

SAFETY DATA SHEET

1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name LUCITE™ 4Fi
Product Description Polymer based on Methyl methacrylate containing peroxide.

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

Identified use(s) Use at industrial sites.
Industrial use only.
Glass separation.

Uses advised against Use at non-industrial sites.
Not intended for thermal processing.

1.3 Details of the supplier of the safety data sheet

Manufacturer:
Mitsubishi Chemical UK Limited, Specialty Polymers and Resins, Horndale Avenue, Newton
Aycliffe, County Durham, DL5 6YE, United Kingdom
Tel: +44 (0)1325 300990
mcm.sdsinfo@mcgc.com

Supplier:
Lucite International Alpha B.V., Merseyweg 16, 3197 KG Botlek, The Netherlands
Tel: +31 (0)181-233 233
mcm.sdsinfo@mcgc.com

1.4 Emergency telephone number

+44 (0) 1642 452461
01 809 2566

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.2 Label elements

EUH208: Contains: (Methyl methacrylate, Dibenzoyl peroxide). May produce an allergic reaction.
EUH210: Safety data sheet available on request.

2.3 Other hazards

Not classified as PBT or vPvB. Combustible but not readily ignited. May form combustible dust concentrations in air. Low toxicity under normal conditions of handling and use. Does not cause endocrine disruption.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below.

According to Regulation (EC) No. 1272/2008 (CLP)

Substance	%W/W	EC No.	Registration number(s)	Hazard Class and Category Code(s)	Hazard statement Code(s)
Acrylic polymer	>99	-	-	-	-
Methyl methacrylate	<1	201-297-1	01-2119452498-28	Flam. Liq. 2 Skin Irrit. 2 Skin Sens. 1 STOT SE 3	H225 H315 H317 H335
Dibenzoyl peroxide	<1	202-327-6	01-2119511472-50	Org. Perox. B Skin Sens. 1 Eye Irrit. 2 Aquatic Acute 1 Aquatic Chronic 1	H241 H317 H319 H400 H410 M Acute=10 M Chronic=10

For full text of H phrases see section 16.

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Skin Contact	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Obtain medical attention if ill effects occur.

4.2 Most important symptoms and effects, both acute and delayed

Not applicable.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media Water spray, foam, dry powder or CO₂.

Unsuitable extinguishing media Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Combustible but not readily ignited. May form combustible dust concentrations in air. Combustion or thermal decomposition will evolve toxic, irritant and flammable vapours. By analogy with similar materials, the product may decompose if heated to temperatures above 200°C.

5.3 Advice for firefighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Caution - spillages may be slippery.

6.2 Environmental precautions

Prevent release to the environment.

6.3 Methods and material for containment and cleaning up

Contain spillages. Collect in containers for disposal using approved dust respirator.

6.4 Reference to other sections

See section: 8, 13

7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not eat, drink or smoke at the workplace. Product as supplied: Avoid contact with skin and eyes. Unlikely to represent a dust hazard under normal handling conditions.

The product may be suitable for a wide range of industrial applications and therefore it is impossible to make detailed recommendations regarding all process hazards. If the product is to be used in applications for which the hazards are not fully understood it is recommended to consult the supplier before use.

7.2 Conditions for safe storage, including any incompatibilities

Acrylic polymers are supplied in either bags or bulk containers. Keep containers in a clean, cool and dry area away from heat sources. Natural ventilation is adequate.

Storage temperature (°C):

Preferably not exceeding 40°C.

Incompatible materials:

Polymer contains residual benzoyl peroxide. This may react with oxidising agents, reducing agents, acids, bases and amines leading to decomposition.

7.3 Specific end use(s)

Use at industrial sites.

Industrial use only.

Glass separation.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Substance	CAS No.	LTEL ppm (8Hr TWA)	LTEL mg/m ³ (8Hr TWA)	STEL ppm	STEL mg/m ³	Notes
Dust (total inhalable dust) (respirable dust)			10 4			
Dibenzoyl peroxide	94-36-0		5			Sens.
Traces of: Aluminium oxides total inhalable dust respirable dust	1344-28-1		10 4			

8.2 Exposure controls

Appropriate engineering controls

Do not eat, drink or smoke at the workplace. Provide adequate ventilation, including appropriate local extraction, to ensure that the occupational exposure limit is not exceeded. Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required. The following information is given as general guidance.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection



Wear eye/face protection. Safety spectacles/goggles/full face shield.

Skin protection



Wear suitable gloves.

Suitable materials: Butyl; EN 374.

Suitability of gloves should be confirmed with glove manufacturer. Change gloves, if contamination occurs or duration of activity exceeds breakthrough time. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Respiratory protection



A suitable dust mask or dust respirator with filter type P3 or FFP3 (EN143 or EN149) may be appropriate. In the unlikely event of formation of particularly high levels of dust a self contained breathing apparatus may be appropriate.

Environmental exposure controls

Contain spillages. Collect in containers for disposal using approved dust respirator. Prevent release to the environment.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Beads.
Colour	White.
Odour	Typically methacrylate.
Melting Range (°C)	150 - 230
Boiling Point (°C)	Not applicable.
Flammability	Not applicable.
Flammable Limits	Not applicable.
Flash Point (°C)	Not applicable.
Auto Ignition Temperature (°C)	Not applicable.
Decomposition Temperature (°C)	Not available.
pH	Not available.
Kinematic Viscosity (mm ² /s)	Not applicable.
Solubility (Water)	Negligible.
Solubility (Other)	Not available.
Partition Coefficient (n-Octanol/water)	Not applicable.
Vapour pressure (Pascal)	Not applicable.
Specific Gravity	1.18
Vapour Density (Air=1)	Not applicable.
Particle characteristics	Not available.

9.2 Other information

Explosive properties	Weakly to moderately explosible.
Oxidising properties	Not applicable.
St Class	1
Relative Evaporation Rate (Ether = 1)	Not applicable.

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Non-reactive material.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None known.

10.4 Conditions to avoid

Avoid dust generation. Keep away from heat.

10.5 Incompatible materials

Polymer contains residual benzoyl peroxide. This may react with oxidising agents, reducing agents, acids, bases and amines leading to decomposition.

10.6 Hazardous decomposition products

Methyl methacrylate, Dibenzoyl peroxide, Carbon dioxide, Carbon monoxide.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Ingestion

Based upon the available data, the classification criteria are not met.
Low oral toxicity.

Inhalation

Based upon the available data, the classification criteria are not met.
High concentrations of dust may be irritant to the respiratory tract.

Skin corrosion/irritation	Based upon the available data, the classification criteria are not met.
Serious eye damage/irritation	Based upon the available data, the classification criteria are not met. Dust may cause irritation.
Sensitisation	It is not a skin sensitiser. (By analogy with similar materials) Contains: (Methyl methacrylate, Dibenzoyl peroxide). During normal handling this will not constitute a hazard. If the polymer matrix is destroyed e.g. when the product is dissolved in organic solvent, chemical residues will be released from the polymer matrix. Under these conditions, they may produce an allergic reaction in persons already sensitised.
Carcinogenicity	Based upon the available data, the classification criteria are not met.
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.
Reproductive toxicity	Based upon the available data, the classification criteria are not met.
STOT - single exposure	Based upon the available data, the classification criteria are not met.
STOT - repeated exposure	Based upon the available data, the classification criteria are not met.
Aspiration hazard	Based upon the available data, the classification criteria are not met.
11.2 Information on other hazards	
Other hazards	Does not cause endocrine disruption.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

The product is predicted to have low toxicity to aquatic organisms.

12.2 Persistence and degradability

The product is non-biodegradable in soil. There is no evidence of degradation in soil and water.

12.3 Bioaccumulative potential

The product has low potential for bioaccumulation.

12.4 Mobility in soil

The product is predicted to have low mobility in soil.

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

12.6 Endocrine disrupting properties

Does not cause endocrine disruption.

12.7 Other adverse effects

None known.

13. SECTION 13: DISPOSAL CONSIDERATIONS

Certain packages are returnable. Please consult your local office for further details. Ensure that all packaging is disposed of safely.

13.1 Waste treatment methods

This product meets the criteria for synthetic polymer microparticles as laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006.

Prevent release to the environment. Incineration may be used to recover energy value. Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Consult an accredited waste disposal contractor or the local authority for advice.

14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

Not applicable.

14.2 UN Proper Shipping Name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

15. SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No 1272/2008 (Classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006).

Directive 2009/161/EU (third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC).

The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council. Entry 78 Paragraph 4(a) allows the supply of synthetic polymer microparticles for use at industrial sites.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this substance/mixture. Not required.

16. SECTION 16: OTHER INFORMATION

This Safety Data Sheet was prepared in accordance with Commission Regulation (EU) 2020/878.

The following sections contain revisions or new statements: 1, 3, 4, 6, 8, 13, 15, 16

Date of preparation: 17 -October- 2025

LEGEND

Note: Not all of the following are necessarily contained in this Safety Data Sheet:

IOELV: Indicative Occupational Exposure Limit Value

WEL: Workplace Exposure Limit (UK HSE EH40)

Bmgv: Biological Monitoring Guidance Value

Sen: Capable of causing respiratory sensitisation

Sk: Can be absorbed through skin

Carc: Capable of causing cancer and/or heritable genetic damage

CHAN: Chemical Hazard Alert Notice

COM: The company aims to control exposure in its workplace to this limit

LTEL: Long Term Exposure Limit

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

PNEC: Predicted No-Effect Concentration

DNEL: Derived No-Effect Level

STOT: Specific Target Organ Toxicity

Repr.: Reproductive toxicity

Aquatic acute/chronic: Hazardous to the aquatic environment

Full text of H phrases

H225: Highly flammable liquid and vapour.
H241: Heating may cause a fire or explosion.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

MEDICAL USE: CAUTION: DO NOT USE IN MEDICAL APPLICATIONS INVOLVING IMPLANTATION IN THE HUMAN BODY.

Mitsubishi Chemical UK Limited has performed no clinical testing on the use of this product in any medical application. Mitsubishi Chemical UK Limited has no data to support the use of this product in any medical application. This product was not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. Mitsubishi Chemical UK Limited has neither sought, nor received, approval from any regulatory agency for the use of this product in implantation in the human body or in contact with internal body fluids or tissues.

It is the responsibility of the end-product manufacturer to identify all market and use-specific regulations and to ensure compliance with these regulations.

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