Safety Data Sheet

Section 1 PRODUCT IDENTIFICATION	
Product Name:	Camtect UPF649 Part B
Synonyms:	none
Recommended Use:	Aliphatic polyisocyanate curing agent for Camtect UPF649 Part A
Supplier Information:	Cameleon Coatings 26 Paramount Drive Wangara 6055 Phone:(08) 9302 2577 www.cameleon.com.au Emergency Phone: 0413 610 147 (24 hours)

Section 2 HAZARD IDENTIFICATION

Hazard Classification:

DANGEROUS GOODS according to the criteria of the ADG code

HAZARDOUS CHEMICAL according to the criteria of Safe Work Australia

Flammable Liquids, Category 2

Skin corrosion / Irritation, Category 2

Sensitisation of the skin, Category 1

Specific Target Organ Toxicity (single exposure), Category 3

Specific Target Organ Toxicity (repeated exposure), Category 2

Aspiration Hazard, Category 1

Toxic to reproduction, Category 1A

Label elements:

Pictograms

FLAMMABLE IRRITANT HEALTH HAZARD

Signal Word: **DANGER**

Hazard Statements:

H225 Highly flammable liquid and vapour

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H373 May cause damage to organs through prolonged or repeated exposure

H304 May be fatal if swallowed and enters airways

H360 May damage the unborn child

Precautionary Statements:	*GENERAL* P101 If medical advice is needed, have product container or label at hand P102 Keep out of reach of children P103 Read label before use *PREVENTATIVE* P201 Obtain special instructions before use P202 Do not handle until all safety precautions have been read and understood P210 Keep away from heat/sparks/open flames/hot surfaces – No Smoking P233 Keep container tightly closed P240 Ground/bond container and receiving equipment P241 Use explosion proof electrical/ventilation/lighting equipment P243 Take precautionary measures against static discharge P260 Do not breathe mists/vapour/spray P261 Avoid breathing mists/vapours/spray P264 Wash thoroughly after handling P271 Use only outdoors or in a well-ventilated area P272 Contaminated work clothing should not be allowed out of the workplace P280 Wear protective gloves/eye protection/face protection P281 Use personal protective equipment as required *RESPONSE* P301+P310 IF SWALLOWED; Immediately call a Poison Centre or doctor P302+P352 IF ON SKIN: Wash with plenty of soap and water P303+P361+ IF ON SKIN (or hair):Take off contaminated clothing and wash before reuse P353 Rinse skin with water/shower P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P308+P313 IF exposed or concerned: Get medical advice/attention P312 Call a POISON CENTER or doctor/physician if you feel unwell P314 Get medical advice/attention if you feel unwell P331 Do NOT induce vomiting P332+P313 If skin irritation occurs: Get medical advice/attention P362 Take off contaminated clothing and wash before reuse P370+P378 In case of fire: Use foam/water spray/fog for extinction *STORAGE* P403+P233 Store in a well-ventilated place. Keep container tightly closed P403+P235 Store in a well-ventilated place. Keep cool P405 Store locked up *DISPOSAL* P501 Dispose of contents/container in accordance with local regulations

Section 3 COMPOSITION

Ingredient	CAS Number	Proportion
Hexamethylene-1,6-diisocyanate homopolymer	28182-81-2	30-50%
Toluene	108-88-3	30-50%
1-Methoxy-2-Propyl Acetate	108-65-6	<10%
Xylene	1330-20-7	<10%
Hexamethylene-1,6-diisocyanate	822-06-0	<0.2%
Other Non-Hazardous Materials to 100%		

Note – product contains <0.1% benzene

Proportion is % weight per weight
All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS)

Section 4 FIRST AID MEASURES

Poisons Information Centres in each State capital city can provide additional assistance for scheduled poisons.

Description of necessary first aid measures

Inhalation: Keep victim calm and remove to fresh air if safe to do so. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

Skin Contact: If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water and follow by washing with soap if available. Transport to nearest medical facility for additional treatment if necessary.

Eye Contact: If in eyes, hold eyes open, flood with water for at least 15 minutes. Seek immediate medical assistance.

Ingestion: If swallowed, do NOT induce vomiting. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Symptoms caused by exposure

Inhalation: Breathing of high vapour concentrations may cause central nervous system depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continuous inhalation may result in unconsciousness and death.

Skin: May include burning sensation and/or a dried/cracked appearance and/or allergic skin reaction.

Eye: May include burning sensation, redness, swelling and/or blurred vision.

Ingestion: May include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and/or fever.

Section 5 FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Foam, water spray or fog, carbon dioxide, dry chemical powder. Do not use water in a jet.

Specific Hazards:
Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen, isocyanate vapours and traces of hydrogen cyanide. In the event of fire/explosion do not breathe fumes.

Fire Fighting Advice:
Class 3 Flammable liquid. On burning this product may emit toxic fumes. Heating can cause expansion or decomposition leading to violent rupture of containers. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or decomposition products.
Do not allow contaminated extinguishing water to enter the soil, groundwater or surface waters.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Avoid contact with spilled or released material. Shut off leaks, if possible without personal risks. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Remove all sources of ignition in the surrounding area. Take precautionary measure against static discharge. Ensure electrical continuity by bonding and earthing all equipment.

Environmental precautions
Use appropriate containment to avoid environmental contamination. Prevent from spreading and entering waterways using sand, earth or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Ventilate contaminated area thoroughly.

Methods and materials for containment and cleaning up
Remove by mechanical means to a labelled, sealable container for product recovery or safe disposal. Cover the remainder with wet, absorbent material (eg sawdust, chemical binder based on calcium silicate hydrate, sand). After approx. one hour transfer to a waste container and do not seal (evolution of CO2!). Keep damp in a safe ventilated area for several days.

Section 7 HANDLING AND STORAGE

Storage:

Store tightly closed in a cool, dry, well ventilated area.
Store away from acids, oxidising agents, and sources of heat or ignition. Keep containers closed at all times when not in use. Check regularly for leaks. Reacts with moisture in air and water.
This material is Harmful and a Scheduled Poison S6. It must be stored, maintained and used in accordance with relevant regulations.
The precautions required in the handling of isocyanates must be taken. Avoid contact with skin and eyes and inhalation of vapours.
Provide sufficient air exchange and/or exhaust in work rooms. Exhaust ventilation is necessary if product is sprayed.
Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work and use skin-protecting ointment. Keep work clothes separate. Take off all contaminated clothing immediately.

Section 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

National Exposure Limits.
No value has been assigned for this specific product by the National Occupational Health and Safety Commission (NOHSC) Worksafe Australia

However, exposure standards for constituents:

Material	TWA		STEL		Notices
	ppm	Mg/m^3	ppm	mg/m^3	
Hexamethylene-1,6-diisocyanate homopolymer (measured as NCO)		0.02		0.07	
Hexamethylene-1,6-diisocyanate		0.02		0.07	-
1-Methoxy-2-Propyl Acetate	50	274	100	548	
Xylene	80	350	150	655	SK
Toluene	50	191	150	574	

TWA:
The Time Weighted Average airborne concentrations over an eight-hour working day, for a five day working week over an entire working life.

STEL:
(Short Term Exposure Limit) The average airborne concentration over a fifteen minute period which should not be exceeded at any time during a normal eight-hour work day.

SK Notice:
Absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.
According to current knowledge, these concentrations should neither impair the health of, nor cause undue discomfort to, nearly all workers.

These exposure standards are guides to be used in the control of Occupational Health Hazards. All atmospheric contamination should be kept as low as is practicable.
Exposure standards should **NOT** be used as the defining line between safe and dangerous concentrations of chemicals. They are **NOT** a measure of relative toxicity.

Biological monitoring
No biological limit allocated.

Engineering controls
Ensure that adequate ventilation is provided. Maintain air concentrations below recommended exposure standards. Avoid generating and inhaling mists and vapours. Keep containers closed when not in use.
DO NOT enter confined spaces where vapour may have collected.

Individual protection measures

Skin protection: Use solvent resistant gloves, nitrile for longer term protection or PVC and neoprene for incidental splashes. Use apron, protective boots, chemical protection suit dependant on activity and possible exposure.
Respiratory protection: Respiratory protection required in insufficiently ventilated working areas and during spraying. When using respirators, select an appropriate combination of mask and filter. Select a filter for organic gases and vapours (boiling point > 65°C). Respirators should comply with AS1716 or an equivalent approved by a state/territory authority.

Thermal hazards: Not applicable

Section 9 PHYSICAL PROPERTIES

Appearance: Clear mobile liquid

Solubility: Reacts with water

Odour:	Solvent	Density @ 20°C:	~0.96 kg/lt
pH:	NAP	Flash point & Method:	~ 7°C Closed Cup
Vapour Pressure 20°C (mm Hg):	*3.0-3.5 kPa	Upper Explosive Limit (UEL):	*8.0%
Vapour Density (Air = 1)	*3.1	Lower Explosive Limit (LEL):	*1.2%
Initial Boiling Point & Range °C:	*110	Ignition Temperature °C:	NAV
Freezing Point °C:	NAV	Percent Volatiles (by weight):	~ 61%
NAP = Not Applicable, NAV = Not Available *For Toluene			

Section 10 STABILITY AND REACTIVITY

Reactivity
Stable under normal conditions of use.

Chemical stability
Stable under normal conditions of use.

Possibility of hazardous reactions
Exothermic reactions with amines and alcohols; reacts slowly with water forming CO2, in closed containers risk of bursting due to increase of pressure.

Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources.

Incompatible materials
Water, alcohol, amines

Hazardous decomposition products
Thermal decomposition is highly dependent on conditions. Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen, isocyanate vapours and traces of hydrogen cyanide.

Section 11 TOXICOLOGICAL INFORMATION

Acute toxicity
Assessment of acute toxicity:
Harmful by inhalation. The product has not been tested. The statement has been derived from the properties of the individual components.
LD50 rat (oral): > 5,000 mg/kg (BASF-Test)
The product has not been tested. The statement has been derived from the properties of the individual components.
LC50 rat (by inhalation): 4 h
not determined
LD50 rat (dermal):
not determined

Irritation
Assessment of irritating effects:
Exposure to high concentrations causes respiratory irritations. The product has not been tested. The statement has been derived from the properties of the individual components.
Primary skin irritation rabbit: non-irritant (OECD Guideline 404)
The product has not been tested. The statement has been derived from the properties of the individual components.
Primary irritations of the mucous membrane rabbit: non-irritant (OECD Guideline 405)
The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment other acute effects
Assessment other acute effects:
A single exposure may have relevant toxic effects on organs.
Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Sensitization
Assessment of sensitization:
No pulmonary sensitization potential was observed in the guinea pig model either after intradermal or inhalative induction with polyisocyanate based on hexamethylene diisocyanate. No sensizitation of the respiratory tract as shown in animal studies.
Guinea pig maximization test : sensitizing
sensitizing effect in animal tests

Repeated dose toxicity
Assessment of repeated dose toxicity:
Repeated dermal exposure to large quantities may affect certain organs. The product has not been tested. The statement has been derived from the properties of the individual components. Repeated inhalation exposure to large quantities may affect certain organs. Repeated oral uptake of the substance did not cause substance-related effects.

Genetic toxicity
Assessment of mutagenicity:
Based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity
Assessment of carcinogenicity:
No reliable data was available concerning carcinogenic activity.

Reproductive toxicity
For constituent Toluene: Experiments have shown reproductive toxicity effects in male and female laboratory animals. Suspected human reproductive toxicant. Damage to foetus possible.

Developmental toxicity
Assessment of teratogenicity:
No reliable data was available concerning teratogenicity.

Additional information:
Special properties/effects: Over-exposure entails the risk of concentration-dependent irritating effects on eyes, nose throat, and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible.
Hypersensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the UK Workplace Exposure Limit (WEL). Prolonged contact with the skin may cause tanning and irritant effects.
Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction.
Aromatic hydrocarbons irritate the skin and mucous membranes and are narcotic if inhaled in high concentrations. Repeated or prolonged contact may cause irritation and dermatitis. Risk of cutaneous absorption.

Section 12 ECOLOGICAL INFORMATION

Ecotoxicity

For constituent **Xylene**:
Acute Toxicity – fish: Toxic, 1<LC/EC/IC 50 ≤ 10mg/l.
Acute Toxicity – invertebrates: Toxic, 1<LC/EC/IC 50 ≤ 10mg/l.
Acute Toxicity – algae: Toxic, 1<LC/EC/IC 50 ≤ 10mg/l.
Acute Toxicity – microorganisms Data not available
Chronic toxicity Data not available

For constituent **Toluene**
Acute Toxicity – fish: Toxic, 1<LC/EC/IC 50 ≤ 10mg/l.
Acute Toxicity – invertebrates: Harmful, 10<LC/EC/IC 50 ≤ 100mg/l.
Acute Toxicity – algae: Low, LC/EC/IC 50 > 100mg/l.
Acute Toxicity – microorganisms Data not available
Chronic toxicity Data not available

For constituent **Hexamethylene-1,6-diisocyanate**

Assessment of aquatic toxicity:
The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish:
LC50 (96 h) > 100 mg/l, Brachydanio rerio (Directive 92/69/EEC, C.1)
The product has not been tested. The statement has been derived from the properties of the individual components.

Aquatic invertebrates:
EC50 (48 h) > 100 mg/l, Daphnia magna (Directive 92/69/EEC, C.2)
The product has not been tested. The statement has been derived from the properties of the individual components.

Aquatic plants:
EC50 (72 h) > 100 mg/l (growth rate), Desmodesmus subspicatus (DIN 38412 Part 9)
The product has not been tested. The statement has been derived from the properties of the individual components.

Microorganisms/Effect on activated sludge:
EC20 (3 h) > 150 mg/l, bacteria
The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product has not been tested. The statement has been derived from the properties of the individual components.

Chronic toxicity to fish:
Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:
Study scientifically not justified.

Assessment of terrestrial toxicity:
Study scientifically not justified.

Mobility
Assessment transport between environmental compartments:
No data available.

Persistence and degradability
Assessment biodegradation and elimination (H2O):
The substance can be virtually eliminated from water in suitable effluent treatment plants by biodegradation, stripping and mechanical separation. Well eliminable from water by adsorption on activated sludge.
Elimination information:
Not readily biodegradable (by OECD criteria).

Bioaccumulation potential
Assessment bioaccumulation potential:
Significant accumulation in organisms is not to be expected.
The product has not been tested. The statement has been derived from the properties of the individual components.

Additional information
Isocyanate reacts with water at the interface forming CO2 and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by watersoluble solvents. Previous experience shows that polyurea is inert and non-degradable.

Do not release untreated into natural waters. The local regulations on waste-water treatment must be followed.

Section 13 DISPOSAL CONSIDERATIONS

Do not pour unwanted product down the drain. Keep unwanted productt in sealed containers for disposal via special chemical waste collections. Empty paint containers should be left open in a well ventilated area to dry out. When dry, recycle steel containers via steel can recycling programs. Disposal of empty containers via domestic recycling programs may differ between local authorities. Check with your local council first.

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Section 14 TRANSPORT INFORMATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG7 Code) for transport by road or rail.

UN Number:	1263	HAZCHEM:	•3YE
UN Proper Shipping Name:	PAINT	Packaging Group:	II
Class and Sub Risk:	3 Flammable Liquid		

Special Precautions: Not to be loaded with explosives (Class 1), flammable gases (Class 2.1) in bulk, poisonous gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2) and radioactive substances (Class 7), however, exemptions may apply.

Section 15 REGULATORY INFORMATION

Hazardous according to Safe Work Australia

Poisons Schedule (Australia): *S6*

Section 16 OTHER INFORMATION

Date of preparation: August 2016
Version 1.02

General:

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.
This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular, how to safely handle and use the product in the work-place.

Since Cameleon Coatings cannot anticipate or control the conditions under which this product may be used or handled, each user must, prior to using or handling this product, review this SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is required to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers, and is also available from the company upon request.