

1. Product and company identification

Product identifier

Trade name: Dahlar®MLF 52

Relevant identified uses of the substance or mixture and uses advised against

General use: Article: Shrink tape

Details of the supplier of the safety data sheet

Company name:	Airtech International, Inc. 5700 Skylab Road Huntington Beach, CA 92647 E-mail: airtech@airtechintl.com Website: www.airtechonline.com Telephone: +1 714.899.8100 Dept. responsible for information: Telephone: +1 714.899.8100 E-mail: airtech@airtechintl.com	Airtech Europe Sarl Zone industrielle Haneboesch L-4562 Differdange Luxembourg Website: www.airtech.lu Telephone: +352 582.282 Dept. responsible for information: Telephone: +352 582.282 E-mail: sales@airtech.lu
	Tygavac Advanced Materials Ltd. The Causeway Broadway Business Park Chadderton, Oldham OL9 9XD United Kingdom Website: www.tygavac.co.uk Telephone: +44 161.947.1610 Dept. responsible for information: Telephone: +44 161.947.1610 E-mail: sales@tygavac.co.uk	Airtech Asia Ltd. Ltd. 888 Airtech Avenue Huangtai Industrial Development Center Xiaozhan Country, Jinnan District Tianjin, China 300353 E-mail: airtechasia@airtechintl.com Website: www.airtech.asia Telephone: +86 22.8622.9800 Dept. responsible for information: Telephone: +86 22.8622.9800 E-mail: airtechasia@airtechintl.com

Emergency phone number

CHEMTREC EMERGENCY PHONE:
Within USA/Canada: 1-(800)424-9300
International: +1 703-741-5970

2. Hazards identification

Emergency overview

Appearance: Form: solid
Color: varying
Odor: odorless
Classification: This substance is classified as not hazardous.

Regulatory status

This material is not considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

Toxic fumes may be emitted at elevated temperatures. Do not breathe vapor. Inhalation of fumes from burning or heating may cause polymer fume fever, a temporary flu-like illness with fever and chills. Processing, e.g. by cutting, sawing or grinding, can produce particles and dust. Avoid inhalation of dusts, as even inert dusts may functionally affect respiratory organs.

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Shrink tape made from: fluorocarbon

4. First aid measures

- In case of inhalation: In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still. If the casualty has difficulty breathing, call a doctor immediately.
- Following skin contact: Remove residues with soap and water. After contact with molten product, cool skin area rapidly with cold water. Do not peel solidified product off the skin. Seek medical attention.
- After eye contact: In the event of irritation from processing vapors: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of troubles or persistent symptoms, consult an ophthalmologist.
- After swallowing: Not a probable route of exposure.
In the case of the formation of dust: Rinse mouth. Seek medical treatment in case of troubles.

Most important symptoms/effects, acute and delayed

In case of inhalation:

Inhalation of dust may cause irritation of the respiratory system. Inhalation of fumes from burning or heating may cause polymer fume fever, a temporary flu-like illness with fever and chills. The following symptoms may occur: Irritation of nose, throat, lung cough, discomfort, shortage of breath, headache, dizziness, nausea, vomiting. Symptoms usually appear after 2 hours and decline within the next 36 to 48 hours. In case of prolonged exposure: Possible danger of damage to liver and kidneys.

After contact with skin: Thermal decomposition products or aerosols can cause irritation. Other symptoms: Itching redness of the skin and oedema (swelling).

The melted product can cause severe burns.

After eye contact:

Process vapors can irritate the eyes. Dust contact with the eyes can lead to mechanical irritation.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

no data available

Auto-ignition temperature: no data available

Suitable extinguishing media:

Water fog, dry chemical powder, foam, carbon dioxide

Extinguishing media which must not be used for safety reasons:

High power water jet.

Specific hazards arising from the chemical

This material is combustible, but will not ignite readily. Toxic fumes may be emitted at elevated temperatures.

In case of fire may be liberated: Hydrogen fluoride, Carbonyl difluoride, Tetrafluoroethylene, Hexafluoropropylene, Perfluoroisobutylene, Carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Seal off endangered area. Cool endangered containers with water spray and, if possible, remove from danger zone. Use a water fog to control vapors. Do not breathe fumes. Do not allow fire water to penetrate into surface or ground water.

6. Accidental release measures

Personal precautions:

Handle in accordance with good industrial hygiene and safety practice.

At processing: Avoid the formation of aerosol/vapors. Avoid dust formation. Avoid inhalation and contact with skin and eyes. Wear protective equipment. Keep unprotected people away. Ensure adequate ventilation, especially in confined areas.

Environmental precautions:

Do not allow to penetrate into soil, waterbodies or drains.

Methods for clean-up:

Take up mechanically, placing in appropriate containers for disposal. Dispose of waste according to applicable legislation.

7. Handling and storage

Handling

Advices on safe handling: Handle in accordance with good industrial hygiene and safety practice.

At processing: Provide adequate ventilation, and local exhaust as needed. Avoid dust formation. Avoid the formation of aerosol/vapors. Avoid inhalation and contact with skin and eyes. Wear protective equipment. Keep unprotected people away. When using do not eat, drink or smoke.

Precautions against fire and explosion:

Take standard precautions to prevent fire.

Storage

Requirements for storerooms and containers:

Keep in a cool place. Keep container dry. Protect from direct sunlight. Keep away from incompatible materials. Store at room temperature.

Hints on joint storage:

Incompatible materials: Strong bases, strong acids, strong oxidizing agents.
Keep away from food and drinks.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

Type	Limit value
USA: ACGIH: TWA	10 mg/m ³ Dust limit value, indicativ; inhalable fraction
USA: ACGIH: TWA	3 mg/m ³ Dust limit value, indicativ; respirable fraction
USA: OSHA: TWA	15 mg/m ³ Dust limit value inhalable fraction
USA: OSHA: TWA	5 mg/m ³ Dust limit value respirable fraction

Engineering controls

Provide good ventilation and/or an exhaust system in the work area.

In case of development of vapors or dust (at processing): Use local exhaust.

See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: At processing (recommended): Safety glasses in accordance with OSHA 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: At processing (recommended): Wear suitable protective clothing.

Recommendation:

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Glove material: nitrile rubber, neoprene (0.11 mm)

Breakthrough time: >480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Respiratory protection is not necessary if room is well ventilated.

At processing:

When vapors form, use respiratory protection. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

General hygiene considerations:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and after work. When using do not eat, drink or smoke.

At processing:

Avoid contact with skin, eyes, and clothing. Do not breathe vapor. Do not breathe dust.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Form: solid Color: varying
Odor:	odorless
Odor threshold:	no data available
pH value:	no data available

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Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point/flash point range:	no data available
Evaporation rate:	no data available
Flammability:	This material is combustible, but will not ignite readily.
Explosion limits:	no data available
Vapor pressure:	no data available
Vapor density:	no data available
Density:	no data available
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Thermal decomposition:	no data available
Additional information:	no data available

10. Stability and reactivity

Reactivity:	Refer to section: Possibility of hazardous reactions.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	No dangerous reactions with proper and specified storage and handling.
Conditions to avoid:	Keep away from heat. Protect from direct sunlight. Avoid generation of dust. Avoid the formation of aerosol/vapors.
Incompatible materials:	Strong bases, strong acids, strong oxidizing agents.
Hazardous decomposition products:	Toxic fumes may be emitted at elevated temperatures. (> 270 °C: Hydrogen fluoride; > 380 °C: Carbonyl difluoride, Tetrafluoroethylene, Hexafluoropropylene, Perfluoroisobutylene) In case of fire may be liberated: Hydrogen fluoride, Carbonyl difluoride, Tetrafluoroethylene, Hexafluoropropylene, Perfluoroisobutylene, carbon monoxide and carbon dioxide.
Thermal decomposition:	no data available

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Lack of data.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Lack of data.

Eye damage/irritation: Lack of data.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

Other information: Toxic fumes may be emitted at elevated temperatures. Processing, e.g. by cutting, sawing or grinding, can produce particles and dust. Dust may irritate airways and cause bronchitis symptoms.

Symptoms

In case of inhalation:
Inhalation of dust may cause irritation of the respiratory system. Inhalation of fumes from burning or heating may cause polymer fume fever, a temporary flu-like illness with fever and chills. The following symptoms may occur: Irritation of nose, throat, lung cough, discomfort, shortage of breath, headache, dizziness, nausea, vomiting. Symptoms usually appear after 2 hours and decline within the next 36 to 48 hours. In case of prolonged exposure: Possible danger of damage to liver and kidneys.

After contact with skin: Thermal decomposition products or aerosols can cause irritation.

Other symptoms: Itching redness of the skin and oedema (swelling).

The melted product can cause severe burns.

After eye contact:
Process vapors can irritate the eyes. Dust contact with the eyes can lead to mechanical irritation.

12. Ecological information

Ecotoxicity

Effects in sewage plants: The insoluble part can be precipitated mechanically in suitable sewage treatment plants.

Mobility in soil

no data available

Persistence and degradability

Further details: Product is not biodegradable.

Additional ecological information

General information: Do not allow to penetrate into soil, waterbodies or drains.

13. Disposal considerations

Product

Recommendation: Disposal of fluoropolymer containing wastes must follow applicable federal, state and local regulations.

Waste must not be mixed with domestic or industrial waste that will be incinerated unless the facilities are equipped and permitted to handle acidic combustion products. Preferred options for disposal are recycling and landfill. Incinerate only if the incinerator is fitted and permitted to scrub out hydrogen fluoride and other acidic combustion gases.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled. Do not remove label until container is thoroughly cleaned.

14. Transport information

USA: Department of Transportation (DOT)

Proper shipping name: Not controlled under DOT

Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: No

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

National regulations - Great Britain

Hazchem-Code: -

16. Other information

Hazard rating systems:



NFPA Hazard Rating:

Health: 1 (Slight)
Fire: 1 (Slight)
Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)
Flammability: 1 (Slight)
Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

This data sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, and which additional precautions may be necessary. All health and safety information contained in this data sheet should be provided to your employees and customers. It is your responsibility to develop appropriate workplace instructions and training programs for employees.

As the conditions and methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. All statements or suggestions are made without warranty, expressed or implied, regarding accuracy of information, the hazards connected with the use of the product or the results to be obtained from the use thereof.