##### China - IECSC

All the ingredients are listed or exempt.

##### Philippines - PICCS

Not determined.

### 16. Other information

<b>Training advice</b>	Only trained personnel should use this material.
<b>Revision comments</b>	NOTE: Lines within the margin indicate significant changes from the previous revision.
<b>Issued by</b>	HS&E Manager.
<b>Revision date</b>	7/1/2022
<b>Revision</b>	11

## Torlon AI-10LM

<b>Supersedes date</b>	6/22/2022
<b>SDS No.</b>	5979
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H360 May damage fertility or the unborn child. USH01 May form combustible dust concentrations in air.
<b>End of SDS</b>	_____

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.