



SURLYN® ionomer resin

Version 2.1
Revision Date 06.09.2011

Ref. 150000000289

This SDS adheres to the standards and regulatory requirements of Lithuania and may not meet the regulatory requirements in other countries.

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

Product identifier

Product name : SURLYN® ionomer resin
Types : PC100, PC350, PC2000, AD2000, AE1034-2
Recycling code : ISO 11469 : >EMA<

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

Use of the Substance/Mixture : Resin for moulding and/or extrusion

Details of the supplier of the safety data sheet

Company : DuPont Iberica S.L.
Avda. Diagonal, 561
ES-08029 Barcelona
Spain
Telephone : +34-98-512.4000
Telefax : +34-98-512.4090
E-mail address : sds-support@che.dupont.com

Emergency telephone number

Emergency telephone number : +44-(0)8456-006.640

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

Other hazards

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature of the mixture : Copolymer of ethylene and methacrylic acid.
: Partial sodium or zinc salt



SURLYN® ionomer resin

Version 2.1
Revision Date 06.09.2011

Ref. 150000000289

: Additives

Substances

not applicable

Mixtures

Registration number	Classification according Directive 67/548/EEC	Classification according Regulation 1272/2008 (CLP)	Concentration
---------------------	---	---	---------------

Methacrylic acid (CAS-No.79-41-4) (EC-No.201-204-4)

01-2119463884-26	Xn;R21/22 C;R35	Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1A; H314	< 0,1 %
------------------	--------------------	---	---------

Methacrylic acid : Present below the regulatory disclosure limits, may be perceptible.

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Description of first aid measures

- General advice : Remove from exposure, lie down. Never give anything by mouth to an unconscious person. No hazards which require special first aid measures. If a person vomits when lying on his back, place him in the recovery position.
- Inhalation : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Consult a physician after significant exposure.
- Skin contact : Cool skin rapidly with cold water after contact with molten material. Do not peel polymer from the skin. Obtain medical attention.
- Eye contact : Flush eyes with water as a precaution. Obtain medical attention.
- Ingestion : No hazards which require special first aid measures. Drink water as a precaution.

Most important symptoms and effects, both acute and delayed

no data available

Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO2), Dry powder, Foam, Water



SURLYN® ionomer resin

Version 2.1
Revision Date 06.09.2011

Ref. 15000000289

Special hazards arising from the substance or mixture

Specific hazards during firefighting : Large molten masses may ignite spontaneously in air. Water quenching is good practice. Under conditions giving incomplete combustion, hazardous gases produced may consist of: Carbon monoxide Carbon dioxide (CO₂) (see also section 10)

Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear suitable protective equipment.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Do not allow run-off from fire fighting to enter drains or water courses. Burns after ignition without external heat source (IEC 60695-11-10 : HB).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions : Ventilate the area. Refer to protective measures listed in sections 7 and 8.

Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water courses. Do not contaminate surface water.

Methods and materials for containment and cleaning up

Methods for cleaning up : Clean up promptly by sweeping or vacuum. Sweep up or vacuum up spillage and collect in suitable container for disposal.

Other information : Use mechanical handling equipment.

Reference to other sections

not applicable

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling : Protect from contamination. When opening containers, avoid breathing vapours that may be emanating. Provide appropriate exhaust ventilation at dryers, machinery and at places where dust or volatiles can be generated. General precaution for all plastics and elastomers: For personal protection see section 8. In case of insufficient ventilation, wear suitable respiratory equipment. No special handling advice required. Open container only in well-ventilated area.

Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

Dust explosion class : no data available



SURLYN® ionomer resin

Version 2.1

Revision Date 06.09.2011

Ref. 150000000289

Conditions for safe storage, including any incompatibilities

Requirements for storage : No special storage conditions required. Keep container tightly closed in a dry areas and containers and well-ventilated place. Protect from contamination.

Further information on storage conditions : none

Advice on common storage : No special restrictions on storage with other products.

Other data : No decomposition if stored and applied as directed.

Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If sub-section is empty then no values are applicable.

Components with workplace control parameters

Type Form of exposure	Control parameters	Update	Basis	Remarks
--------------------------	-----------------------	--------	-------	---------

Dust (inhalable and respirable fraction)

TWA Respirable fraction.	5 mg/m3	12 2001	LT OEL	
TWA Inhalable fraction.	10 mg/m3	12 2001	LT OEL	
TWA Inhalable fraction.	5 mg/m3	12 2001	LT OEL	
TWA Dust.	1 mg/m3	12 2001	LT OEL	

Methacrylic acid (CAS-No. 79-41-4)

TWA	70 mg/m3 20 ppm	12 2001	LT OEL	
STEL	100 mg/m3 30 ppm	12 2001	LT OEL	

Exposure controls

Eye protection : Safety glasses with side-shields

Hand protection : Protective gloves (Type : Kevlar® - heat resistant, use possible until worn out)

Skin and body protection : If there is a potential for contact with hot/molten material wear heat resistant clothing and footwear. Regular cleaning of equipment, work area and clothing.



SURLYN® ionomer resin

Version 2.1

Revision Date 06.09.2011

Ref. 15000000289

- Protective measures : No special protective equipment required.
- Hygiene measures : Wash hands before breaks and at the end of workday. General precaution for all plastics and elastomers: Do not breathe fumes evolved from hot polymer.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment: Half mask with a particle filter FFP2/FFP3 (EN149)

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- Form : pellets
- Colour : off-white
- Odour : acrylic-like
- pH : not applicable
- Melting point/range : 80 - 110 °C
- Flash point : not applicable
- Ignition temperature : 335 - 365 °C
- Thermal decomposition : > 325 °C
- Density : 0,93 - 0,96 g/cm³ , Method: ISO 1183
- Water solubility : insoluble

Other information

no data available

10. STABILITY AND REACTIVITY

- Reactivity** : no data available
- Chemical stability** : no data available
- Possibility of hazardous reactions** : None. Further information : During drying, cleaning and moulding, small amounts of hazardous gases and/or particulate matter may be released. These may irritate eyes, nose and throat. Large molten masses may give off hazardous gases. Water quenching is good practice. Stable under normal conditions.
- Conditions to avoid** : Avoid heating for prolonged periods above the recommended upper processing limit.
- Incompatible materials** : Strong acids and oxidizing agents



SURLYN® ionomer resin

Version 2.1

Revision Date 06.09.2011

Ref. 15000000289

Hazardous decomposition products : Acrolein
acetaldehydes
Organic acids
Crotonaldehyde

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity

- Methacrylic acid
LD50 / rat : 1 320 mg/kg

Acute inhalation toxicity

- Methacrylic acid
LC50 / rat : 3,7 mg/l
Respiratory tract irritation

Acute dermal toxicity

- Methacrylic acid
LD50 / rabbit : 500 - 1 000 mg/kg

Skin irritation

- Methacrylic acid
rabbit
Classification: Causes severe burns.
Result: Corrosive

Eye irritation

- Methacrylic acid
rabbit
Classification: Causes severe burns.
Result: Corrosive

Sensitisation

- Methacrylic acid
guinea pig Buehler Test
Classification: Not a skin sensitizer.
Result: Did not cause sensitization on laboratory animals.
There are reports of human skin sensitization.

Mutagenicity assessment

- Methacrylic acid
Animal testing did not show any mutagenic effects. Information given is based on data obtained from similar substances.

Carcinogenicity assessment



SURLYN® ionomer resin

Version 2.1

Revision Date 06.09.2011

Ref. 15000000289

- Methacrylic acid
Animal testing did not show any carcinogenic effects. Information given is based on data obtained from similar substances.

Toxicity to reproduction assessment

- Methacrylic acid
No toxicity to reproduction Information given is based on data obtained from similar substances.

Further information

The product contains no substances classified as hazardous to health in concentrations which should be taken into account according to EC directives.

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish

- Methacrylic acid
LC50 / 96 h / *Oncorhynchus mykiss* (rainbow trout): 85 mg/l

Toxicity to aquatic plants

- Methacrylic acid
ErC50 / 72 h / *Pseudokirchneriella subcapitata* (green algae): 45 mg/l
EbC50 / 72 h / *Pseudokirchneriella subcapitata* (green algae): 20 mg/l

Toxicity to aquatic invertebrates

- Methacrylic acid
EC50 / 48 h / *Daphnia magna* (Water flea): > 130 mg/l

Chronic toxicity to aquatic Invertebrates

- Methacrylic acid
NOEC / 21 d / *Daphnia magna* (Water flea): 53 mg/l

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Results of PBT and vPvB assessment



SURLYN® ionomer resin

Version 2.1
Revision Date 06.09.2011

Ref. 15000000289

no data available

Other adverse effects

Additional ecological information

The product contains no substances classified as hazardous to the environment in concentrations which should be taken into account.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product : Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled, when in compliance with local regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

European Waste Catalogue number : 07 02 99: Wastes not otherwise specified.

14. TRANSPORT INFORMATION

Further information : Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

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

Water contaminating class : nwg not water endangering
(Germany)

Chemical Safety Assessment

A Chemical Safety Assessment is not required for this/these products

16. OTHER INFORMATION

Text of R-phrases mentioned in Section 3

R21/22 Harmful in contact with skin and if swallowed.
R35 Causes severe burns.

Full text of H-Statements referred to under section 3.

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.

Restrictions on use



SURLYN® ionomer resin

Version 2.1

Revision Date 06.09.2011

Ref. 15000000289

Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of the DuPont POLICY Regarding Medical Applications H-50103-3 and DuPont CAUTION Regarding Medical Applications H-50102-3.

Further information

All chemical constituents are listed in: EINECS

Before use read DuPont's safety information.

® Registered trademark of E.I. du Pont de Nemours and Company

™ Trademark of E.I. du Pont de Nemours and Company.

An Exposure Scenario (ES) is not required.

Significant change from previous version is denoted with a double bar.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.