

SAFETY DATA SHEET

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

1.1 Product identifier

Product Name LUCITE® DIAKON® IMPACT MODIFIED ACRYLIC COMPOUND
 Product Description Impact modified acrylic compound based on Polymethylmethacrylate.
 This data sheet covers the following grades of LUCITE® DIAKON® acrylic compound, both clear and colours, manufactured in Europe: CRG800, CRG812, CRG826, CRG873

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

Identified use(s) Injection moulding and extrusion.
 Uses advised against Food contact applications.
 Some medical applications. For further information contact Technical Service Department.

1.3 Details of the supplier of the safety data sheet

Lucite International Holland BV, Merseyweg 16, Postbus 1222, 3180 AE Rozenburg, Netherlands
 Tel: +31-181-233233
 msdsinfo@lucite.com

1.4 Emergency telephone number

+44 (0) 1642 452461

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

Not applicable.

2.3 Other hazards

Not classified as PBT or vPvB. Combustible but not readily ignited. Low toxicity under normal conditions of handling and use.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

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

Hazardous ingredient(s)	%W/W	EC No.	REACH Registration No.	Hazard Class and Category Code(s)	Hazard statement Code(s)
No classifiable hazardous ingredient(s).					

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Skin Contact IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. Molten material can cause severe burns. Do NOT try to peel molten polymer from the skin. Cool rapidly with water.
 Eye Contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Ingestion Do not induce vomiting. Wash out mouth with water. Obtain medical attention if ill effects occur.

4.2 Most important symptoms and effects, both acute and delayed

Not applicable.

4.3 Indication of the immediate medical attention and special treatment needed

None necessary.

5. SECTION 5: FIRE-FIGHTING 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 decompose if heated above 280°C. Combustion or thermal decomposition will evolve toxic, irritant and flammable vapours.

5.3 Advice for fire-fighters

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

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Sweep up and shovel into waste drums or plastic bags. Wash the spillage area with water.

6.4 Reference to other sections

See Section: 8, 13

7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with eyes. Avoid prolonged skin contact. Unlikely to represent a dust hazard under normal handling conditions. Extra care should be taken to prevent burns from contact with hot material.

Burns are the most common injury during melt processing of thermoplastics. Take utmost care. LUCITE® DIAKON® grades can be processed safely in moulding and extrusion equipment at melt temperatures up to 280°C. The more rapid decomposition above these temperatures could cause gaseous pressure to be built up, with a risk of spraying low-viscosity polymer from the nozzle or die without any screw movement. All polymers degrade to some extent at their processing temperature, an effect which increases with increasing temperature. It is therefore impossible to be precise about which substances may be evolved. However, it is only the minor components which vary substantially. The major components are given in Section 10. Care should be taken when despruing or degating mouldings as resultant edges can be sharp and may cause cuts to skin and damage to eyes. Condensation residues that build up on and around extrusion equipment should be handled and disposed of as hazardous chemical waste. For further information refer to Thermal Processing - Hazard Advice Note TS01-05.

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 Ambient.

Incompatible materials: None known.

7.3 Specific end use(s)

Number plates

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

The following values apply to substances which may be evolved during thermal processing.

Substance	CAS No.	LTEL ppm (8Hr TWA)	LTEL mg/m3 (8Hr TWA)	STEL ppm	STEL mg/m3	Notes
Methyl methacrylate	000080-62-6	50	208	100	416	WEL
Ethyl acrylate	000140-88-5	5	21	10	42	WEL
Styrene	000100-42-5	100	430	250	1080	WEL
n-Butyl acrylate	000141-32-2	1	5	5	26	WEL

8.2 Exposure controls

Appropriate engineering controls

Do not eat, drink or smoke at the work place. 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.

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

Eye/face protection



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

Skin protection



Not normally required.

Respiratory protection



A suitable dust mask or dust respirator with filter type P may be appropriate. In the unlikely event of formation of particularly high levels of dust a self contained breathing apparatus may be appropriate.

Thermal hazards

Wear thermal insulating gloves when handling hot masses.

Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely. A suitable mask with filter type A may be appropriate. In the unlikely event of formation of particularly high levels of vapour a self contained breathing apparatus may be appropriate.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Limiting Oxygen Index (% O₂): 16.8

UL Flame Class: HB

9.1 Information on basic physical and chemical properties

Form	Pellets (cylinders or cubes).
Colour	Clear or coloured
Odour	Slight.
pH (Value)	Not applicable.
Boiling Point (°C)	Not applicable.
Flash Point (°C)	395
Relative Evaporation Rate (Ether = 1)	Not applicable.
Flammable Limits	Not applicable.
Vapour Pressure (Pascal)	Not applicable.
Vapour Density (Air=1)	Not applicable.
Specific Gravity	1.14 - 1.18 (Refer to grade technical data sheet for values)
Solubility (Water)	Practically insoluble.
Solubility (Other)	Attacked by chlorinated aliphatic hydrocarbons, aromatic hydrocarbons, ketones, alcohols, ether and esters.
Partition Coefficient (n-Octanol/water)	Not applicable.
Auto Ignition Temperature (°C)	390
Viscosity (mPa.s)	Not applicable.

Explosive Properties
Oxidising Properties

Not applicable.
Not applicable.

9.2 Other information

Softening Point (°C)

88 - 116 (Refer to grade technical data sheet for values)

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

Keep away from heat.

10.5 Incompatible materials

None known.

10.6 Hazardous Decomposition Product(s)

Methyl methacrylate, Ethyl acrylate, Styrene, Butyl acrylate, Carbon dioxide, Carbon monoxide.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Ingestion

Low oral toxicity.

Inhalation

Unlikely to be hazardous by inhalation. High concentrations of vapour from hot operations may be harmful, cause irritation of the respiratory tract and slight narcotic effects.

Skin Contact

Unlikely to cause skin irritation.

Contains greater than 0.1% residual (Methyl methacrylate, Ethyl acrylate, Butyl acrylate). 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.

Eye Contact

Dust may cause irritation.

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 Other adverse effects

None known.

13. SECTION 13: DISPOSAL CONSIDERATIONS

The waste is considered to be non hazardous. Clean scrap may be reprocessed. 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

May be disposed of by landfill in accordance with local regulations. Incineration may be used to recover energy value.

14. SECTION 14: TRANSPORT INFORMATION

Not Classified as Dangerous for Transport.

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 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

15. SECTION 15: REGULATORY INFORMATION

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

Directive 67/548/EEC & Directive 1999/45/EC

15.2 Chemical Safety Assessment

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

16. SECTION 16: OTHER INFORMATION

This Safety Data Sheet was prepared in accordance with EC Regulation (EC) No. 453/2010.

Date of preparation: 3 -January- 2013
The following sections contain revisions or new statements: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Inventory Status

European Union	To the best of our knowledge all chemicals in this product comply with REACH regulations.
United States (TSCA)	Listed in TSCA
Canada (DSL/NDSL)	Listed in DSL
Japan (ENCS)	Listed in ENCS
Philippines (PICCS)	Listed in PICCS
Australia (AICS)	Listed in AICS
South Korea (KECI)	Listed in KECI
China (IECSC)	Listed in IECSC

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

STOT SE: Specific Target Organ Toxicity - Single Exposure

Repr.: Reproductive toxicity

Aquatic acute/chronic: Hazardous to the aquatic environment

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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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