

| | | | | 1910.1200 and WHMIS 2015 |
|--|---|---|-------------------------|--------------------------|
| Revision date: | 31 July 2019 | Initial date of issue: | 12 May 2010 | SDS No. 437A-7b |
| SECTION 1: IDE | ENTIFICATION OF THE | SUBSTANCE/MIXTURE AN | ID OF THE COMPANY | //UNDERTAKING |
| 1.1. Product ide | ntifier | | | |
| ARC S7 (RD, WH | I) (Part A) | | | |
| 1.2. Relevant ide | entified uses of the sul | ostance or mixture and use | s advised against | |
| Resin for ARC S7 | 7, when mixed with Part | B forms a tough, chemical re | sistant, sprayable coat | ing. |
| 1.3. Details of th | e supplier of the safet | - | | |
| (Mon Fri. 8:30 - SDS requests: w E-mail (SDS que: | t 1834-1507, USA 6446 Fax: +1 978-46 | 9-6785 @chesterton.com | plier: | |
| Unit 105, Burlingt EU: Chesterton I | nesterton Company Ltd., ton, Ontario L7L 4X8 – 1 nternational GmbH, Am g, Germany – Tel. +49-8 | ⁻ el. 905-335-5055 Lenzenfleck 23, | | |
| 1.4. Emergency | telephone number | | | |
| Call Infotrac: 1-8 Outside N. Ameri | , 7 days per week 00-535-5053 ca: +1 352-323-3500 (c ormation Centre (Austra | | | |
| SECTION 2: HA | ZARDS IDENTIFICATIO | N | | |
| 2.1. Classificatio | on of the substance or | mixture | | |
| 2.1.1. Classificat | tion according to Regu | Ilation (EC) No 1272/2008 [0 | CLP] / 29 CFR 1910.12 | 200 / WHMIS 2015 / GHS |
| Skin irritation, Ca Eye irritation, Cat Specific target or Reproductive tox | egory 2, H319 gan toxicity – single exp icity, Category 2, H361d | osure, Category 3, H335 exposure, Category 1, H372 (| hearing, inhalation) | |
| 2.1.2. Australian | statement of hazardo | us nature | | |
| Hazardous accor | ding to criteria of Safe V | Vork Australia. | | |
| 2.1.3. Additional | information | | | |
| For full text of H-s | statements: see SECTIC | ONS 2.2 and 16. | | |
| 2.2. Label eleme | ents | | | |
| Labelling accore | ding to Regulation (EC |) No 1272/2008 [CLP] / 29 C | FR 1910.1200 / WHMI | S 2015 / GHS |
| Hazard pictogra | ms: | | | |
| | | | | |

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| Date: 31 July 2019 | | | | | SDS No. 437A-7b |
|---|---|---|--|---|--|
| Hazard statements: | H226 H315 H319 H335 H361d H372 | Causes skir Causes ser May cause Suspected | ious eye irritatio respiratory irrita of damaging the | n. tion. • unborn child. | ed or repeated exposure by inhalation. |
| Precautionary statements: | P304/340 | Do not hand Keep away No smoking Keep conta Ground and Use explosi Use non-sp Take action Do not brea Wash skin t Do not eat, Use only ou Wear protect IF ON SKIN with water of IF INHALED IF IN EYES lenses, if pr IF exposed In case of fi | from heat, hot s g. iner tightly close l bond container on-proof electric arking tools. to prevent stati the vapours/spr horoughly after drink or smoke tdoors or in a w ctive gloves and I (or hair): Take or shower. D: Remove pers : Rinse cautious esent and easy or concerned: C re: Use CO2, dr <i>v</i> ell-ventilated pla | y precautions have urfaces, sparks, or ed. cal/ventilating/ligh c discharges. ay. handling. when using this p ell-ventilated area eye/face protection off immediately a on to fresh air and sly with water for st to do. Continue r Set medical advic y chemical, foam | ting equipment. a. a. Il contaminated clothing. Rinse skin d keep comfortable for breathing. several minutes. Remove contact insing. |
| | P501 | - | | | d waste disposal plant. |
| Supplemental information: | Contains Coba | alt bis(2-ethyl | hexanoate). Ma | y produce an alle | rgic reaction. |
| 2.3. Other hazards The safety and health hazards | s are detailed se | paratelv for F | Part A and Part E | 3. The final cured | material is considered nonhazardous. |
| Upon machining, refer to the | precautions in the | e safety data | sheets for Part | | |
| SECTION 3: COMPOSITION | I/INFORMATION | | DIENTS | | |
| 3.2. Mixtures Hazardous Ingredients ¹ | | % Wt. | CAS No./ EC No. | REACH Reg. No. | CLP/GHS Classification |
| Styrene | | 10-20 | 100-42-5 202-851-5 | NA | Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H335 Repr. 2, H361d STOT RE 1, H372 (hearing, inhalation) Aquatic Acute 2, H401* Aquatic Chronic 3, H412 |
| Methacrylic acid | | <2 | 79-41-4 201-204-4 | NA | Flam. Liq. 4, H227* Acute Tox. 4, H302 Acute Tox. 3 H311 Acute Tox. 4 H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 3, H402* |
| Other ingredients: | | 1.5 | 14909 60 7 | | Not classified** |
| Silica (Quartz) | | 1-5 | 14808-60-7 238-878-4 | NA | Not classified** |

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238-878-4

| Date: 31 July 2019 | FIGUUCI. A | RC S7 (RD, WH | (Fall A) | SDS No. 437A-7b |
|--|---|---------------------------------------|-----------------|--|
| Date. ST July 2019 | | | | 303 NO. 437A-70 |
| Titanium dioxide | 1-2 | 13463-67-7 236-675-5 | NA | Not classified** |
| Cobalt bis(2-ethylhexanoate) | 0.01-0.09 | 136-52-7 205-250-6 | NA | Skin Sens. 1A, H317 Eye Irrit. 2, H319 Repr. 2, H361fd Aquatic Acute 1, H400 (M-factor = 1) Aquatic Chronic 3, H412 |
| *Non-CLP classification. | | | | |
| **Substance with a workplace exposu For full text of H-statements: see SEC | | | | |
| ¹ Classified according to: • 29 CFR 1910. • 1272/2008/EC • WHMIS 2015 • Safe Work Au | , GHS, REACH | 7, Mass. Right-to-ł | Know Law (ch | 40, M.G.LO. 111F) |
| SECTION 4: FIRST AID MEASURES | 6 | | | |
| 4.1. Description of first aid measure | es | | | |
| Inhalation: Remove to fresh air | . If not breathing, ad | minister artificial | respiration. C | Contact physician. |
| Skin contact: Remove contamina | ted clothing. Wash sl | kin with soap an | d water. Wasl | h clothing before reuse. Consult physician. |
| Eye contact: Flush eyes for at lea | ast 15 minutes with la | arge amounts of | water. Conta | ct physician if irritation persists. |
| Ingestion: Do not induce vomit | ting. Contact physicia | an immediately. | | |
| the pro | | aid to the victim | . Do not breat | thout suitable training. Avoid contact with the vapours. See section 8.2.2 for |
| 4.2. Most important symptoms and | effects, both acute | and delayed | | |
| Causes serious eye irritation. Causes cause dizziness, nausea and other ce | | | ions may irrita | ate eyes, respiratory tract and possibly |
| 4.3. Indication of any immediate me | edical attention and | special treatm | ent needed | |
| Treat symptoms. | | | | |
| SECTION 5: FIREFIGHTING MEAS | URES | | | |
| 5.1. Extinguishing media | | | | |
| Suitable extinguishing media: Ca | arbon dioxide, dry che | emical, foam or | water fog | |
| Unsuitable extinguishing media: | High volume water je | et | | |
| 5.2. Special hazards arising from the | ne substance or mix | ture | | |
| Water may cause frothing. Material m a closed container which may cause t | | | osed to heat a | and polymerization will increase pressure in |
| 5.3. Advice for firefighters | | | | |
| Cool exposed containers with water. | Recommend Firefight | ters wear self-co | ntained breat | thing apparatus. |
| Flammability Classification: – | | | | |
| HAZCHEM Emergency Action Code | e: 2 Z | | | |
| SECTION 6: ACCIDENTAL RELEAS | SE MEASURES | | | |
| 6.1. Personal precautions, protectiv | ve equipment and e | mergency proc | edures | |
| Avoid skin contact. Utilize exposure c | ontrols and personal | protection as sp | ecified in Sec | ction 8. |
| 6.2. Environmental Precautions | | | | |
| Keep out of sewers, streams and wate | erways. | | | |
| 6.3. Methods and material for conta | ainment and cleanin | ng up | | |
| Evacuate area. Provide adequate ver | itilation. Contain spill sible, then flush mate | to a small area. erial away with w | ater. Pick up | rom sources of ignition - No smoking. If with absorbent material (sand, sawdust, y water. |

6.4. Reference to other sections

Refer to section 13 for disposal advice.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use nonsparking tools. Take action to prevent static discharges. Vapors are heavier than air and will collect in low areas. Do not breathe vapours/spray. Avoid skin contact. Utilize exposure controls and personal protection as specified in Section 8. Remove contaminated clothing immediately. Wash clothing before reuse. Do not eat, drink or smoke when using this product. Avoid creating and breathing dust during removal, drilling, grinding, sawing or sanding.

7.2. Conditions for safe storage, including any incompatibilities

Store below 24°C (75°F). Store in a well-ventilated place. Keep container tightly closed. Vapors may polymerize to cause plugs in vents and relief devices.

7.3. Specific end use(s)

No special precautions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limit values

| Ingredients | OSHA ppm | PEL ¹ mg/m ³ | ACGIF ppm | l TLV ² mg/m ³ | UK V ppm | VEL ³ mg/m ³ | AUSTRA ppm | LIA ES ⁴ mg/m ³ |
|------------------------------|--|---------------------------------------|-------------------|---|---------------------|---------------------------------------|------------------------|--|
| Styrene | 100 Ceiling: 200 | - | 20 STEL: 40 | - | 100 STEL: 250 | 430 STEL: 1080 | 50 STEL: 100 | 213 426 |
| | Peak: 600 (5 min in any 3 hr) | | 40 | | 230 | 1080 | 100 | 420 |
| Methacrylic acid | _ | - | 20 | - | 20 STEL: 40 | 72 143 | 20 | 70 |
| Silica (Quartz) | (resp.) (total) | 0.05 | (resp.) | 0.025 | (resp.) | 0.1 | (resp.) | 0.1 |
| Titanium dioxide | _ | 15 | - | 10 | - | 10 4 (resp.) | _ | 10 |
| Cobalt bis(2-ethylhexanoate) | (dust/fum e, as Co) | 0.1 | - | N/A | (as Co) | 0.1 | (dust/fum e, as Co) | 0.05 |

¹ United States Occupational Health & Safety Administration permissible exposure limits

² American Conference of Governmental Industrial Hygienists threshold limit values

³ EH40 Workplace exposure limits, Health & Safety Executive

⁴ Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants

Biological limit values

Styrene:

| Control parameter | Biological specimen | Sampling Time | Limit value | Basis | Notes |
|---|---------------------|---------------|------------------------|-------|-------------|
| Sum of mandelic acid and phenylglyoxylic acid | Urine | End of shift | 400 mg/g creatinine | ACGIH | Nonspecific |
| Styrene | Urine | End of shift | 0.04 mg/l | ACGIH | - |

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Derived No Effect Level (DNEL) according to Regulation (EC) No 1907/2006:

Workers

| Substance | Route of exposure | Potential health effects | DNEL |
|------------------|-------------------|---------------------------|------------------------|
| Styrene | Inhalation | Acute effects, local | 306 mg/m ³ |
| | | Acute effects, systemic | 289 mg/m ³ |
| | | Chronic effects, systemic | 85 mg/m ³ |
| | Dermal | Chronic effects, systemic | 406 mg/kg |
| | | | bw/day |
| Methacrylic acid | Inhalation | Chronic effects, local | 88 mg/m ³ |
| | | Chronic effects, systemic | 29.6 mg/m ³ |
| Titanium dioxide | Inhalation | Chronic effects | 10 mg/m ³ |

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No 1907/2006:

| Substance | Environmental protection target | PNEC |
|------------------|------------------------------------|-------------------|
| Styrene | Fresh water | 0.028 mg/l |
| | Marine water | 0.014 mg/l |
| | Water, intermittent release | 0.04 mg/l |
| | Freshwater sediments | 0.614 mg/kg dry |
| | | wt. |
| | Marine sediments | 0.307 mg/kg dry |
| | | wt. |
| | Microorganisms in sewage treatment | 5 mg/l |
| | Soil (agricultural) | 0.2 mg/kg dry wt. |
| Titanium dioxide | Fresh water | 0.184 mg/l |
| | Marine water | 0.0184 mg/l |
| | Water | 0.193 mg/l |
| | Freshwater sediments | 1000 mg/kg |
| | Marine sediments | 100 mg/kg |
| | Microorganisms in sewage treatment | 100 mg/l |
| | Soil (agricultural) | 100 mg/kg |

8.2. Exposure controls

8.2.1. Engineering measures

Use only in well-ventilated areas. If exposure limits are exceeded, provide adequate explosion-proof ventilation. If it is necessary to alter the final cured product such that dust may be generated, use adequate dust extraction or damp down.

8.2.2. Individual protection measures

Respiratory protection: If exposure limits are exceeded, use an approved organic vapor respirator (e.g., EN filter type A-P2). During spraying, wear suitable respiratory equipment.

Protective gloves: Chemical resistant gloves (e.g. Viton*, neoprene, nitrile). *DuPont's registered trademark.

Styrene:

| | Contact type | Glove material | Layer thickness | Breakthrough time * |
|--------------------------|--------------------------------------|-------------------------|----------------------------|-----------------------------|
| | Full | Viton | 0.70 mm | > 480 min. |
| | Splash | Nitrile rubber | 0.40 mm | > 30 min. |
| | *Determined accord | ding to EN374 standard. | | |
| Eye and face protection: | Safety goggles. | | | |
| Other: | Impervious clothing before reuse. | as necessary to prever | t skin contact. Remove cor | taminated clothing and wash |

8.2.3. Environmental exposure controls

Refer to sections 6 and 12.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| Physical state | paste | Odour | aromatic |
|---------------------------|--------------------|-------------------------------|----------------|
| Colour | red or white | Odour threshold | 0.14 ppm |
| Initial boiling point | 145°C (293°F) | Vapour pressure @ 20°C | 4.5 mm Hg |
| Melting point | not determined | % Aromatics by weight | 12.8% |
| % Volatile (by volume) | 16% @ 20°C | pH | not applicable |
| Flash point | 31°C (87.6°F) | Relative density | 1.55 kg/l |
| Method | PM Closed Cup | Weight per volume | 12.9 lbs/gal. |
| Viscosity | 40,000 cps @ 25°C | Coefficient (water/oil) | < 1 |
| Autoignition temperature | 490°C (914°F) | Vapour density (air=1) | > 1 |
| Decomposition temperature | not determined | Rate of evaporation (ether=1) | < 1 |
| Upper/lower flammability | LEL 0.9%; UEL 6.8% | Solubility in water | insoluble |
| or explosive limits | | | |
| Flammability (solid, gas) | not applicable | Oxidising properties | not determined |
| Explosive properties | not determined | | |

9.2. Other information

VOC (EPA 24): 1.61 lbs/gal. (0.19 kg/l)

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Refer to sections 10.3 and 10.5.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Elevated temperatures can cause hazardous polymerization. Vapors may polymerize to cause plugs in vents and relief devices.

10.4. Conditions to avoid

Open flames, heat, sparks and red hot surfaces. Avoid direct sunlight or ultraviolet sources.

10.5. Incompatible materials

Strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide and other toxic fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects Inhalation, skin and eye contact. Personnel with pre-existing skin, eye and lung disorders are Primary route of exposure under normal use:

generally aggravated by exposure.

Acute toxicity -

Oral:

ATE-mix = 12,550 mg/kg

| Substance | Test | Result |
|------------------|-----------|----------------|
| Styrene | LD50, rat | 2,650 mg/kg |
| Methacrylic acid | LD50, rat | 1,320 mg/kg |
| Titanium dioxide | LD50, rat | > 10,000 mg/kg |

Dermal:

ATE-mix = 23,810 mg/kg

| Substance | Test | Result |
|------------------|--------------|-------------------|
| Styrene | LD50, rat | > 2,000 mg/kg |
| Methacrylic acid | LD50, rabbit | 500 - 1,000 mg/kg |
| Titanium dioxide | LD50, rabbit | > 10,000 mg/kg |

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| Substance Test Result Styrene Skin irritation, rabbit Moderate irritation Methacrylic acid Skin irritation, rabbit Corrosive Causes serious eye irritation. Substance Test Styrene Styrene Eye irritation, rabbit Moderate irritation Substance Test Result Moderate irritation Styrene Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Corrosive Itespiratory or skin Styrene Test Result Styrene Skin sensitization, guinea Not sensitizing pig Methacrylic acid Skin sensitization, guinea Not sensitizing pig Kerm cell mutagenicity: Styrene is considered a potential carcinogen by the International Agency for Research on Can | Inhalation: | High vapor concentrations may irrita | | bly cause dizziness, nause | | |
|--|------------------------------------|--|---|---|--|--|
| ATE-mix = 99.34 mg/l (aerosol) Substance Test Result Styrene LC50, rat, 4 hours 11.8 mg/l (vapor) Methacrylic acid LC50, rat, 4 hours 1.1.8 mg/l (vapor) Titanium dioxide LC50, rat, 4 hours 1.1.8 mg/l (vapor) Itianium dioxide LC50, rat, 4 hours > 6.82 mg/l Kin corrosion/irritation: Causes skin irritation. Prolonged or repeated skin contact may cause dermatitis. Substance Test Result Styrene Skin irritation, rabbit Moderate irritation Methacrylic acid OED 404 Causes serious eye irritation. ritation: Substance Test Result Styrene Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Moderate irritation Styrene Substance Test Result Styrene Substance Test Result Styrene Substance Test Result Styrene Substance Test Result Styrene | | | iects. | | | |
| Substance Test Result Styrene LC50, rat, 4 hours 7.1 mg/l (vapor) Methacrylic acid LC50, rat, 4 hours 7.1 mg/l (aerosol/vapor) Titianium dioxide LC50, rat, 4 hours 7.1 mg/l (aerosol/vapor) Titianium dioxide LC50, rat, 4 hours > 6.82 mg/l Kin corrosion/irritation: Causes skin irritation. Prolonged or repeated skin contact may cause dermatitis. Substance Test Result Styrene Skin irritation, rabbit Moderate irritation Methacrylic acid CBCCD 404) Corrosive course serious eye irritation. Substance Test Styrene Skin irritation, rabbit Moderate irritation Substance Test Result Styrene Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Moderate irritation Styrene Skin sensitization, guinea Not sensitizing pig Methacrylic acid Test Result Styrene Skin sensitization, guinea Not sensitizing pig Methacrylic acid | | | | | | |
| Styrene LC50, rat, 4 hours 11.8 mg/l (vapor) Methacrylic acid LC50, rat, 4 hours 7,1 mg/l (QECD 403) (aerosol/vapor) Titanium dioxide LC50, rat, 4 hours > 6.82 mg/l ikin corrosion/irritation: Causes skin irritation. Prolonged or repeated skin contact may cause dermatitis. Substance Test Result Styrene Skin irritation, rabbit Moderate irritation Methacrylic acid Corrosive Corrosive (QECD 404) Causes serious eye irritation. Test ritation: Substance Test Result Styrene Eye irritation, rabbit Moderate irritation Styrene Eye irritation, rabbit Corrosive (OECD 405) Corrosive Corrosive Styrene Styrene Eye irritation, rabbit Moderate irritation Bespiratory or skin Styrene Styrene Result Styrene Styrene Styrene Not sensitizing Methacrylic acid Styrene sconsidered a potential carcinogen ktin anue distication, rule are not met. Styren | | | | | | |
| Methacrylic acid LC50, rat, 4 hours (QECD 403) 7.1 mg/l (aerosol/vapor) Titanium dioxide LC50, rat, 4 hours > 6.82 mg/l ikin corrosion/irritation: Causes skin irritation. Prolonged or repeated skin contact may cause dermatitis. Substance Test Result Styrene Skin irritation, rabbit Moderate irritation Methacrylic acid Skin irritation, rabbit Moderate irritation Vertation: Causes serious eye irritation. Causes serious eye irritation. Substance Test Result Styrene Eye irritation, rabbit Moderate irritation Vertacrylic acid Cye irritation, rabbit Moderate irritation Styrene Eye irritation, rabbit Moderate irritation Styrene Styrene Styrene Not sensitizing Byrene Styrene Skin sensitization, guinea Not sensitizing Wethacrylic acid Styrene Styrene is considered a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Tox | | | | | | |
| i.i.i. in corrosion/irritation: | | | | | | |
| kin corrosion/irritation: Causes skin irritation. Prolonged or repeated skin contact may cause dermatitis. Substance Test Result Styrene Skin irritation, rabbit Corrosive Methacrytic acid Skin irritation, rabbit Corrosive Verious eye damage/ Causes serious eye irritation. Skin irritation, rabbit Corrosive Veriation: Substance Test Result Substance Test Result Styrene Substance Test Result Corrosive Styrene Eye irritation, rabbit Corrosive Corrosive Methacrytic acid Eye irritation, rabbit Corrosive Corrosive Styrene Skin sensitization, guinea Not sensitizing Not sensitizing Methacrytic acid Skin sensitization, guinea Not sensitizing Not sensitizing Methacrytic acid Skin sensitization, guinea Not sensitizing Not sensitizing Methacrytic acid Skin sensitization, guinea Not sensitizing Not sensitizing Styrene Styrene is considered a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The Int | | | (OECD 403) | (aerosol/vapor) | | |
| Substance Test Result Styrene Skin irritation, rabbit Moderate irritation ierious eye damage/ ritation: Causes serious eye irritation. Causes serious eye irritation. Substance Test Result Styrene Eye irritation, rabbit Moderate irritation Substance Test Result Styrene Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Corrosive (OECD 405) Corrosive Corrosive tespiratory or skin Styrene Skin sensitization, guinea Not sensitizing Methacrylic acid Skin sensitization, guinea Styrene Skin sensitization, guinea Not sensitizing Methacrylic acid Skin sensitization, guinea Not sensitizing pig Methacrylic acid, Titanium dioxide: based on available data, the classification criteria are not met. sarcinogenicity: Styrene is considered a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). have classified inhaled sitica as a human carcinogen. IARC has designated inhaled titanium dioxide as a a human carcinogen. IARC has designated inhaled titanium dioxide as a a human carcinogen. IARC has designated inhaled titanium | | Titanium dioxide | LC50, rat, 4 hours | > 6.82 mg/l | | |
| Styrene Skin irritation, rabbit Moderate irritation merious eye damage/ ritation: Causes serious eye irritation. Causes serious eye irritation. Substance Test Result Styrene Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Corrosive Methacrylic acid Eye irritation, rabbit Corrosive Styrene Skin sensitization, guinea Not sensitizing pig Methacrylic acid Skin sensitization, guinea Not sensitizing pig Methacrylic acid, Titanium dioxide: based on available data, the classification criteria are not met. Styrene, Methacrylic acid, Titanium dioxide: based on available data, the classification criteria are not met. strongenicity: Styrene is considered a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have classified inhaled silica as a human carcinogen. IARC has designated inhaled tinnum dioxide in thag product do not separate from the mixtu or in of themselves become airborne, therefore, | Skin corrosion/irritation: | Causes skin irritation. Prolonged or | repeated skin contact may cause d | ermatitis. | | |
| Methacrylic acid Skin irritation, rabbit (OECD 404) Corrosive ritation: Causes serious eye irritation. Substance Test Result Styrene Eye irritation, rabbit (OECD 405) Moderate irritation tespiratory or skin ensitisation: Substance Test Result Styrene Skin sensitization, guinea Not sensitizing pig Not sensitizing pig Methacrylic acid Skin sensitization, guinea Not sensitizing pig Not sensitizing pig Sterm cell mutagenicity: Styrene, Methacrylic acid, Titanium dioxide: based on available data, the classification criteria are not met. Not sensitizing pig Styrene is considered a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The lassified inhaled silica as a human carcinogen. IARC has designated inhaled titanium dioxide as possibly carcinogenic to humans (group 2B). The silica and titanium dioxide in this product do not separate from the mixtu or in of themselves become airborne, therefore, do not present a hazard in normal use. Store - single exposure: May cause respiratory iritation (Styrene, Methacrylic acid). ITOT - single exposure: May cause respiratory iritation (Styrene, Methacrylic acid). Itab animals exposed to Styrene showed hearing loss and li | | Substance | Test | Result | | |
| ierious eye damage/ ritation: (OECD 404) Causes serious eye irritation. Substance Test Styrene Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Styrene Eye irritation, rabbit Methacrylic acid Eye irritation, rabbit Styrene Skin sensitization, guinea Not sensitiziation: Styrene Styrene Skin sensitization, guinea Not sensitizing Not sensitizing Methacrylic acid Skin sensitization, guinea Styrene, Methacrylic acid, Titanium dioxide: based on available data, the classification criteria are not met. starcinogenicity: Styrene is considered a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The understore a possibly carcinogenic to humans (group 2B). The silica and titanium dioxide in possibly carcinogenic to humans (group 2B). The silica and titanium dioxide in this product do not separate from the mixtu or in of themselves become airborne, therefore, do not present a hazard in normal use. Store - single exposure: May cause respiratory irritation (Styrene). Mort - single exposure: May cause respiratory irritation (Styrene, Methacrylic acid). | | Styrene | Skin irritation, rabbit | Moderate irritation | | |
| Substance Test Result Styrene Eye irritation, rabbit Moderate irritation Methacrylic acid Eye irritation, rabbit Corrosive (OECD 405) Stin sensitization, guinea Not sensitizing iespiratory or skin Styrene Skin sensitization, guinea Not sensitizing ig Methacrylic acid Skin sensitization, guinea Not sensitizing ig Methacrylic acid Skin sensitization, guinea Not sensitizing ig Methacrylic acid, Titanium dioxide: based on available data, the classification criteria are not met. starcinogenicity: Styrene is considered a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on the mixtu or in of themselves become airborune, therefore, do not present a hazard in no | | Methacrylic acid | | Corrosive | | |
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| Germ cell mutagenicity: Styrene, Methacrylic acid, Titanium dioxide: based on available data, the classification criteria are not met. Starcinogenicity: Styrene is considered a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have classified inhaled silica as a human carcinogen. IARC has designated inhaled titanium dioxide as possibly carcinogenic to humans (group 2B). The silica and titanium dioxide in this product do not separate from the mixtu or in of themselves become airborne, therefore, do not present a hazard in normal use. Reproductive toxicity: Suspected of damaging the unborn child (Styrene). RTOT - single exposure: May cause respiratory irritation (Styrene, Methacrylic acid). Lab animals exposed to Styrene showed hearing loss and liver, kidney and central nervous syste effects. Titanium dioxide: based on available data, the classification criteria are not met. Methacrylic acid: Sub-chronic NOAEL, 90 days, inhalation, rat, 100 ppm. Aspiration hazard: Based on available data, the classification criteria are not met (viscosity). None known None known | | | | | | |
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| Other information: None known | STOT – repeated exposure: | effects. Titanium dioxide: based on a | available data, the classification crit | teria are not met. | | |
| | Aspiration hazard: | | | | | |
| ECTION 12: ECOLOGICAL INFORMATION | Other information: | None known | | | | |
| | SECTION 12: ECOLOGICAL | INFORMATION | | | | |

Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar substances.

12.1. Toxicity

Styrene: toxic to aquatic organisms on an acute basis [48 h EC50 (for daphnia): 4.7 mg/l]; harmful to aquatic life with long lasting effects (chronic NOEC, Daphnia magna, 21 days: 1.01 mg/l). Methacrylic acid: 72 h EC50 (for algae), 45 mg/l.

12.2. Persistence and degradability

Styrene: 80% biodegradable (OECD 301D, 20 days); readily biodegradable. Methacrylic acid: readily biodegradable. Titanium dioxide, Silica: inorganic substances.

12.3. Bioaccumulative potential

Styrene: low potential for bioaccumulation (BCF < 100). Methacrylic acid: not expected to bioaccumulate.

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12.4. Mobility in soil

Paste. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Styrene: expected to exhibit low mobility in soil (500 < Koc < 2000). Methacrylic acid: expected to have very high mobility in soils (Koc = 15).

12.5. Results of PBT and vPvB assessment

Not available

12.6. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Combine resin and curative. The final cured material is considered nonhazardous. Landfill sealed containers with a properly licensed facility. Unreacted components are a special waste (classified as hazardous according to 2008/98/EC). May be incinerated at an appropriate facility. Check local, state and national/federal regulations and comply with the most stringent requirement.

| SECTION 14: TRANSPORT INFORMATION | | |
|--|---|--|
| 14.1. UN number | | |
| ADG/ADR/RID/ADN/IMDG/ICAO: | UN1866 | |
| TDG: | UN1866 | |
| US DOT: | UN1866 | |
| 14.2. UN proper shipping name | | |
| ADG/ADR/RID/ADN/IMDG/ICAO: | RESIN SOLUTION | |
| TDG: | RESIN SOLUTION | |
| US DOT: | RESIN SOLUTION | |
| 14.3. Transport hazard class(es) | | |
| ADG/ADR/RID/ADN/IMDG/ICAO: | 3 | |
| TDG: | 3 | |
| US DOT: | 3 | |
| 14.4. Packing group | | |
| ADG/ADR/RID/ADN/IMDG/ICAO: | III | |
| TDG: | III | |
| US DOT: | III | |
| 14.5. Environmental hazards | | |
| NO ENVIRONMENTAL HAZARDS | | |
| 14.6. Special precautions for user | | |
| NO SPECIAL PRECAUTIONS FOR USER | 2 | |
| 14.7. Transport in bulk according to Anne | ex II of MARPOL73/78 and the IBC Code | |
| NOT APPLICABLE | | |
| 14.8. Other information | | |
| US DOT: ERG NO. 128 | | |
| , ,,, | ntities in packaging having a rated capacity gross weight of 66 lb. or less and in inner packages | |
| not over 5 Liters (49 CFR 173.15 | 50(b,3)). | |
| IMDG: EmS F-E, <u>S-E</u> | | |
| ADR: Classification code F1, Tunnel restr | | |
| SECTION 15: REGULATORY INFORMATION | | |
| 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture | | |
| 15.1.1. EU regulations | | |
| Authorisations under Title VII: Not applie | cable | |
| Restrictions under Title VIII: None | | |
| 1 | | |

| Other EU regulatio | recently giver Directive 94/3 Directive 201 | 35/EEC on the safety and health at work of pro- b birth or are breastfeeding. 33/EC on the protection of young people at wo 2/18/EU on the control of major-accident haza Flammable Liquids). | prk. |
|--|---|---|--|
| 15.1.2. National reg | gulations | | |
| US EPA SARA TITL | .E III | | |
| 312 Hazards: | | 313 Chemicals: | |
| Flammable liquid | | Styrene | 100-42-5 10-20% |
| Skin irritation | | Cobalt compounds | 136-52-7 Below de minimis |
| Eye irritation | | concentration | |
| Specific target orga Reproductive toxicit | | kposure | |
| Specific target orga | | d exposure | |
| Other national reg | ulations: Nationa | l implementations of the EC Directives referre | ed to in section 15.1.1. |
| 15.2. Chemical safe | ety assessment | | |
| | | een carried out for this substance/mixture by t | the supplier. |
| SECTION 16: OTH | | | |
| | | ngerous Goods Code eement concerning the International Carriage | of Dangerous Goods by Inland Waterways |
| | | eement concerning the International Carriage | |
| | ATE: Acute Toxicity | | |
| | BCF: Bioconcentrat | on Factor Acute Toxicity point Estimate | |
| | | Labelling Packaging Regulation (1272/2008/E | C) |
| E | ES: Exposure Stand | ard | -, |
| | GHS: Globally Harn | | |
| | | Civil Aviation Organization Maritime Dangerous Goods | |
| | | ntration to 50 % of a test population | |
| l | D50: Lethal Dose t | o 50% of a test population | |
| | OEL: Lowest Obse | rved Effect Level | |
| | N/A: Not Applicable NA: Not Available | | |
| | | d Effect Concentration | |
| | NOEL: No Observe | | |
| | | o for Economic Co-operation and Developmer | nt |
| | | accumulative and Toxic substance e Structure-Activity Relationship | |
| | | n, Evaluation, Authorisation and Restriction of | f Chemicals Regulation (1907/2006/EC) |
| | REL: Recommende | | |
| | SDS: Safety Data S | ncerning the International Carriage of Danger | ous Goods by Rail |
| | STEL: Short Term E | | |
| 5 | STOT RE: Specific | Farget Organ Toxicity, Repeated Exposure | |
| | | Farget Organ Toxicity, Single Exposure | |
| | TWA: Time Weighte | n of Dangerous Goods (Canada) d Average | |
| | | tes Department of Transportation | |
| | | nt and very Bioaccumulative substance | |
| | NEL: Workplace Ex | posure Limit Hazardous Materials Information System | |
| | | and acronyms can be looked up at www.wikip | pedia.org. |
| Key literature refer | | on des normes, de l'équité, de la santé et de | - |
| and sources for da | ata: Chemical | Classification and Information Database (CCI | D) |
| | | Chemicals Agency (ECHA) - Information on (| Chemicals |
| | | s Chemical Information System (HCIS) nstitute of Technology and Evaluation (NITE) | |
| | | Chemicals Agency (KEMI) | |
| | | nal Library of Medicine Toxicology Data Netw | vork (TOXNET) |
| | | an red @ Desistered trademark surred by A.W. Chasterter | |

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| Classification | Classification procedure |
|---------------------------|--|
| Flam. Liq. 3, H226 | On basis of test data |
| Skin Irrit. 2, H315 | Calculation method |
| Eye Irrit. 2, H319 | Calculation method |
| STOT SE 3, H335 | Calculation method |
| Repr. 2, H361d | Calculation method |
| STOT RE 1, H372 | Calculation method |
| Relevant H-statements: | H226: Flammable liquid and vapour. H227: Combustible liquid. H302: Harmful if swallowed. H304: May be fatal if swallowed and enters airways. H311 : Toxic in contact with skin. H314 : Causes severe skin burns and eye damage. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H318: Causes serious eye damage. H319: Causes serious eye damage. H319: Causes serious eye irritation. H332: Harmful if inhaled. H335: May cause respiratory irritation. H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child. H372: Causes damage to organs through prolonged or repeated exposure. H400: Very toxic to aquatic life. H401: Toxic to aquatic life. H402: Harmful to aquatic life. H412 Harmful to aquatic life with long lasting effects. |
| lazard pictogram names | |
| Further information: No | pne |
| Date of last revision: 31 | July 2019 |
| hanges to the SDS in th | is revision: Sections 2.2, 3, 8.1, 15.1.2, 16. |

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