

MATERIAL SAFETY DATA SHEET

No. Z-3220E-14

Identity (As Used on Label and List)

- **Date Prepared:** November 24, 1998
- **Date Revised:** September 11, 2009

LUMIFLON LF552

1. PRODUCT AND COMPANY INFORMATION

Product Name: LUMIFLON LF552

Synonym: Fluoropolymer varnish

General Use: Paints

MSDS Number: Z-3220E

Manufacturer

Company Name: ASAHI GLASS CO., LTD. Chemicals Company Fluorochemicals Division

Address: 1-12-1, Yurakucho, Chiyoda-ku, Tokyo, 100-8405, Japan

Telephone No.: +81-3-3218-5574

Facsimile No.: +81-3-3218-7843

Supplier

Company Name: AGC Chemicals Americas, Inc.

Address: 55 East Uwchlan Ave. Suite 201, Exton, PA 19341, USA

24 Hour Medical Emergency Telephone #: (800)420-8479

24 Hour Transportation Emergency # (CHEMTREC): (800) 424-9300

Customer Service Number: (800) 424-7833

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	%
Fluoropolymer	207691-69-8	40
Aromatic Hydrocarbons	64742-94-5	>33
Trimethyl benzene	25551-13-7	<2
Naphthalene	91-20-3	<10
Cyclohexanone	108-94-1	12
Xylene	1330-20-7	<1.5
Ethylbenzene	100-41-4	<1.5

OSHA Hazardous Components (29 CFR 1910.1200)

Aromatic Hydrocarbons, Trimethyl benzene, Naphthalene, Cyclohexanone Xylene and Ethylbenzene are hazardous components.

3. HAZARDS IDENTIFICATION

Emergency overview

May be harmful by inhalation, ingestion, or skin absorption.

Potential health Effects

Inhalation:

May cause irritation to the respiratory tract. High vapor concentrations may cause headaches, nausea and dizziness and can lead to loss of smell. The inhalation of droplets can lead to pneumonia.

In contact with skin:

Can be absorbed through skin. Repeated exposure to the liquid may give rise to cracking and defacing of the skin, possibly leading to irritation.

In contact with eyes:

Liquid splashes and high vapor concentrations can lead to irritation in the eyes.

Ingestion: Liquid ingestion may cause severe gastrointestinal pain, abdominal cramps, nausea, vomiting, narcosis and central nervous system depression.

4. FIRST AID MEASURES

- **Inhalation:**
Remove victims to fresh air. Seek medical attention.
- **Skin contact:**
Remove contaminated clothing and wash well affected skin with plenty of soap and water. Seek medical attention.
- **Eye contact:**
Flush eyes including eyelids, with plenty of water for at least 15 minutes. Get medical attention.
- **Ingestion:**
Wash mouth out with water; give half pint water to drink. Don't induce vomiting unless directed to do by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

5. FIRE-FIGHTING MEASURES

- **Suitable extinguishing media:** Foam, Dry chemicals, CO₂
- **Unsuitable extinguish media/methods:** DO NOT USE WATER!
- **Hazardous combustion product or gases:** If involved in a fire or if overheated, there is a risk of generation of toxic degradation products such as: hydrogen chloride, hydrogen fluoride, carbonyl fluoride, carbon monoxide, and carbon dioxide.
- **Special protective equipment for fire fighters:** Wear self-contained breathing apparatus in confined areas or when exposed to combustion products.
- **Additional information:** Move container from fire areas if it can be done without risk. Cool containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Keep public away.
Ensure adequate ventilation.
Use personal protective clothing

Environmental precautions:

Shut off source of ignition and ventilate spill area.
Do not wash away into shower or waterway.

Methods for cleaning up/taking up:

Absorb or contain liquid with inert material and dispose of in accordance with applicable regulations.
Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

Additional information:

Information for safe handling looks up chapter 7.
Information for disposal looks up chapter 13.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Atmospheric levels of vapor should be maintained as low as reasonably possible and below the Occupational Exposure Limit.

Shut off all gas pilot and electrical (spark or hot wire) igniters and other sources of ignition during use and until all vapors (odors) are gone.

Prevent build-up of electrostatic charges (e.g. by grounding).

Storage

Floor surface of storage place should be made of non-permeable materials to the ground such as concrete. No fire and smoking in area of storage.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limit Values

Chemical name	OSHA (1993)	ACGIH (2006)	NIOSH
Aromatic Hydrocarbons	TLV-TWA: 17ppm (as recommend by manufacture*)		
Trimethyl benzene	N/E	TLV-TWA: 25ppm	REL:TWA 25ppm(125 mg/m ³)
Naphthalene	PEL-TWA: 10ppm (50 mg/m ³)	TLV-TWA: 10ppm STEL: 15ppm	REL: TWA 10ppm (50 mg/m ³) ST 15ppm (75 mg/m ³)
Cyclohexanone	PEL-TWA 50ppm	TLV-TWA 20ppm STEL 50ppm	REL: TWA 25ppm (100 mg/m ³) [skin]
Xylene	PEL- TWA 100 ppm (435 mg/m ³)	TLV-TWA 100ppm STEL 150ppm	TWA 100 ppm (435 mg/m ³) ST 150 ppm (655 mg/m ³)
Ethylbenzene	PEL-TWA 100ppm (435 mg/m ³)	TLV-TWA 100ppm STEL 125ppm	REL: TWA 100ppm (435 mg/m ³) ST 125 ppm (545 mg/m ³)

* as Aromatic Hydrocarbon product containing Trimethyl benzene and Naphthalene

Exposure controls

Occupational exposure controls

Engineering Controls:

Use with appropriate local exhaust ventilation.

Personal protection:

- **Respiratory protection:** Chemical cartridge respirator with an organic vapor cartridge.
- **Hand protection:** Impermeable gloves
- **Skin protection:** Suits as needed by the circumstance of use.
- **Eye protection:** Safety glass, goggles, face shield

Additional recommendations: Eyewash and safety shower should be ready for use.

9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance and Odor:** Colorless liquid.
- **Chemical Formula:** Trade Secret
- **Flash Point (method):** 49.5deg.C (121.1deg.F) (S.C.C)
- **Lower Explosive Limit:** N/D
- **Upper Explosive Limit:** N/D
- **Autoignition Temperature:** N/D
- **Boiling Point:** 138-144deg.C (280.4-291.2deg.F)(Xylene)
- **Melting Point:** N/D
- **Vapor Pressure (20deg.C):** N/D
- **Specific Gravity (25deg.C):** 1.04-1.08
- **Solubility (20deg.C) in water:** insoluble
- **pH value(20deg.C) :** N/A
- **Partition Coefficient:** N/D
- **Viscosity(Stokes)(25deg.C):** 2.4-4.8cm²/s

10. STABILITY AND REACTIVITY

Conditions to avoid:

Overheating and cooling

Stability: Stable under normal temperature and pressure.

Materials to avoid (Incompatibilities): Strong oxidants, strong reducing agents or strong bases

Hazardous decomposition products:

In a fire situation, hydrogen chloride, hydrogen fluoride, carbon monoxide and carbon dioxide may liberate.

11. TOXICOLOGICAL INFORMATION

(Fluoropolymer)

Acute toxicity: N/D

Genetic studies: Ames Assay: Negative

(Thinner: 1,2,4-trimethyl benzene)

Acute toxicity:

LD50 oral (rat): 5g/kg, LC50 (rat): 18g/m³/4h

(Cyclohexanone)

Acute toxicity:

Eye Irritation (rabbit): 0.25mg/24h SEVERE (Standard Draize Test)

LD50 oral (mouse): 1.4g/kg

LC50 (rat): 8000 ppm/4h

(Naphthalene)

Acute toxicity:

LD50 oral (rat): 1.25g/kg

(Xylene)

Acute toxicity:

LD50 oral (rat): 4.3g/kg

(Ethylbenzene)

LD50 oral (rat): 3.5 g/kg (Ethylbenzene)

Carcinogenicity: Naphthalene IARC:2B, Ethylbenzene IARC :2B

Health studies have shown many petro hydrocarbons and synthetic lubricants pose potential human health risks, which may vary from person to person. As a precaution, exposure to liquids, vapors, mists/fumes should be minimizing. Products has low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingested or vomiting may cause mild to severe pulmonary injury and possibly death. High vapor concentrations are irritating to eyes and respiratory tract.

12. ECOLOGICAL INFORMATION

Biodegradability: N/D

Bioaccumulation: N/D

Other information: N/D

13. DISPOSAL CONSIDERATIONS

Reuse when possible the residual product. Send waste product for thermal destruction, using high-temperature incinerators designed to burn fluorine compounds.

Because of a flash point below 60 deg.C (140 degrees Fahrenheit), discarded product is a hazardous waste, No.D001, under RCRA, 40CFR 261.21.

Reuse containers when possible, after thorough washing. Dispose of waste containers to authorized landfill, in accordance with local laws and regulations.

Comply with all federal, state and local regulations.

Do not dump this product into sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATION

US DEPARTMENT OF TRANSPORTATION (DOT)

Hazardous Materials: Yes

Hazardous Materials Description and Proper Shipping Name: RESIN SOLUTION

Hazardous Class or Division: 3

Identification Number: UN1866

Packing Group: III

Label(s) Required: 3

Sea transport

IMDG

Class: 3

Packing Group: III

UN Number: 1866

Proper Shipping Name: RESIN SOLUTION

Marine Pollutant: No

Air transport

ICAO/IATA

Class: 3

Packing Group: III

UN Number: 1866

Proper Shipping Name: RESIN SOLUTION

15. REGULATORY INFORMATION

OSHA STATUS: This product is hazardous under 29 CFR 1910.1200.

TSCA STATUS: All components are listed on the TSCA Inventory.

SARA TITLE III

SECTION 302(40 CFR 355):

None of the Chemicals in this product have a TPQ.

Name	CERCLA/SERA-hazardous substances and their Reportable Quantities
Cyclohexanone	=5000 lb (2270kg) final RQ
Naphthalene	=100 lb (45.4kg) final RQ
Xylene	=100 lb (45.4kg) final RQ
Ethylbenzene	=1000 lb (454kg) final RQ

SECTION 311/312(40 CFR 370): Acute Health Hazard, Chronic Health Hazard, Fire hazard

SECTION 313(40 CFR 372): Xylene, Naphthalene

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. OTHER INFORMATION

- **N/E:** Not Established
- **N/A:** Not Applicable
- **N/D:** No Data
- **ACGIH:** American Conference of Governmental Industrial Hygienists
- **S.C.C.:** Seta Closed Cup (RAPID EQUILIBRIUM METHOD)

NFPA CODES

Flammability	Hazard	Instability
2	1	1

Revision Summary: Section 1-16(2004.6) Product name(2004.12) Section 2,8,9,11,15(2005.7)
Section 2, 8, 15(2006.6) 1 (2006.9) 1(2009.4)

The product is not designed for special applications such as pharmaceutical, medical use.

The information given in this safety data sheet is for safety purposes only. It is given in good faith and based on the best knowledge and experience of the company at the date of issuing.

The company is not responsible for any loss or damage caused by the use of the product in applications for which it was not intended or for conditions of use contrary to the recommendations in this safety data sheet.
