



DRIVING SURFACE PERFECTION

ISOPON FASTGLAS RESIN

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
 Product Reference code: according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
 SDS Ref. (EU): FASTGLAS-R-SDS
 Issue date: 27/06/2016 Revision date: 31/08/2020 Supersedes version of: 20/08/2019 Version: 6.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Trade name : ISOPON FASTGLAS RESIN
 UFI : XKR0-H0GP-200X-YQHF
 Product code : RE/SM, RE/LA, RE/XL
 Product group : Unsaturated polyester
 Other means of identification : Component of: GL/LA/D, GL/SM/D

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

1.2.1. Relevant identified uses

Intended for general public
 Main use category : Industrial use, Professional use, Consumer use
 Use of the substance/mixture : Fillers, putties, plasters, modelling clay
 Function or use category : Fillers

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

U-POL Limited Ltd
 Denington Road
 GB- NN8 2QH Wellingborough – Northamptonshire
 United Kingdom
 T +44 (0) 1933 230310
technicalsupport@u-pol.com - www.u-pol.com

Importer

U-POL Netherlands B.V. B.V.
 Hoogoorddreef 15
 NL- 1101BA Amsterdam
 Netherlands
 T +31 20 240 2216
technicalsupport@u-pol.com - www.u-pol.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: +44 (0) 870 8200418 (24 hrs)

| Country | Organisation/Company | Address | Emergency number | Comment |
|----------------|--|--|--|---|
| Ireland | National Poisons Information Centre Beaumont Hospital | PO Box 1297 Beaumont Road 9 Dublin | +353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7) | |
| United Kingdom | NHS England, Scotland & Wales | - | Call 111 or a Doctor | In Northern Ireland, contact your local GP or pharmacist during normal hours (www.gpoutofhours.h schi.net) |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3 H226
 Skin corrosion/irritation, Category 2 H315
 Serious eye damage/eye irritation, Category 2 H319

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Reproductive toxicity, Category 2 H361
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335
Specific target organ toxicity — Repeated exposure, Category 1 H372
Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Contains

: styrene

Hazard statements (CLP)

: H226 - Flammable liquid and vapour.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H361 - Suspected of damaging fertility or the unborn child.
H372 - Causes damage to organs (hearing organs) through prolonged or repeated exposure (Inhalation).
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, open flames, sparks. — No smoking.
P261 - Avoid breathing vapours, spray, fume.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, protective clothing, protective gloves.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements : EUH208 - Contains phthalic anhydride. May produce an allergic reaction.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

| Component | |
|------------------------------|---|
| styrene (100-42-5) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| phthalic anhydride (85-44-9) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---------------------|--|---------|--|
| styrene (Note D) | CAS-No.: 100-42-5 EC-No.: 202-851-5 EC Index-No.: 601-026-00-0 REACH-no: 01-2119457861-32 | 25 – 50 | Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 3, H412 |
| phthalic anhydride | CAS-No.: 85-44-9 EC-No.: 201-607-5 EC Index-No.: 607-009-00-4 REACH-no: 01-2119457017-41 | 0.1 – 1 | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 |

Note D : Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : IF exposed or concerned: Get medical advice/attention. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell. |
| First-aid measures after skin contact | : Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Call a poison center or a doctor if you feel unwell. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-------------------------------------|-------------------------------------|
| Symptoms/effects after inhalation | : May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Irritation. |
| Symptoms/effects after eye contact | : Eye irritation. |

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

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5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Protective clothing. Gloves.
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe vapours, spray, fume. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, collect/pump into suitable containers. Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe spray, vapours, fume. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Incompatible products : Oxidizing agent.
Storage temperature : < 25 °C
Storage area : Store in a well-ventilated place.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

| styrene (100-42-5) | |
|---|--|
| Ireland - Occupational Exposure Limits | |
| Local name | Styrene [Phenylethylene, Vinyl benzene] |
| OEL TWA [1] | 85 mg/m ³ |
| OEL TWA [2] | 20 ppm |
| OEL STEL | 170 mg/m ³ |
| OEL STEL [ppm] | 40 ppm |
| Regulatory reference | Chemical Agents Code of Practice 2020 |
| United Kingdom - Occupational Exposure Limits | |
| Local name | Styrene |
| WEL TWA (OEL TWA) [1] | 430 mg/m ³ |
| WEL TWA (OEL TWA) [2] | 100 ppm |
| WEL STEL (OEL STEL) | 1080 mg/m ³ |
| WEL STEL (OEL STEL) [ppm] | 250 ppm |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |
| phthalic anhydride (85-44-9) | |
| EU - Indicative Occupational Exposure Limit (IOEL) | |
| Local name | Phthalic anhydride |
| Remark | Respiratory sensitizer; skin sensitizer. (Year of adoption 2010) Respiratory sensitizer; skin sensitizer. (Year of adoption 2010) |
| Regulatory reference | SCOEL Recommendations SCOEL Recommendations |
| Ireland - Occupational Exposure Limits | |
| Local name | Phthalic anhydride |
| OEL TWA [2] | 1 ppm |
| OEL STEL | 12 mg/m ³ |
| Remark | Sens. (In the workplace respiratory or dermal exposures to sensitising agents may occur. Sensitizers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The notation does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitizers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE)) |
| Regulatory reference | Chemical Agents Code of Practice 2020 |
| United Kingdom - Occupational Exposure Limits | |
| Local name | Phthalic anhydride |
| WEL TWA (OEL TWA) [1] | 4 mg/m ³ |
| WEL STEL (OEL STEL) | 12 mg/m ³ |

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| phthalic anhydride (85-44-9) | |
|------------------------------|--|
| Remark | Sen (Capable of causing occupational asthma) |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

| styrene (100-42-5) | |
|--|--------------------------|
| DNEL/DMEL (Workers) | |
| Acute - systemic effects, inhalation | 289 mg/m ³ |
| Acute - local effects, inhalation | 306 mg/m ³ |
| Long-term - systemic effects, dermal | 406 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 85 mg/m ³ |
| DNEL/DMEL (General population) | |
| Acute - systemic effects, inhalation | 174.25 mg/m ³ |
| Acute - local effects, inhalation | 182.75 mg/m ³ |
| Long-term - systemic effects, oral | 2.1 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 10.2 mg/m ³ |
| Long-term - systemic effects, dermal | 343 mg/kg bodyweight/day |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 0.028 mg/l |
| PNEC aqua (marine water) | 0.014 mg/l |
| PNEC aqua (intermittent, freshwater) | 0.04 mg/l |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 0.614 mg/kg dwt |
| PNEC sediment (marine water) | 0.307 mg/kg dwt |
| PNEC (Soil) | |
| PNEC soil | 0.2 mg/kg dwt |
| PNEC (STP) | |
| PNEC sewage treatment plant | 5 mg/l |
| phthalic anhydride (85-44-9) | |
| DNEL/DMEL (Workers) | |
| Long-term - systemic effects, dermal | 10 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 32.2 mg/m ³ |
| DNEL/DMEL (General population) | |
| Long-term - systemic effects, oral | 5 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 8.6 mg/m ³ |
| Long-term - systemic effects, dermal | 5 mg/kg bodyweight/day |

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| phthalic anhydride (85-44-9) | |
|--------------------------------------|-----------------|
| PNEC (Water) | |
| PNEC aqua (freshwater) | 1 mg/l |
| PNEC aqua (marine water) | 0.1 mg/l |
| PNEC aqua (intermittent, freshwater) | 5.6 mg/l |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 3.8 mg/kg dwt |
| PNEC sediment (marine water) | 0.38 mg/kg dwt |
| PNEC (Soil) | |
| PNEC soil | 0.173 mg/kg dwt |
| PNEC (STP) | |
| PNEC sewage treatment plant | 10 mg/l |

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Protective clothing. Safety glasses.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

| Hand protection | | | | | |
|-------------------|----------------------|------------------|----------------|-------------|----------|
| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
| Protective gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) | 0.3 | | EN 374-3 |

Other skin protection

Materials for protective clothing:

Impermeable clothing

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

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| Respiratory protection | | | |
|------------------------|--|-----------|----------|
| Device | Filter type | Condition | Standard |
| Breathing apparatus | Type A - High-boiling (>65 °C) organic compounds | | EN 14387 |

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Liquid |
| Colour | : dark yellow. |
| Appearance | : Liquid. |
| Odour | : characteristic. |
| Odour threshold | : Not available |
| Melting point | : -30 °C |
| Freezing point | : Not available |
| Boiling point | : 145 °C |
| Flammability | : Not applicable |
| Explosive limits | : Not available |
| Lower explosion limit | : Not available |
| Upper explosion limit | : Not available |
| Flash point | : 31 °C |
| Auto-ignition temperature | : Not available |
| Decomposition temperature | : Not available |
| pH | : Not available |
| Viscosity, kinematic | : 477 – 624 mm ² /s |
| Viscosity, dynamic | : ≈ 600 (520 – 680) mPa·s |
| Solubility | : Insoluble in water. Soluble in aromatic hydrocarbons. |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : 6 hPa |
| Vapour pressure at 50 °C | : Not available |
| Density | : 1.09 g/cm ³ |
| Relative density | : Not available |
| Relative vapour density at 20 °C | : 3.6 |
| Particle size | : Not applicable |
| Particle size distribution | : Not applicable |
| Particle shape | : Not applicable |
| Particle aspect ratio | : Not applicable |
| Particle aggregation state | : Not applicable |
| Particle agglomeration state | : Not applicable |
| Particle specific surface area | : Not applicable |
| Particle dustiness | : Not applicable |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : 345 g/l

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SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

| styrene (100-42-5) | |
|-----------------------|--|
| LD50 oral rat | 5000 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |
| LC50 Inhalation - Rat | 11.8 mg/l (4 h, Rat, Inconclusive, insufficient data, Inhalation (vapours)) |

| phthalic anhydride (85-44-9) | |
|------------------------------|--|
| LD50 oral rat | 1530 mg/kg bodyweight Animal: rat, Animal sex: male |
| LD50 dermal rabbit | > 3160 mg/kg (Rabbit, Experimental value, Dermal, 14 day(s)) |
| LC50 Inhalation - Rat | > 2.14 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity) |

| 1,4-naphthoquinone (130-15-4) | |
|---------------------------------|--|
| LD50 oral rat | 190 mg/kg bodyweight (Rat, Literature study, Oral) |
| LD50 dermal rat | 202 mg/kg |
| LC50 Inhalation - Rat (Vapours) | 0.046 mg/l/4h |

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

| styrene (100-42-5) | |
|--------------------|--------------------------------------|
| IARC group | 2B - Possibly carcinogenic to humans |

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| phthalic anhydride (85-44-9) | |
|---|--|
| NOAEL (chronic, oral, animal/male, 2 years) | 3570 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information) |
| NOAEL (chronic, oral, animal/female, 2 years) | 1785 mg/kg bodyweight Animal: mouse, Animal sex: female, Remarks on results: other:Effect type: carcinogenicity (migrated information) |

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

| phthalic anhydride (85-44-9) | |
|------------------------------|--|
| NOAEL (animal/male, F0/P) | 3570 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Generation: all major organs incl. reproductive organs were examined (migrated information) |
| NOAEL (animal/female, F0/P) | 1785 mg/kg bodyweight Animal: mouse, Animal sex: female, Remarks on results: other:Generation: all major organs incl. reproductive organs were examined (migrated information) |

STOT-single exposure : May cause respiratory irritation.

| styrene (100-42-5) | |
|----------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |

| phthalic anhydride (85-44-9) | |
|------------------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |

| 1,4-naphthoquinone (130-15-4) | |
|-------------------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |

STOT-repeated exposure : Causes damage to organs (hearing organs) through prolonged or repeated exposure (Inhalation).

| styrene (100-42-5) | |
|--|--|
| LOAEL (oral, rat, 90 days) | 2000 mg/kg bodyweight Animal: rat |
| LOAEC (inhalation, rat, vapour, 90 days) | 0.21 mg/l air Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| NOAEL (oral, rat, 90 days) | 1000 mg/kg bodyweight Animal: rat |
| NOAEL (subchronic, oral, animal/male, 90 days) | 10 mg/kg bodyweight Animal: mouse, Animal sex: male |
| STOT-repeated exposure | Causes damage to organs (hearing sense) through prolonged or repeated exposure (if inhaled). |

| phthalic anhydride (85-44-9) | |
|------------------------------|---|
| LOAEL (oral, rat, 90 days) | 2500 mg/kg bodyweight Animal: rat, Animal sex: male |

Aspiration hazard : Not classified

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|-----------------------|------------------------------|
| Viscosity, kinematic | 477 – 624 mm ² /s |

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Not classified

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Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

| styrene (100-42-5) | |
|---------------------------|--|
| LC50 - Fish [1] | 10 mg/l Test organisms (species): Pimephales promelas |
| EC50 - Crustacea [1] | 4.7 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 4.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 96h - Algae [1] | 6.3 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| ErC50 algae | 4.9 mg/l (EPA OTS 797.1050, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate) |
| LOEC (chronic) | 2.06 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |
| NOEC (chronic) | 1.01 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |

| phthalic anhydride (85-44-9) | |
|-------------------------------------|--|
| LC50 - Fish [1] | 560 mg/l (OECD 210: Fish, Early-Life Stage Toxicity Test, 7 day(s), Danio rerio, Semi-static system, Fresh water, Experimental value, Nominal concentration) |
| EC50 - Crustacea [1] | > 640 mg/l Test organisms (species): Daphnia magna |
| NOEC (chronic) | 16 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |
| NOEC chronic fish | 10 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '60 d' |

12.2. Persistence and degradability

| styrene (100-42-5) | |
|-------------------------------|--|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. |
| Chemical oxygen demand (COD) | 2.8 g O ₂ /g substance |
| ThOD | 3.07 g O ₂ /g substance |
| BOD (% of ThOD) | 0.42 (Literature study) |

| phthalic anhydride (85-44-9) | |
|-------------------------------------|------------------------------------|
| Persistence and degradability | Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 1.26 g O ₂ /g substance |
| ThOD | 1.51 g O ₂ /g substance |

12.3. Bioaccumulative potential

| styrene (100-42-5) | |
|---|---|
| BCF - Fish [1] | 74 (Calculated value) |
| Partition coefficient n-octanol/water (Log Pow) | 2.96 (Practical experience/observation, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| phthalic anhydride (85-44-9) | |
|---|--|
| BCF - Other aquatic organisms [1] | 3.4 (EPIWIN BCF (v 2.15), Calculated value) |
| Partition coefficient n-octanol/water (Log Pow) | 1.6 (Experimental value) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

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12.4. Mobility in soil

styrene (100-42-5)

| | |
|--|---------------------------------------|
| Surface tension | No data available in the literature |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.55 (log Koc, Estimated value) |
| Ecology - soil | Low potential for adsorption in soil. |

phthalic anhydride (85-44-9)

| | |
|--|--|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 0.3 – 1.49 (log Koc, Calculated value) |
| Ecology - soil | Highly mobile in soil. |

12.5. Results of PBT and vPvB assessment

Component

| | |
|------------------------------|---|
| styrene (100-42-5) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| phthalic anhydride (85-44-9) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|------------------------------|---|
| Regional legislation (waste) | : Disposal must be done according to official regulations. |
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Additional information | : Flammable vapours may accumulate in the container. |

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

| | |
|---------------|-----------|
| UN-No. (ADR) | : UN 1866 |
| UN-No. (IMDG) | : UN 1866 |
| UN-No. (IATA) | : UN 1866 |
| UN-No. (ADN) | : UN 1866 |
| UN-No. (RID) | : UN 1866 |

14.2. UN proper shipping name

| | |
|---------------------------------------|---|
| Proper Shipping Name (ADR) | : RESIN SOLUTION |
| Proper Shipping Name (IMDG) | : RESIN SOLUTION |
| Proper Shipping Name (IATA) | : Resin solution |
| Proper Shipping Name (ADN) | : RESIN SOLUTION |
| Proper Shipping Name (RID) | : RESIN SOLUTION |
| Transport document description (ADR) | : UN 1866 RESIN SOLUTION, 3, III, (D/E) |
| Transport document description (IMDG) | : UN 1866 RESIN SOLUTION, 3, III |
| Transport document description (IATA) | : UN 1866 Resin solution, 3, III |

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Transport document description (ADN) : UN 1866 RESIN SOLUTION, 3, III
Transport document description (RID) : UN 1866 RESIN SOLUTION, 3, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3
:



IMDG

Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3
:



IATA

Transport hazard class(es) (IATA) : 3
Danger labels (IATA) : 3
:



ADN

Transport hazard class(es) (ADN) : 3
Danger labels (ADN) : 3
:



RID

Transport hazard class(es) (RID) : 3
Danger labels (RID) : 3
:



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

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14.6. Special precautions for user

Overland transport

| | |
|---|---|
| Classification code (ADR) | : F1 |
| Special provisions (ADR) | : 640E |
| Limited quantities (ADR) | : 5I |
| Excepted quantities (ADR) | : E1 |
| Packing instructions (ADR) | : P001, IBC03, LP01, R001 |
| Special packing provisions (ADR) | : PP1 |
| Mixed packing provisions (ADR) | : MP19 |
| Portable tank and bulk container instructions (ADR) | : T2 |
| Portable tank and bulk container special provisions (ADR) | : TP1 |
| Tank code (ADR) | : LGBF |
| Vehicle for tank carriage | : FL |
| Transport category (ADR) | : 3 |
| Special provisions for carriage - Packages (ADR) | : V12 |
| Special provisions for carriage - Operation (ADR) | : S2 |
| Hazard identification number (Kemler No.) | : 30 |
| Orange plates | :  |
| | :  |
| Tunnel restriction code (ADR) | : D/E |
| EAC code | : •3YE |

Transport by sea

| | |
|------------------------------------|--|
| Special provisions (IMDG) | : 223, 955 |
| Limited quantities (IMDG) | : 5 L |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : P001, LP01 |
| Special packing provisions (IMDG) | : PP1 |
| IBC packing instructions (IMDG) | : IBC03 |
| Tank instructions (IMDG) | : T2 |
| Tank special provisions (IMDG) | : TP1 |
| EmS-No. (Fire) | : F-E |
| EmS-No. (Spillage) | : S-E |
| Stowage category (IMDG) | : A |
| Properties and observations (IMDG) | : Miscibility with water depends upon the composition. |

Air transport

| | |
|--|--------|
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y344 |
| PCA limited quantity max net quantity (IATA) | : 10L |
| PCA packing instructions (IATA) | : 355 |
| PCA max net quantity (IATA) | : 60L |
| CAO packing instructions (IATA) | : 366 |
| CAO max net quantity (IATA) | : 220L |
| Special provisions (IATA) | : A3 |
| ERG code (IATA) | : 3L |

Inland waterway transport

| | |
|-----------------------------------|-------------|
| Classification code (ADN) | : F1 |
| Special provisions (ADN) | : 640E |
| Limited quantities (ADN) | : 5 L |
| Excepted quantities (ADN) | : E1 |
| Equipment required (ADN) | : PP, EX, A |
| Ventilation (ADN) | : VE01 |
| Number of blue cones/lights (ADN) | : 0 |

Rail transport

| | |
|---------------------------|------|
| Classification code (RID) | : F1 |
|---------------------------|------|

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| | |
|---|---------------------------|
| Special provisions (RID) | : 640E |
| Limited quantities (RID) | : 5L |
| Excepted quantities (RID) | : E1 |
| Packing instructions (RID) | : P001, IBC03, LP01, R001 |
| Special packing provisions (RID) | : PP1 |
| Mixed packing provisions (RID) | : MP19 |
| Portable tank and bulk container instructions (RID) | : T2 |
| Portable tank and bulk container special provisions (RID) | : TP1 |
| Tank codes for RID tanks (RID) | : LGBF |
| Transport category (RID) | : 3 |
| Special provisions for carriage – Packages (RID) | : W12 |
| Colis express (express parcels) (RID) | : CE4 |
| Hazard identification number (RID) | : 30 |

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)

| Reference code | Applicable on | Entry title or description |
|----------------|---------------------------------|--|
| 3(a) | ISOPON FASTGLAS RESIN ; styrene | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F |
| 3(b) | ISOPON FASTGLAS RESIN ; styrene | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 |
| 3(c) | ISOPON FASTGLAS RESIN ; styrene | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1 |
| 40. | ISOPON FASTGLAS RESIN ; styrene | Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not. |

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

VOC content : 345 g/l

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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SECTION 16: Other information

Abbreviations and acronyms:

| | |
|---------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BLV | Biological limit value |
| CAS-No. | Chemical Abstract Service number |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC50 | Median effective concentration |
| EC-No. | European Community number |
| EN | European Standard |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| vPvB | Very Persistent and Very Bioaccumulative |
| WGK | Water Hazard Class |

Full text of H- and EUH-statements:

| | |
|----------------------------------|---|
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4 |
| Acute Tox. 4 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| EUH208 | Contains phthalic anhydride. May produce an allergic reaction. |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |

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| Full text of H- and EUH-statements: | |
|-------------------------------------|--|
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation. |
| H361 | Suspected of damaging fertility or the unborn child. |
| H361d | Suspected of damaging the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects. |
| Repr. 2 | Reproductive toxicity, Category 2 |
| Resp. Sens. 1 | Respiratory sensitisation, Category 1 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| STOT RE 1 | Specific target organ toxicity — Repeated exposure, Category 1 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |

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