GRP RESIN

SECTION 1

Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product name: FIX-R GRP Resin
Product code: FXR018CR, FXR009CR & FX005CR
Synonyms: UPR RESIN IN STYRENE

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

1.3. Details of the supplier of the safety data sheet
FIX-R, Harding Way, St Ives, Cambridgeshire PE27 3YJ
Tel: 01480 466 777 Fax: 01480 290 133 Email: info@fix-r.co.uk www.fix-r.co.uk

1.4. Emergency telephone numbers:
NHS Tel: 111

SECTION 2

Hazards Identification

2.1. Classification of the substance or mixture
EC regulation criteria 1272/2008 (CLP)
Warning: Warning, Flam. Liq. 3, Flammable liquid and vapour.
Warning: Warning, Acute Tox. 4, Harmful if inhaled.
Warning: Warning, Skin Irrit. 2, Causes skin irritation.
Warning: Warning, Eye Irrit. 2, Causes serious eye irritation.
Warning: Warning, Repr. 2, Suspected of damaging fertility or the unborn child.
Warning: Danger, STOT RE 1, Causes damage to organs through prolonged or repeated exposure. Adverse physicochemical, human health and environmental effects:
No other hazards

2.2. Label elements

Warning	:	Danger
Hazard statements	:	H226 Flammable liquid and vapour. H332 Harmful if inhaled. H315 Causes skin irritation. H319 Causes serious eye irritation. H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to organs through prolonged or repeated exposure.

Hazard pictograms	:	GHS02: Flame GHS07: Exclamation mark GHS08: Health hazard

Signal words	:	Danger
Precautionary statements	:	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/protective clothing/eye protection/face protection. P312 Call a POISON CENTER/ doctor/if you feel unwell. P337+P313 If eye irritation persists: Get medical advice/attention. P370+P378 In case of fire, use a dry powder fire extinguisher to extinguish. P501 Dispose of contents/container in accordance with applicable regulations.

2.3. Other hazards

Other hazards: None

PBT: vPvB Substances: None - PBT Substances: None

SECTION 3

Composition/Information on Ingredients

3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:
39.7% styrene
REACH No.: 01-2119457861-32-XXXX, Index number: 601-026-00-0, CAS: 100-42-5, EC: 202-851-5, Repr. Cat. 3,Xn,Xi; R10-20-36/38-48/20-63

- 2.6/3 Flam. Liq. 3 H226
- 3.7/2 Repr. 2 H361d
- 3.1/4/Inhal Acute Tox. 4 H332
- 3.9/1 STOT RE 1 H372
- 3.2/2 Skin Irrit. 2 H315
- 3.3/2 Eye Irrit. 2 H319

639 ppm xylene [isomer mixture]
REACH No.: 01-2119488216-32-XXXX, Index number: 601-022-00-9, CAS: 1330-20-7, EC:215-535-7 Xn,Xi; R36/37/38-65-10-20/21

- 2.6/3 Flam. Liq. 3 H226
- 3.3/2 Eye Irrit. 2 H319
- 3.2/2 Skin Irrit. 2 H315
- 3.8/3 STOT SE 3 H335
- 3.1/4/Dermal Acute Tox. 4 H312
- 3.9/2 STOT RE 2 H373
- 3.1/4/Inhal Acute Tox. 4 H332
- 3.10/1 Asp. Tox. 1 H304

519 ppm 2-phenylpropene
Index number: 601-027-00-6, CAS: 98-83-9, EC: 202-705-0 Xi,N; R10-36/37-51/53

- 2.6/3 Flam. Liq. 3 H226
- 3.3/2 Eye Irrit. 2 H319
- 3.8/3 STOT SE 3 H335
- 4.1/C2 Aquatic Chronic 2 H411

347 ppm 2-(2-butoxyethoxy)ethanol
REACH No.: 01-2119475104-44-XXXX, Index number: 603-096-00-8, CAS: 112-34-5, EC:203-961-6 Xi; R36

3.3/2 Eye Irrit. 2 H319

139 ppm ethanediol
REACH No.: 01-2119456816-28-XXXX, Index number: 603-027-00-1, CAS: 107-21-1, EC:203-473-3 Xn; R22

3.1/4/Oral Acute Tox. 4 H302

3.9/2 STOT RE 2 H373

39 ppm 2-butoxyethanol
REACH No.: 01-2119475108-36-XXXX, Index number: 603-014-00-0, CAS: 111-76-2, EC:203-905-0 Xn,Xi; R20/21/22-36/38

3.3/2 Eye Irrit. 2 H319

3.2/2 Skin Irrit. 2 H315

3.1/4/Oral Acute Tox. 4 H302

3.1/4/Dermal Acute Tox. 4 H312

3.1/4/Inhal Acute Tox. 4 H332

SECTION 4

First Aid Measures

4.1. Description of first aid measures

In case of skin contact	:	Immediately take off all contaminated clothing. Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash thoroughly the body (shower or bath). Remove contaminated clothing immediately and dispose off safely. After contact with skin, wash immediately with soap and plenty of water. In case of eyes contact: After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Protect uninjured eye.
In case of Ingestion	:	Do NOT induce vomiting.
In case of Inhalation	:	Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of inhalation, consult a doctor immediately and show him packing or label.

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

None.

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

Immediate / special treatment	:	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Treatment	:	None.

SECTION 5

Fire-fighting Measures

5.1. Extinguishing media

Extinguishing media : In case of fire use CO_2, foam, chemical powders.

Extinguishing media which must not be used for safety reasons : None in particular.

5.2. Special hazards arising from the substance or mixture

Exposure hazards : Do not inhale explosion and combustion gases. Burning produces heavy smoke.

5.3. Advice for firefighters

Advice for fire-fighters : Use suitable breathing apparatus, collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6

Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear personal protection equipment. Remove all sources of ignition. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Provide adequate ventilation. Use appropriate respiratory protection.

See protective measures under point 7 & 8.

6.2. Environmental precautions

Environmental precautions : Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose of it in a safe manner. In case of gas escape or entry into walkways, soil or drains, inform the responsible authorities. Suitable material for taking up: absorbing material, organic, sand. Eliminate all unguarded flames and possible sources of ignition. Do not smoke.

6.3. Methods and material for containment and cleaning up

Clean-up procedures : Collect the spilled product with non sparking tools. Rapidly recover the product for re-use if possible, or for elimination. The product might, where appropriate, be absorbed by inert material. After the product has been recovered, rinse the area and materials involved with water.

6.4. Reference to other sections

Reference to other sections : See also Section 8 and 13.

SECTION 7

Handling and Storage

7.1. Precautions for safe handling

Handling requirements : Avoid contact with skin and eyes, inhalation of vapours and mists. Use localised ventilation system. Don't use empty container before they have been cleaned. Before making transfer operations, assure that there aren't any incompatible material residuals in the containers. Contaminated clothing should be changed before entering eating areas. Do not eat or drink while working. Do not smoke while working. See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep away from unguarded flame, sparks and heat sources. Avoid direct exposure to sunlight. Avoid the accumulation of electrostatic charges. Put the containers earthed while decanting and wear antistatic footwear and clothing. Keep away from food, drink and feed. Incompatible materials: Avoid contact with combustible materials. The product could catch fire. Cool and adequately ventilated. Safety electric system.

7.3. Specific end use(s)

Specific end use(s) : None in particular.

SECTION 8

Exposure Controls/Personal Protection

8.1. Control parameters

styrene - CAS: 100-42-5

France VME - LTE(8h): 215 mg/m³, 50 ppm

United Kingdom WEL TWA - LTE(8h): 430 mg/m³, 100 ppm - STE(15'): 1050 mg/m³, 250 ppm

MAK - LTE(8h): 85 mg/m³, 20 ppm - STE(15'): 170 mg/m³, 40 ppm

Spain TLV - LTE(8h): 85 mg/m³, 20 ppm - STE(15'): 170 mg/m³, 40 ppm

Netherlands TLV - LTE(8h): 105 mg/m³, 25 ppm - STE(15'): 200 mg/m³, 50 ppm

Czech Republic TLV - LTE(8h): 200 mg/m³, 47 ppm - STE(15'): 990 mg/m³, 234 ppm Poland TLV - LTE(8h): 50 mg/m³, 12 ppm - STE(15'): 200 mg/m³, 50 ppm

F16, 25 ppm

ACGIH, 20 ppm, 40 ppm - Notes: A4, BEI - CNS impair, URT irr, peripheral neuropathy xylene [isomer mixture] - CAS: 1330-20-7

EU - LTE(8h): 221 mg/m³, 50 ppm - STE: 442 mg/m³, 100 ppm - Notes: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography)

ACGIH, 100 ppm, 150 ppm - Notes: A4, BEI - URT and eye irr, CNS impair

2-phenylpropene - CAS: 98-83-9

EU - LTE(8h): 246 mg/m³, 50 ppm - STE: 492 mg/m³, 100 ppm - Notes: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography)

ACGIH, 10 ppm - Notes: A3 - URT irr, kidney dam, female repro dam

2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

EU - LTE(8h): 67,5 mg/m³, 10 ppm - STE: 101,2 mg/m³, 15 ppm - Notes: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography)

ACGIH, 10 ppm - Notes: (IFV) - Hematologic, liver and kidney eff

ethanediol - CAS: 107-21-1

EU - LTE(8h): 52 mg/m³, 20 ppm - STE: 104 mg/m³, 40 ppm - Notes: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography)

ACGIH - STE: C 100 mg/m³ - Notes: A4 (H) - URT and eye irr

2-butoxyethanol - CAS: 111-76-2

Czech Republic TLV - LTE(8h): 100 mg/m³ - STE(15'): 200 mg/m³ - Notes: SKIN

EU - LTE(8h): 98 mg/m³, 20 ppm - STE: 246 mg/m³, 50 ppm - Notes: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography)

ACGIH, 20 ppm - Notes: A3, BEI - Eye and URT irr

DNEL/PNEC Values

styrene - CAS: 100-42-5

Worker Industry: 289 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 306 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 406 mg/kg/bw/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 85 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 174.25 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

ethanediol - CAS: 107-21-1

Worker Industry: 106 mg/kg/bw/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 35 mg/m³ - Frequency: Long Term, local effects

Consumer: 53 mg/kg/bw/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects PNEC Exposure Limit Values

styrene - CAS: 100-42-5

Target: Fresh Water - Value: 0.028 mg/l

Target: Marine water - Value: 0.0028 mg/l

Target: Freshwater sediments - Value: 0.614 mg/l

Target: Marine water sediments - Value: 0.0614 mg/l

Target: Soil (agricultural) - Value: 0.2 mg/kg

8.2. Exposure controls

Eye Protection	:	Use close fitting safety goggles, don't use eye lens.
Protection for skin	:	Use clothing that provides comprehensive protection to the skin, such as coveralls (EN1073 EN 13034 EN 13982-1 EN 1149-5)
Protection for hands	:	Use suitable chemical resistant safety gloves (EN 374) Type
	:	PVC, neoprene or rubber. Always refer to the data protection and permeation rate provided by the glove manufacturer, in respect of the substances listed in paragraph 3 of this data sheet.
Respiratory protection	:	Use adequate respiratory protection, for example, organic vapor cartridge-type, or combined filter.
Thermal Hazard	:	None.
Environmental exposure controls	:	None.

SECTION 9

Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance and colour	Turbid liquid blue
Odour	Of solvent
Odour threshold	N.A.
pH	N.A.
Melting point / freezing point	(100-42-5) -31°C
Initial boiling point and boiling range	(100-42-5) 145°C
Solid/gas flammability	N.A.
Upper/lower flammability or explosive limits	(100-42-5) 1.1% - 6.1%
Vapour density	(100-42-5) 3.6
Evaporation rate	N.A.
Vapour pressure	(100-42-5) 0.667 kPa a 20°C
Relative density	1.1 Kg/l a 20°C
Solubility in water	No
Solubility in oil	No
Partition coefficient (n-octanol/water)	(100-42-5) 2.9 Log POW a 20°C
Auto-ignition temperature	(100-42-5) 490°C
Decomposition temperature	N.A.
Viscosity	680 mPa s (20°C)
Explosive properties	No
Oxidising properties	No

9.2. Other information

Miscibility	:	Si
Fat Solubility	:	No
Conductivity	:	N.A.

Substance Groups relevant properties N.A.

SECTION 10

Stability and Reactivity

10.1. Reactivity
Stable under normal conditions. It may generate dangerous reactions (See subsections below).

10.2. Chemical stability
Stable under normal conditions. It may generate dangerous reactions (See subsections below).

10.3. Possibility of hazardous reactions
None.

10.4. Conditions to avoid
Avoid the accumulation of electrostatic charges. Keep away from open flames, sparks and other sources of ignition.
Vapors may form explosive mixtures with air.

10.5. Incompatible materials
Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products
None.

SECTION 11

Toxicological Information

11.1. Information on toxicological effects
Toxicological information of the mixture: N.A.
Toxicological information of the main substances found in the mixture: styrene - CAS: 100-42-5

a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 2650 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat = 11.8 mg/l - Duration: 4h
xylene [isomer mixture] - CAS: 1330-20-7

a) acute toxicity:
Test: LD50 - Route: Inhalation - Species: Rat = 5000 ppm - Duration: 4h
Test: LD50 - Route: Oral - Species: Rat = 5000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit = 1700 mg/kg
2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

a) acute toxicity:
Test: LC50 - Route: Inhalation - Species: Rabbit = 3 mg/l - Duration: 2h
Test: LD50 - Route: Oral - Species: Rat = 3384 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit = 3764 mg/kg
2-butoxyethanol - CAS: 111-76-2

a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 200 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat > 2 mg/l - Duration: 4h
Test: LD50 - Route: Skin - Species: Rat > 400 mg/kg
styrene - CAS: 100-42-5

Eye Contact: Causes severe eye irritation with symptoms of pain or irritation, tearing and redness.
Inhalation can irritate the respiratory tract with symptoms of coughing.
contact with skin may cause irritation, redness.

May be fatal if swallowed and enters airways, irritating to the mouth, throat, stomach with symptoms of nausea, vomiting If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.A.:

a) acute toxicity;
b) skin corrosion/irritation;
c) serious eye damage/irritation;
d) respiratory or skin sensitisation;
e) germ cell mutagenicity;
f) carcinogenicity;
g) reproductive toxicity;
h) STOT-single exposure;
i) STOT-repeated exposure;
j) aspiration hazard.

SECTION 12

Ecological Information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment. styrene - CAS: 100-42-5

a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Algae = 4.9 mg/l - Duration h: 72 - Notes: fresh water Endpoint: EC50 - Species: Daphnia = 4.7 mg/l - Duration h: 48 - Notes: fresh water Endpoint: LC50 - Species: Fish = 4.02 mg/l - Duration h: 96 - Notes: fresh water xylene [isomer mixture] - CAS: 1330-20-7

a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 4.09 mg/l - Duration h: 96
2-butoxyethanol - CAS: 111-76-2

a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 1474 mg/l - Duration h: 96
Endpoint: EC50 - Species: Daphnia = 1550 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae = 1840 mg/l - Duration h: 72

12.2. Persistence and degradability

None
N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances : None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13

Disposal Considerations

13.1. Waste treatment methods

Waste treatment methods : Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing comply with the local and national regulations currently in force. Dispose of the container/s at authorised waste disposal centres.

SECTION 14

Transport Information

14.1. UN number

ADR-UN Number	:	1866
IATA-UN Number	:	1866
IMDG-UN Number	:	1866

14.2. UN proper shipping name

ADR-Shipping Name	:	RESIN SOLUTION, flammable
IATA-Shipping Name	:	RESIN SOLUTION, flammable
IMDG-Shipping Name	:	RESIN SOLUTION, flammable

14.3. Transport hazard class(es)

ADR-Class	:	3
ADR - Hazard identification number	:	30
IATA-Class	:	3
IATA-Label	:	3
IMDG-Class	:	3

14.4. Packing group

ADR-Packing Group	:	III
IATA-Packing group	:	III
IMDG-Packing group	:	III

14.5. Environmental hazards

ADR-Enviromental Pollutant	:	No
IMDG-Marine pollutant	:	No

14.6. Special precautions for user

SADR-Subsidiary risks	:	-
ADR-S.P.	:	640E
ADR-Tunnel Restriction Code	:	(D/E)
IATA-Passenger Aircraft	:	355
IATA-Subsidiary risks	:	-
IATA-Cargo Aircraft	:	615
IATA-S.P.	:	-
IATA-ERG	:	3L
IMDG-EmS	:	F-E, S-E
IMDG-Subsidiary risks	:	-
IMDG-Storage category	:	Category A
IMDG-Storage notes	:	-

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

N.A.

SECTION 15

Regulatory Information

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

Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances)
Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Dir. 2006/8/EC
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 453/2010 (Annex I)
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications: None.

Volatile Organic compounds - VOCs = 41.19%
Volatile CMR substances = 0.00%
Organic Carbon - C = 0.38
Where applicable, refer to the following regulatory provisions :
Directive 2003/105/CE ('Activities linked to risks of serious accidents') and subsequent amendments. Regulation (EC) nr 648/2004 (detergents).
1999/13/EC (VOC directive)
Provisions related to directives 82/501/EC(Seveso), 96/82/EC(Seveso II): N.A.

15.2. Chemical safety assessment

No.

SECTION 16

Other information

Full text of phrases referred to in Section 3:

R10	Flammable.
R20	Harmful by inhalation.
R20/21	Harmful by inhalation and in contact with skin.
R20/21/22	Harmful by inhalation,in contact with skin and if swallowed.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R36/37	Irritating to eyes and respiratory system.
R36/37/38	Irritating to eyes, respiratory system and skin.
R36/38	Irritating to eyes and skin.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child
R65	Harmful: may cause lung damage if swallowed.
H226	Flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H312	Harmful in contact with skin.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.
H304	May be fatal if swallowed and enters airways.
H411	Toxic to aquatic life with long lasting effects.
H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.