SAFETY DATA SHEET
FLEXANE HIGH PERFORMANCE BRUSHABLE RESIN

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

1.1. Product identifier

Product name FLEXANE HIGH PERFORMANCE BRUSHABLE RESIN

Product No. X0103

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

Identified uses Resin.

1.3. Details of the supplier of the safety data sheet

Supplier

ITW DEVCON
BAY 150
SHANNON INDUSTRIAL ESTATE
SHANNON
CO CLARE
IRELAND
T: +353 (0)61471299
F: 353(0)61471285
info@itwppe.eu

1.4. Emergency telephone number

+44 (0) 1235 239670

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) T;R23. Carc. Cat. 3;R40. R42/43. Xi;R36/37/38. F;R11. R52/53.

Human health

Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Persons susceptible to allergic reactions should not handle this product. Persons with impaired lung functions should not handle this preparation.

2.2. Label elements

Contains

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE
ISOPHORONE DI-ISOCYANATE

Labelling

Harmful

Highly flammable

Risk Phrases

R11	Highly flammable
R23	Toxic by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitisation by inhalation and skin contact.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.3. Other hazards

This product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE) 1-5%

CAS-No.: 5124-30-1 EC No.: 225-863-2

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 3 - H331	T;R23
Skin Irrit. 2 - H315	R42/43
Eye Irrit. 2 - H319	Xi;R36/37/38
Resp. Sens. 1 - H334	
Skin Sens. 1 - H317	
STOT Single 3 - H335	

CYCLOHEXANONE 1-5%

CAS-No.: 108-94-1 EC No.: 203-631-1

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 3 - H226	R10
Acute Tox. 4 - H332	Xn;R20

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE 1-5%

CAS-No.: 101-68-8 EC No.: 202-966-0

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H332	Carc. Cat. 3;R40
Skin Irrit. 2 - H315	Xn;R20,R48/20
Eye Irrit. 2 - H319	Xi;R36/37/38
Resp. Sens. 1 - H334	R42/43
Skin Sens. 1 - H317	
Carc. 2 - H351	
STOT Single 3 - H335	
STOT Rep. 2 - H373	

ETHYL ACETATE 10-30%

CAS-No.: 141-78-6 EC No.: 205-500-4

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
EUH066	Xi;R36
Eye Irrit. 2 - H319	R66
STOT Single 3 - H336	R67

ISOPHORONE DI-ISOCYANATE 1-5%

CAS-No.: 4098-71-9 EC No.: 223-861-6

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 3 - H331	T;R23
Skin Irrit. 2 - H315	R42/43
Eye Irrit. 2 - H319	Xi;R36/37/38
Resp. Sens. 1 - H334	N;R51/53
Skin Sens. 1 - H317	
STOT Single 3 - H335	
Aquatic Chronic 2 - H411	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Avoid contact with skin and eyes. Do not breathe vapour. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

Inhalation

Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Contact physician if discomfort continues.

Ingestion

Do not induce vomiting. Drink plenty of water. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention immediately!

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Contact physician if irritation persists.

Eye contact

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention. Contact physician if irritation persists.

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

General information

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

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

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Extinguish with foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

Specific hazards

Highly flammable When heated and in case of fire, irritating vapours/gases may be formed. Vapours are heavier than air and may travel along the floor and in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours. Keep up-wind to avoid fumes. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control.

Protective equipment for fire-figthers

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Warn everybody of potential hazards and evacuate if necessary. Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin and eyes. Do not breathe vapour.

6.2. Environmental precautions

Prevent entry into drains. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Absorb with sand or other inert absorbent. Transfer to a dry metal container, keeping it open for 48 hours. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Use only in well-ventilated areas. Open drum carefully as content may be under pressure. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Do not use in confined spaces without adequate ventilation and/or respirator. Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Storage tanks and other containers must be grounded. Do not eat, drink or smoke when using the product. Observe good chemical hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)	WEL		0.02 mg/m3(Sen)		0.07 mg/m3(Sen)	
CYCLOHEXANONE	WEL	10 ppm(Sk)		20 ppm(Sk)		
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE	WEL		0.02 mg/m3(Sen)		0.07 mg/m3(Sen)	
ETHYL ACETATE	WEL	200 ppm		400 ppm		
ISOPHORONE DI-ISOCYANATE	WEL		0.02 mg/m3(Sen)		0.07 mg/m3(Sen)	

WEL = Workplace Exposure Limit.

Ingredient Comments

WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment

Process conditions

Provide eyewash, quick drench.

Engineering measures

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment

If ventilation is insufficient, suitable respiratory protection must be provided.

Hand protection

Use protective gloves made of: Rubber, neoprene or PVC.

Eye protection

Use approved safety goggles or face shield.

Hygiene measures

Keep away from food, drink and animal feeding stuffs. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. Do not eat, drink or smoke when using the product.

Skin protection

Protection suit must be worn.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Clear
Odour	Solvent.
Solubility	Reacts violently with water.

Initial boiling point and boiling range	78
Melting point (°C)	N/D
Relative density	0.902 20 ºC
Vapour density (air=1)	3
Vapour pressure	86mmHg 20
Evaporation rate	4.1 (butyl acetate =1)
pH-Value, Conc. Solution	7 @ 20 ºC
Flash point (°C)	-4
Flammability Limit - Lower(%)	2
Flammability Limit - Upper(%)	11

9.2. Other information

Volatile By Vol. (%)	21

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Strong oxidising agents. Alcohols, glycols.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

May polymerise.

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time. Avoid exposure to high temperatures or direct sunlight. Avoid contact with water.

10.5. Incompatible materials

Materials To Avoid

Avoid contact with oxidising agents. Bases, alkalis (inorganic). Bases, alkalis (organic). Water, moisture. Alcohols, glycols.

10.6. Hazardous decomposition products

Fire or high temperatures create: Nitrous gases (NOx). Oxides of: Carbon monoxide (CO). Carbon dioxide (CO2). Vapours/gases/fumes of: Ammonia or amines. Isocyanates. Hydrogen cyanide (HCN).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxic Dose 1 - LD 50 >1500 mg/kg (oral rat)

Inhalation

Harmful by inhalation. Irritating to respiratory system. May cause sensitisation by inhalation. In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects.

Ingestion

Central nervous system depression. May cause nausea, headache, dizziness and intoxication.

Skin contact

Irritating to skin. May cause sensitisation by skin contact.

Eye contact

Irritating to eyes.

Name	**CYCLOHEXANONE**
Toxic Dose 1 - LD 50	1620uL/kg mg/kg (oral rat)
Name	**ETHYL ACETATE**
Toxic Dose 1 - LD 50	5620 mg/kg (oral rat)
Toxic Conc. - LC 50	56 mg/l/4h (inh-rat)
Name	**DIPHENYLMETHANE-4,4'-DI-ISOCYANATE**
Toxic Dose 1 - LD 50	9200 mg/kg (oral rat)
Toxic Conc. - LC 50	178 mg/m3 4hr

Name	**ISOPHORONE DI-ISOCYANATE**
Toxic Dose 1 - LD 50	4825 mg/kg (oral rat)
Toxic Conc. - LC 50	0.04 mg/liter 4hr rat
Name	**4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)**
Name	**2,6-DITERTIARYBUTYL-PARA-CRESOL**

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

12.1. Toxicity

Acute Fish Toxicity

Not considered toxic to fish.

12.2. Persistence and degradability

Degradability

There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

12.4. Mobility in soil

Mobility:

Do not discharge into drains, water courses or onto the ground.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

When handling waste, consideration should be made to the safety precautions applying to handling of the product.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

Waste Class

08 04 99

SECTION 14: TRANSPORT INFORMATION

General	No other information noted.

14.1. UN number

UN No. (ADR/RID/ADN)	1139
UN No. (IMDG)	1139
UN No. (ICAO)	1139

14.2. UN proper shipping name

Proper Shipping Name	COATING SOLUTION

14.3. Transport hazard class(es)

ADR/RID/ADN Class	3
ADR/RID/ADN Class	Class 3: Flammable liquids.
ADR Label No.	3
IMDG Class	3
ICAO Class/Division	3

Transport Labels

14.4. Packing group

ADR/RID/ADN Packing group	II
IMDG Packing group	II
ICAO Packing group	II

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS	F-E, S-E
Emergency Action Code	3YE
Hazard No. (ADR)	33

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

No information required.

SECTION 15: REGULATORY INFORMATION

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

EU Legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

Water hazard classification

WGK 1

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Date	11/08/2011
Revision	9
Supersedes date	09/08/2011
Date	27/07/2011

Risk Phrases In Full

R10	Flammable.
R20	Harmful by inhalation.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R11	Highly flammable
R36/37/38	Irritating to eyes, respiratory system and skin.
R36	Irritating to eyes.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitisation by inhalation and skin contact.
R66	Repeated exposure may cause skin dryness or cracking.
R23	Toxic by inhalation.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.

Hazard Statements In Full

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs <<Organs>> through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.