

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name DEFT M23377K TYPE I CLASS N BASE
Synonym(s) NSN: XXXX-01-555-3381
02GN084 - PRODUCT CODE • BASE/MIL-PRF-23377K, TYPE I, CLASS N (NON-CHROME) • DEFT MIL-PRF-23377J TYPE I CLASS N BASE (02GN084) (FORMERLY)

1.2 Uses and uses advised against

Use(s) AEROSPACE APPLICATIONS • COATING • TWO COMPONENT COATING

1.3 Details of the supplier of the safety data sheet

Supplier name PPG INDUSTRIES AUSTRALIA PTY. LTD. (ASC - AUSTRALIA)
Address 23 Ovata Drive, Tullamarine, VIC, Australia, 3043
Telephone (03) 9335 1557
Fax (03) 9335 3490
Email contact.aust@ppg.com
Website <http://www.ppg.com/coatings/aerospace/>

1.4 Emergency telephone number(s)

Emergency 1800 807 001

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS Classification(s) Flammable Liquids: Category 2
Aspiration Hazard: Category 1
Skin Corrosion/Irritation: Category 2
Skin Sensitisation: Category 1
Serious Eye Damage / Eye Irritation: Category 2A
Acute Toxicity: Inhalation: Category 4
Specific Target Organ Systemic Toxicity (Single Exposure): Category 3
Carcinogenicity: Category 2
Toxic to Reproduction: Category 2
Aquatic Toxicity (Chronic): Category 3
Repeated exposure may cause skin dryness or cracking

2.2 Label elements

Signal word

DANGER

Pictograms



Hazard statement(s)

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Product name DEFT M23377K TYPE I CLASS N BASE

- H351 Suspected of causing cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H412 Harmful to aquatic life with long lasting effects.
- AUH066 Repeated exposure may cause skin dryness or cracking

Prevention statement(s)

- 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/ventilating/lighting equipment.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/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.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response statement(s)

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P321 Specific treatment is advised - see first aid instructions.
- P331 Do NOT induce vomiting.
- P362 Take off contaminated clothing and wash before re-use.
- P370 + P378 In case of fire: Use appropriate media for extinction.

Storage statement(s)

- P403 + P233 + P235 Store in a well-ventilated place. Keep cool. Keep container tightly closed.
- P405 Store locked up.

Disposal statement(s)

- P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other Hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS number	EC number	Content
ADDITIVE(S)	Not Available	Not Available	remainder
1-CHLORO-4-(TRIFLUOROMETHYL)BENZENE	98-56-6	202-681-1	15 - 40%
2-PENTANONE	107-87-9	203-528-1	7 - 13%
BUTAN-2-OL	78-92-2	201-158-5	5 - 10%
CYCLOHEXANONE	108-94-1	203-631-1	5 - 10%
TITANIUM DIOXIDE	13463-67-7	236-675-5	5 - 10%
BENZYL ALCOHOL	100-51-6	202-859-9	1 - 5%
EPOXY RESIN-OXIRANE, BISPHENOL HOMOPOLYMER	25085-99-8	607-537-5	1 - 5%
AMINOETHYL PIPERAZINE	140-31-8	205-411-0	0.5 - 1.5%
DIPRASEODYMIUM TRIOXIDE	12036-32-7	234-845-3	1 - 5%

Product name **DEFT M23377K TYPE I CLASS N BASE**

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation If swallowed or inhaled, remove from contaminated area. Apply artificial respiration if not breathing. Do not give direct mouth-to-mouth resuscitation. To protect rescuer, use air-viva, oxy-viva or one-way mask. Resuscitate in a well-ventilated area.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. Rinse mouth with water.

First aid facilities Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

No information provided.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Dry agent, carbon dioxide or foam. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture

Highly flammable. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition. Vapour may form explosive mixtures with air. Eliminate all ignition sources, including cigarettes, open flames, spark producing switches/tools, electrical equipment, heaters, pilot lights etc. Earth containers when dispensing fluids. May evolve hydrogen chloride, phosgene and hydrogen fluoride gas when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

- 3YE
- Alcohol Resistant Foam is the preferred firefighting medium. Else use;
- 3 Normal Foam (protein based foam that is not alcohol resistant).
- Y Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.
- E Evacuation of people in and around the immediate vicinity of the incident should be considered.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all sources of ignition.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

Product name **DEFT M23377K TYPE I CLASS N BASE**

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, preferably flammables store, removed from direct sunlight, incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Large storage areas should have appropriate ventilation and fire protection systems.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Substance	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Cyclohexanone	SWA (AUS)	25	100	--	--
Methyl propyl ketone	SWA (AUS)	200	705	250	881
Titanium dioxide (a)	SWA (AUS)	--	10	--	--
sec-Butyl alcohol	SWA (AUS)	100	303	--	--

Biological limits

Ingredient	Reference	Determinant	Sampling time	BEI
CYCLOHEXANONE	ACGIH BEI	1,2-Cyclohexanediol in urine (with hydrolysis)	End of shift at end of workweek	80 mg/L
	ACGIH BEI	Cyclohexanol in urine (with hydrolysis)	End of shift	8 mg/L

8.2 Exposure controls

Engineering Controls

Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated or confined areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

PPE

Eye/Face

Wear splash-proof goggles.

Hand

Wear PVA or viton (R) gloves.

Body

Wear coveralls.

Respiratory

Where an inhalation risk exists, wear a Type A (Organic vapour) respirator. If sanding dry product, wear a Class P1 (Particulate) respirator. If spraying, with prolonged use, or if in confined areas, wear an Air-line respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

GREEN LIQUID

Product name	DEFT M23377K TYPE I CLASS N BASE
Odour	SOLVENT ODOUR
Odour Threshold	NOT AVAILABLE
Flammability	HIGHLY FLAMMABLE
Flash Point	8°C (cc)
Boiling Point	99°C to 139°C
Melting Point	NOT AVAILABLE
Evaporation Rate	NOT AVAILABLE
pH	NOT AVAILABLE
Specific Gravity	1.411
Solubility (water)	NOT AVAILABLE
Vapour Density	> 1 (Air = 1)
Vapour Pressure	NOT AVAILABLE
Upper Explosion Limit	NOT AVAILABLE
Lower Explosion Limit	NOT AVAILABLE
Partition Coefficient	NOT AVAILABLE
Autoignition Temperature	NOT AVAILABLE
Decomposition Temperature	NOT AVAILABLE
Viscosity	> 20 cps @ 20°C
Explosive Properties	NOT AVAILABLE
Oxidising Properties	NOT AVAILABLE

9.2 Other information

No information provided.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Hazardous polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), heat and ignition sources. Incompatible with alkalis (e.g. sodium hydroxide) and reducing agents (e.g. sulphites).

10.6 Hazardous decomposition products

May evolve carbon oxides and hydrocarbons when heated to decomposition.

Product name **DEFT M23377K TYPE I CLASS N BASE**

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary	Harmful - irritant. This product has the potential to cause adverse health effects with over exposure. Use safe work practices to avoid eye or skin contact and inhalation. Chronic exposure to some solvents may result in liver, kidney and central nervous system (CNS) damage. Possible risk of harm to the unborn child. Titanium dioxide is classified as possibly carcinogenic to humans (IARC Group 2B).
Eye	Irritant. Contact may result in irritation, lacrimation, pain and redness. May result in burns with prolonged contact.
Inhalation	Harmful - irritant. Over exposure may result in irritation of the nose and throat, coughing, nausea and headache. High level exposure may result in dizziness, drowsiness, breathing difficulties and unconsciousness. Repeated exposure to some solvents may result in liver, kidney and central nervous system (CNS) damage.
Skin	Irritant. Contact may result in drying and defatting of the skin, rash and dermatitis. May be absorbed through skin with harmful effects. May cause sensitisation by skin contact.
Ingestion	Harmful. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, dizziness and drowsiness. Aspiration or inhalation may cause chemical pneumonitis and pulmonary oedema.
Toxicity data	<p>1-CHLORO-4-(TRIFLUOROMETHYL)BENZENE (98-56-6)</p> <ul style="list-style-type: none">LC50 (Inhalation): 20 g/m³ (mouse)LD50 (Ingestion): 11500 mg/m³ (mouse) <p>2-PENTANONE (107-87-9)</p> <ul style="list-style-type: none">LCLo (Inhalation): 2000 ppm/4 hour (rat)LD50 (Ingestion): 1600 mg/kg (rat)LD50 (Intraperitoneal): 800 mg/kg (rat)LD50 (Skin): 6500 mg/kg (rabbit)TCLo (Inhalation): 1500 ppm (human) <p>BUTAN-2-OL (78-92-2)</p> <ul style="list-style-type: none">LC50 (Inhalation): 48.5 mg/L/4hrsLD50 (Ingestion): 6480 mg/kg (rat)LD50 (Skin): > 2000 mg/kg (rat) <p>CYCLOHEXANONE (108-94-1)</p> <ul style="list-style-type: none">LC50 (Inhalation): > 6.2 mg/L/4 hours (rat) <p>BENZYL ALCOHOL (100-51-6)</p> <ul style="list-style-type: none">LCLo (Inhalation): 1000 ppm/8 hours (rat)LD50 (Ingestion): 1230 mg/kg (rat)LD50 (Skin): 2000 mg/kg (rabbit)LDLo (Skin): 10 g/kg (cat) <p>EPOXY RESIN-OXIRANE, BISPHENOL HOMOPOLYMER (25085-99-8)</p> <ul style="list-style-type: none">LD50 (Ingestion): 2-19 g/kg (rat)LD50 (Skin): 20,000 mg/kg <p>AMINOETHYL PIPERAZINE (140-31-8)</p> <ul style="list-style-type: none">LD50 (Ingestion): 2140 mg/kg (rat)LD50 (Intraperitoneal): 250 mg/kg (mouse)LD50 (Skin): 880 mg/kg (rabbit)

Product name **DEFT M23377K TYPE I CLASS N BASE**

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Results of PBT and vPvB assessment

No information provided.

12.6 Other adverse effects

If aromatic hydrocarbons are released to soil, they will evaporate from near-surface soil & leach to groundwater. Biodegradation occurs in soil & groundwater but may be slow, especially at high concentrations, which can be toxic to microorganisms. Will exist largely as vapour in air. Half life in atmosphere depends on particular hydrocarbon (eg 1-2 days (xylene); 3 hrs-1 day (toluene)).

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Mix components together (small amounts), absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Ensure protective equipment is worn when mixing. Do not seal containers/tins until reaction is complete. Contact the manufacturer/supplier for additional information (if required). Prevent contamination of drains and waterways as environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	Land Transport (ADG)	Sea Transport (IMDG/IMO)	Air Transport (IATA/ICAO)
14.1 UN number	1263	1263	1263
14.2 UN proper shipping name	PAINT or PAINT RELATED MATERIAL		
14.3 Transport hazard classes			
DG Class	3	3	3
Subsidiary risk(s)	None Allocated	-	-
14.4 Packing group	II	II	II
14.5 Environmental hazards		None Allocated	
14.6 Special precautions for user			
Hazchem Code	•3YE		
EMS		F-E, S-E	

Product name **DEFT M23377K TYPE I CLASS N BASE**

15. REGULATORY INFORMATION

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

Poison schedule	Classified as a Schedule 5 Poison using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).	
Classifications	Carc. - Carcinogen F - Flammable N - Dangerous for the environment Repr. - Reproductive toxin Xi - Irritant Xn - Harmful	
Risk phrases	R11:	Highly flammable.
	R20:	Harmful by inhalation.
	R36/37/38:	Irritating to eyes, respiratory system and skin.
	R40:	Limited evidence of a carcinogenic effect.
	R43:	May cause sensitisation by skin contact.
	R52/53:	Harmful 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.
	R66:	Repeated exposure may cause skin dryness or cracking.
Safety phrases	S9:	Keep container in a well ventilated place.
	S13:	Keep away from food, drink and animal feeding stuffs.
	S16:	Keep away from sources of ignition - No smoking.
	S23:	Do not breathe gas/fumes/vapour/spray (where applicable).
	S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
	S29:	Do not empty into drains.
	S40:	To clean the floor and all objects contaminated by this material use [appropriate material to be specified by the manufacturer].
	S51:	Use only in well ventilated areas.
	S53:	Avoid exposure - obtain special instructions before use.
	S60:	This material and its container must be disposed of as hazardous waste.
	S62:	If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

15.2 Chemical safety assessment

No information provided.

16. OTHER INFORMATION

Additional information This product is intended for use in conjunction with DEFT MIL-PRF-23377K TYPE I CLASS N CURATIVE. Please refer to the appropriate SDS before use.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

Product name DEFT M23377K TYPE I CLASS N BASE

WORK PRACTICES - SOLVENTS: Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report Status

This ChemAlert report has been independently compiled by RMT's scientific department utilising the original Safety Data Sheet ('SDS') for the product provided to RMT by the manufacturer. The information is based on the latest chemical and toxicological research and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. It is an independent collation by RMT of information obtained from the original SDS for this product. Its content has not been authorised or verified by the manufacturer / distributor of the chemical to which it relates.

Product name **DEFT M23377K TYPE I CLASS N BASE**

This ChemAlert report does not constitute the manufacturer's original SDS and is not intended to be a replacement for same. It is provided to subscribers of ChemAlert as a reference tool only, is not all-inclusive and does not represent any guarantee as to the properties of the product. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this ChemAlert report, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this ChemAlert report.

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End of Report