SAFETY DATA SHEET

1. Identification

GHS product identifier	**LUMIFLON LF710F**
SDS number	AGC-0550
Version No.	01
Issue date	17-December-2020
CAS #	Mixture
Recommended use	Raw material for industry
Recommended Restrictions	Not available.

Manufacturer

Company name	AGC Inc. Chemicals Company Coating Business Group
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2. Hazards identification

GHS classification

Physical hazards	Flammable solids	Not classified
	Pyrophoric solids	Not classified
Health hazards	Acute toxicity, oral	Not classified
	Sensitization, skin	Category 1B
	Reproductive toxicity	Category 1B
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
	Hazardous to the ozone layer	Classification not possible

GHS label elements

Signal word

Danger

Hazard statement

H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302 + P352	IF ON SKIN: Wash with plenty of water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification None known.

Supplemental information None.

3. Composition/information on ingredients

Components	CAS #	Percent
Fluoro resin	Trade Secret	>=97
Xylene	1330-20-7	<1
Ethylbenzene	100-41-4	<1
light stabilizer	Trade Secret	≦1.5

4. First aid measures

First aid procedures

Inhalation Move to fresh air.
If breathing stops, provide artificial respiration.
Oxygen or artificial respiration if needed.
Call a physician or poison control centre immediately.

Skin Remove contaminated clothing immediately and wash skin with soap and water.
In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
Wipe up with absorbent material (e.g. cloth, fleece).
Do not use solvents and thinner for wipe up.

Eye Get medical attention immediately.
Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.
Do not rub eyes.

Ingestion Rinse mouth.
Do not induce vomiting without advice from poison control center.
Call a physician or poison control centre immediately.

Most important symptoms and effects, both acute and delayed Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction.
Dermatitis. Rash.

Notes to physician Provide general supportive measures and treat symptomatically.

General advice IF exposed or concerned: Get medical advice/attention.
If you feel unwell, seek medical advice (show the label where possible).
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Show this safety data sheet to the doctor in attendance.
Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
Foam. Dry chemical powder. Carbon dioxide (CO2).
Apply extinguishing media carefully to avoid creating airborne dust.

Specific hazards arising from the chemical In the event of a fire, toxic gases such as hydrogen chloride, hydrogen fluoride, halocarbonyl, and carbon monoxide may be generated.

Protective equipment and precautions for firefighters When thermally decomposed by a fire, highly toxic gas such as hydrogen fluoride is generated.
Wear for fire fighting.

Protection of fire-fighters Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Fight fire from upwind area.

General fire hazards No unusual fire or explosion hazards noted.

Specific methods Remove flammable materials from the environment
Use designated extinguishing media.
Cool closed containers exposed to high temperatures with water.

6. Accidental release measures

Personal precautions

Keep unnecessary personnel away.
Use only non-sparking tools.
Wear appropriate protective equipment and clothing during clean-up.

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Ensure adequate ventilation.

Prepare a suitable fire extinguisher in case of ignition.

Environmental precautions

Do not discharge to rivers. Be careful not to cause environmental impact
Adherents, waste, etc. are treated based on relevant laws and regulations.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk.

Methods for cleaning up

Ventilate the contaminated area.
Wear appropriate protective equipment and clothing during clean-up.
Prevent product from entering drains.
Do not allow material to contaminate ground water system.
Stop the flow of material, if this is without risk.
Large Spills: Wet down with water and dike for later disposal.

Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use.
For waste disposal, see section 13 of the SDS.

7. Handling and storage

Handling

Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Explosion-proof general and local exhaust ventilation.
Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid contact with eyes, skin, and clothing.
Avoid prolonged exposure.
Pregnant or breastfeeding women must not handle this product.
Avoid release to the environment.
Observe good industrial hygiene practices.
Use personal protection recommended in Section 8 of the SDS.
Seal the container each time.
In the past, people who are experiencing allergy symptoms should not handle it.
Prohibit the use of fire, sparks, and hot objects in the vicinity
Minimise dust generation and accumulation.
Wear appropriate personal protective equipment.

Storage

Store locked up.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls / personal protection

Control parameters

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Ethylbenzene (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
Xylene (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Take precautions against electrostatic discharge.
Use explosion-proof handling equipment and do not use bare light bulbs
When handling indoors, seal the source, or install a local exhaust system.
In case of indoor work, use auto application equipment or local ventilation equipment to prevent a worker from directly being exposed

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Chemical respirator with organic vapour cartridge.

Hand protection Wear appropriate chemical resistant gloves.

9. Physical and chemical properties

Appearance

Physical state Solid.

Colour Light yellow.

Form Not available.

Odour Not available.

Odour threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Boiling point 138 - 144 °C (280.4 - 291.2 °F) [Xylene]
136 °C (276.8 °F) [ethylbenzene]

Flash point 18.0 °C (64.4 °F) Closed cup [ethylbenzene]
27.0 °C (80.6 °F) [Xylene]

Evaporation rate Not available.

Flammability (solid, gas) incombustibility

Flammability limits in air, lower, % by volume Not available.

Flammability limits in air, upper, % by volume Not available.

Vapour pressure Not available.

Vapour density 3.7 [ethylbenzene]

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Softening point	130 - 140 °C (266 - 284 °F) (ring-and-ball method)
Density	1.40 g/cm3 (25°C)
Other data	
Explosive limit - lower (%)	> 1 % [ethylbenzene]
Explosive limit – upper (%)	< 6.7 % [ethylbenzene]

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Strong acids, strong oxidizing substances, and halogens can cause fires and explosions.
Conditions to avoid	Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Minimise dust generation and accumulation.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Hydrogen fluoride. Hydrogen chloride. carbon monoxide and carbon dioxide.

11. Toxicological information

Toxicological data

Product	**Species**	**Test Results**
LUMIFLON LF710F		
Acute		
LD50	Mouse	> 20 g/kg
Dermal		
LD50	Rabbit	15400 mg/kg（ethylbenzene）
Inhalation		
Vapour		
LC50	Rat	4000 ppm, 4 Hours（ethylbenzene）
Oral		
LD50	Rat	3500 mg/kg（ethylbenzene）
Components	**Species**	**Test Results**
Ethylbenzene (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	15400 mg/kg
Inhalation		
LC50	Rat	4000 ppm, 4 hr
Oral		
LD50	Rat	3500 mg/kg
Xylene (CAS 1330-20-7)		
Acute		
Dermal		
LD50	Rabbit	> 4350 mg/kg
Inhalation		
LC50	Rat	29.08 mg/l, 4 Hours
Oral		
LD50	Rat	3500 mg/kg

Routes of exposure	Inhalation. Skin contact.
Eye contact	
LUMIFLON LF710F	Test
Toxicological information	Occupational exposure to the substance or mixture may cause adverse effects.
Acute toxicity	
Skin corrosion/irritation	Not available.

Serious eye damage/eye irritation Not available.

Irritation Corrosion - Eye

Xylene	Category2
Ethylbenzene	Category2A

Skin sensitisation May cause an allergic skin reaction.

Skin Sensitisation

LUMIFLON LF710F	19.4 % EC3 Result: mildly sensitizing

Mutagenicity

Germ cell mutagenicity: Ames test

LUMIFLON LF710F	OECD 471 Result: Negative
Ethylbenzene	Result: Negative
Xylene	Result: Negative

Germ cell mutagenicity: Chromosome abberation

Ethylbenzene	Result: Negative
Xylene	Result: Negative

Germ Cell Mutagenicity: In Vitro Mammalian Cell Gene Mutation Tests

Ethylbenzene	Result: There are both negative and positive reports.
Xylene	Result: There are both negative and positive reports.

Germ Cell Mutagenicity: Micronucleus

Ethylbenzene	Result: Negative
Xylene	Result: Negative

Carcinogenicity

Ethylbenzene	Category2

ACGIH Carcinogens

Ethylbenzene (CAS 100-41-4)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Xylene (CAS 1330-20-7)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
Xylene (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity May damage fertility or the unborn child.

Reproductivity

Ethylbenzene	Category1B
Xylene	Category1B

Specific target organ toxicity - single exposure Not applicable.

Xylene	Cat.1(Central nervous system,Respiratory,Liver,Kidney), Cat.3(Narcrotic
Ethylbenzene	Cat.3 (Respiratory irritation, Narcotic effect)

Specific target organ toxicity - repeated exposure Not applicable.

Xylene	Cat.1 (Nervous system,Respiratory organs)
Ethylbenzene	Category2(Hearing organs)

Aspiration hazard Not applicable.

Xylene	Category1

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Symptoms Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.

12. Ecological information

Ecotoxicological data

Components		Species	Test Results
Ethylbenzene (CAS 100-41-4)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	1.37 - 4.4 mg/l, 48 hours
Fish	LC50	Atlantic silverside (Menidia menidia)	4.4 - 5.7 mg/l, 96 hours

Components		Species	Test Results
Xylene (CAS 1330-20-7)			
Aquatic			
Acute			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	3.3 mg/l, 96 hours

Ecotoxicity Harmful to aquatic life with long lasting effects. In case of leakage, disposal etc., there is a risk of influencing the environment, so handle with care. Especially when products and washing water.Take measures not to flow directly to the ground, river or drainage.

Environmental effects Harmful to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and degradability When the temperature exceeds 230 ° C, decomposition begins gradually and halogen-containing decomposition products are produced.

Bioaccumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

Ethylbenzene	3.15

Aquatic toxicity Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Mobility Not available.

13. Disposal considerations

Disposal methods Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

Waste generated by wastewater treatment, incineration, etc. shall be processed or consigned according to Waste Management and Public Cleansing Act. and the related laws.
Do not flush wastewater cleaned in containers, equipment, etc. to the ground or drain.

Since waste generates hydrogen chloride and hydrogen fluoride when incinerated, it is incinerated in an incinerator equipped with neutralization facility and. the incinerated residue is land filled in legally right place. Do not incinerate in the case of exceeding fluorine emission standards.

When incinerating, harmful gases may be generated, so incinerate in an equipment that can handle exhaust gas.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. The remaining products (residual waste) should be discarded according to the law concerning waste disposal and cleaning and the prefectural / municipal regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to IMO instruments Not applicable.

General information In case of falling under the Fire Service Law, Occupational Safety and Health Law, Poisonous and Deleterious Substances Control Law, follow the transportation method prescribed by each applicable law.
To comply with the provisions of the ship safety law. Follow the aviation laws.

When transporting, keep the container at 40 ° C or below, taking care not to fall over, fall, or damage.

15. Regulatory information

Regulatory information Ensure this materials in compliance with federal requirements and ensure conformity to local regulation.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Further information Refer to:
OSHA 3371-08 2009, Hazard Communication Guidance for Combustible Dusts
NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids

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SDS is a document for business operators. Not all materials and literature have been investigated, so there may be information leaks. In addition, the content will change due to the announcement of new knowledge and correction of the existing theory. When used for important decisions, it is recommended to examine the sources carefully and to confirm by examination. No guarantee is made for the data or evaluation described. In addition, the items described are intended for normal handling. Therefore, when handling specially, be sure to implement safety measures suitable for new applications and usages before handling. Attach this SDS when transferring this product.
This product is an industrial product, it is not the thing which developed / manufactured assuming the medical use.