



SAFETY DATA SHEET

Torlon 4000 TF

1. Identification

Product identifier

Product name Torlon 4000 TF

Chemical name PAI

Product number TORL-4000TF-20KG

Recommended use of the chemical and restrictions on use

Application Plastics Industry

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 Not Classified

Environmental hazards Not Classified

Label elements

Signal word Warning

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Hazard statements USH01 May form combustible dust concentrations in air.

3. Composition/information on ingredients

Mixtures

Poly(amide-imide) polymer	100%
CAS number: —	

Composition comments No classified ingredients, or those having occupational exposure limits, present above the levels of disclosure.

Ingredient notes Non-classified vPvB substance.

4. First-aid measures

Description of first aid measures

General information Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation 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.

Ingestion Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

Skin Contact 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.

Eye contact Rinse with water. Continue to rinse for at least 15 minutes and get medical attention.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information 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. 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. Causes eye irritation.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

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

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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 ₂). Carbon monoxide (CO). Toxic gases or vapors.
<u>Advice for firefighters</u>	
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. Contact with hot product can cause serious thermal burns. For personal protection, see Section 8.
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Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.
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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.
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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.
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7. Handling and storage

Precautions for safe handling

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. 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. Avoid generation and spreading of dust. Avoid inhalation of vapors and contact with skin and eyes. Avoid release to the environment. Ground container and transfer equipment to eliminate sparks from static electricity. In case of insufficient ventilation, wear suitable respiratory equipment.
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Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.
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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.
<u>Specific end uses(s)</u>	
Specific end use(s)	The identified uses for this product are detailed in Section 1.

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.

Thermal hazards

If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures.

Environmental exposure controls

Keep container tightly sealed when not in use.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid. Powder.
Color	Yellow.

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Odor	Odorless.
Odor threshold	Not available.
pH	Not applicable.
Melting point	280°C/536°F
Initial boiling point and range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not determined.
Evaporation factor	Not available.
Flammability (solid, gas)	The product is not flammable. Dust may form explosive mixture with air.
Upper/lower flammability or explosive limits	Data lacking.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Data lacking.
Bulk density	Data lacking.
Solubility(ies)	Insoluble in water.
Partition coefficient	Not applicable.
Auto-ignition temperature	Data lacking.
Decomposition Temperature	Data lacking.
Viscosity	Not applicable.
Minimum ignition energy	25-50 mJ
Dust Explosion Constant	St1
Dust deflagration index (Kst)	171 m.bar/s

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known. Will not polymerize.
Conditions to avoid	Avoid generation and spreading of dust. Avoid heat, flames and other sources of ignition. Avoid heat, flames and other sources of ignition.
Materials to avoid	None known.
Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors. Carbon dioxide (CO ₂). Carbon dioxide (CO ₂).

11. Toxicological information

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Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) No specific test data are available.

Acute toxicity - dermal

Notes (dermal LD₅₀) No specific test data are available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No specific test data are available.

Skin corrosion/irritation

Skin corrosion/irritation No specific test data are available.

Serious eye damage/irritation

Serious eye damage/irritation No specific test data are available.

Respiratory sensitization

Respiratory sensitization No specific test data are available.

Skin sensitization

Skin sensitization No specific test data are available.

Germ cell mutagenicity

Genotoxicity - in vitro No specific test data are available.

Genotoxicity - in vivo No specific test data are available.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

IARC carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP carcinogenicity

Carcinogenicity in humans is not expected.

OSHA Carcinogenicity

Carcinogenicity in humans is not expected.

Reproductive toxicity

Reproductive toxicity - fertility No specific test data are available.

Reproductive toxicity - development No specific test data are available.

Specific target organ toxicity - single exposure

STOT - single exposure No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No specific test data are available.

Aspiration hazard

Aspiration hazard No data available.

12. Ecological information

Acute aquatic toxicity

Acute toxicity - fish No specific test data are available.

Acute toxicity - aquatic invertebrates

Not available.

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Acute toxicity - aquatic plants	Not available.
Acute toxicity - microorganisms	Not available.
Acute toxicity - terrestrial	Not available.
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - fish early life stage	Not available.
Short term toxicity - embryo and sac fry stages	Not available.
<u>Persistence and degradability</u>	
Persistence and degradability	No data available.
Phototransformation	No specific test data are available.
Stability (hydrolysis)	No specific test data are available.
Biodegradation	No specific test data are available.
Biological oxygen demand	No specific test data are available.
Chemical oxygen demand	No specific test data are available.
<u>Bioaccumulative potential</u>	
Bio-Accumulative Potential	No data available on bioaccumulation.
Partition coefficient	Not applicable.
<u>Mobility in soil</u>	
Mobility	No data available.
Adsorption/desorption coefficient	No specific test data are available.
Henry's law constant	No specific test data are available.

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

Road transport notes	Not regulated.
Rail transport notes	Not regulated.
Sea transport notes	Not regulated.

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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

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

Not listed.

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

Not listed.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

Not listed.

SARA 313 Emission Reporting

Not listed.

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SARA (311/312) Hazard Categories

Combustible Dust

OSHA Highly Hazardous Chemicals

Not listed.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

Not listed.

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 components of this product are included in inventory, exempt, or notified

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

Australia - AICS

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

Some of the ingredients are listed or exempt.

16. Other information

Revision date	7/1/2022
Revision	5
Supersedes date	6/22/2022
SDS No.	5978
Hazard statements in full	USH01 May form combustible dust concentrations in air.
End of SDS	