

MATERIAL SAFETY DATA SHEET



APCOTHANE CF 678

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Identification of the substance or mixture

Product name : APCOTHANE CF 678

Product code : 25850608

Chemical name : Not available.

Synonyms : Not available.

Chemical formula : Not applicable.

CAS number : Not applicable.

Use of the substance/mixture : Painting/Coating

Company/undertaking identification

Manufacturer : Asian Paints Ltd.
6A, Shantinagar.
Opp Hotel Grand Hyatt,
Santacruz (E), P.O. Box No. 6818,
Mumbai 400 055

Tel No. 091 22 39818000

Fax No. 091 22 39818888

Supplier : Asian Paints Ltd.
6A, Shantinagar.
Opp Hotel Grand Hyatt,
Santacruz (E), P.O. Box No. 6818,
Mumbai 400 055

Tel No. 091 22 39818000

Fax No. 091 22 39818888

e-mail address of person responsible for this SDS : aplmsds@asianpaints.com

Emergency telephone number (with hours of operation) : +091 22 39814000

2. HAZARDS IDENTIFICATION

Classification : Toxic

Risk phrases : R10- Flammable.
R60- May impair fertility.
R61- May cause harm to the unborn child.
R20/21/22- Also harmful by inhalation, in contact with skin and if swallowed.
R38- Irritating to skin.

Physical/chemical hazards : Flammable.

Human health hazards : May impair fertility. May cause harm to the unborn child. Also harmful by inhalation, in contact with skin and if swallowed. Irritating to skin.

Additional hazards : None known.

See Section 11 for more detailed information on health effects and symptoms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Mixture

Ingredient name	CAS number	%
Acrylic Polymer	Not Available	30 - 50
2-methoxy-1-methylethyl acetate	108-65-6	15 - 30
xylene	1330-20-7	5 - 15
Hexamethylene diisocyanate, oligomers	28182-81-2	5 - 15
titanium dioxide	13463-67-7	5 - 15
n-butyl acetate	123-86-4	1 - 5
2-ethoxyethyl acetate	111-15-9	1 - 5
Hydroxyphenyl benzotriazole derivatives		0 - 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

N-methyl-2-pyrrolidone	872-50-4	0 - 1
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

- Inhalation** : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

See Section 11 for more detailed information on health effects and symptoms.

5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable** : Recommended: alcohol-resistant foam, CO₂, powders, water spray or mist.
- Not suitable** : Do not use water jet.

- Special exposure hazards** : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. HANDLING AND STORAGE

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

Ingredient name

2-methoxy-1-methylethyl acetate

Occupational exposure limits

EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values

TWA: 50 ppm 8 hours.

TWA: 275 mg/m³ 8 hours.

STEL: 100 ppm 15 minutes.

STEL: 550 mg/m³ 15 minutes.

xylene

EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values

TWA: 50 ppm 8 hours.

TWA: 221 mg/m³ 8 hours.

STEL: 100 ppm 15 minutes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

titanium dioxide	STEL: 442 mg/m ³ 15 minutes. ACGIH TLV (United States, 3/2012).
n-butyl acetate	TWA: 10 mg/m ³ 8 hours. ACGIH TLV (United States, 3/2012). TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes.
2-ethoxyethyl acetate	EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values TWA: 11 mg/m ³ 8 hours. TWA: 2 ppm 8 hours.
N-methyl-2-pyrrolidone	EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values TWA: 40 mg/m ³ 8 hours. TWA: 10 ppm 8 hours. STEL: 80 mg/m ³ 15 minutes. STEL: 20 ppm 15 minutes.
2-methoxy-1-methylethyl acetate	AIHA WEEL (United States, 10/2011). TWA: 50 ppm 8 hours.
Xylene	ACGIH TLV (United States, 3/2012). TWA: 100 ppm 8 hours. TWA: 434 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m ³ 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 435 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m ³ 15 minutes. OSHA PEL (United States, 6/2010). TWA: 100 ppm 8 hours. TWA: 435 mg/m ³ 8 hours.
titanium dioxide	ACGIH TLV (United States, 3/2012). TWA: 10 mg/m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2010). TWA: 15 mg/m ³ 8 hours. Form: Total dust
n-Butyl acetate	OSHA PEL 1989 (United States, 3/1989). TWA: 150 ppm 8 hours. TWA: 710 mg/m ³ 8 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m ³ 15 minutes. NIOSH REL (United States, 1/2013). TWA: 150 ppm 10 hours. TWA: 710 mg/m ³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m ³ 15 minutes. ACGIH TLV (United States, 3/2012). TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes. OSHA PEL (United States, 6/2010). TWA: 150 ppm 8 hours. TWA: 710 mg/m ³ 8 hours.
2-ethoxyethyl acetate(Cellosolve acetate)	ACGIH TLV (United States, 3/2012). Absorbed through skin. TWA: 5 ppm 8 hours. TWA: 27 mg/m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 100 ppm 8 hours. TWA: 540 mg/m ³ 8 hours. NIOSH REL (United States, 1/2013). Absorbed through skin. TWA: 0.5 ppm 10 hours. TWA: 2.7 mg/m ³ 10 hours. OSHA PEL (United States, 6/2010). Absorbed through skin. TWA: 100 ppm 8 hours. TWA: 540 mg/m ³ 8 hours.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ethylbenzene

ACGIH TLV (United States, 3/2012).

TWA: 20 ppm 8 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

STEL: 125 ppm 15 minutes.

STEL: 545 mg/m³ 15 minutes.**NIOSH REL (United States, 1/2013).**

TWA: 100 ppm 10 hours.

TWA: 435 mg/m³ 10 hours.

STEL: 125 ppm 15 minutes.

STEL: 545 mg/m³ 15 minutes.**OSHA PEL (United States, 6/2010).**

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Exposure controls

Occupational exposure controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eye protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid.
Odor	: Not available.
Odor threshold	: 0.05 ppm
pH	: Not applicable.
Boiling point	: Not available.
Melting point	: Not available.
Flash point	: Closed cup: >24°C (>75.2°F) [Abel's close cup]
Explosion limits	: Lower: 1% Upper: 10%
Vapor pressure	: 0.32 kPa (2.4 mm Hg) [room temperature]
Relative density	: 1.05
Solubility	: Not available.
Vapor density	: 4.6 [Air = 1]
Evaporation rate	: <1 (Butyl Acetate = 1)
Auto-ignition temperature	: 380°C (716°F)
Density	: 1.05 g/cm ³ [30°C (86°F)]
Flammability	: Not available.

10. STABILITY AND REACTIVITY

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Materials to avoid	: No known incompatibility

11. TOXICOLOGICAL INFORMATION

Potential acute health effects

Inhalation	: Harmful by inhalation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Harmful if swallowed. Irritating to mouth, throat and stomach.
Skin contact	: Harmful in contact with skin. Irritating to skin.
Eye contact	: May cause eye irritation.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Hexamethylene diisocyanate, oligomers	LC50 Inhalation Vapor	Rat	18500 mg/m ³	1 hours
	LD50 Oral	Rat	>5000 mg/kg	-
n-butyl acetate	LC50 Inhalation Gas.	Rat	390 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
2-ethoxyethyl acetate	LD50 Oral	Rat	2700 mg/kg	-
Hydroxyphenyl benzotriazole derivatives	LD50 Oral	Rat	>2000 mg/kg	-
N-methyl-2-pyrrolidone	LD50 Dermal	Rabbit	8 g/kg	-
	LD50 Oral	Rat	3914 mg/kg	-

Potential chronic health effects

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
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11. TOXICOLOGICAL INFORMATION

xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
Hexamethylene diisocyanate, oligomers	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
titanium dioxide	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
n-butyl acetate	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
2-ethoxyethyl acetate	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
N-methyl-2-pyrrolidone	Skin - Mild irritant	Rabbit	-	490 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-

Product name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
2-ethoxyethyl acetate N-methyl-2-pyrrolidone			Repr. Cat. 2; R61 Repr. Cat. 2; R61	Repr. Cat. 2; R60

- Chronic effects** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : May cause birth defects.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : May impair fertility.
- Denmark Carcinogen list** : Contains a substance or substances listed under National Working Environment Authorities Executive Order 908/2005.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Eyes** : No specific data.

12. ECOLOGICAL INFORMATION

- Ecotoxicity** : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
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12. ECOLOGICAL INFORMATION

xylene	-	Acute LC50 8500 µg/l Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 13400 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
Hexamethylene diisocyanate, oligomers	-	EC50 >1 mg/l	Algae - Scenedesmus subspicatus	72 hours
titanium dioxide	-	Acute EC50 5.83 mg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	-	Acute LC50 3 mg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	-	Acute LC50 1000000 µg/l Marine water	Fish - Mummichog - Fundulus heteroclitus	96 hours
	-	Chronic NOEC 0. 984 mg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
n-butyl acetate	-	Acute LC50 32000 µg/l Marine water	Crustaceans - Brine shrimp - Artemia salina - Nauplii	48 hours
	-	Acute LC50 62000 µg/l	Fish - Zebra danio - Danio rerio	96 hours
2-ethoxyethyl acetate	-	Acute LC50 40000 µg/l Marine water	Fish - Inland silverside - Menidia beryllina	96 hours
N-methyl-2-pyrrolidone	-	Acute LC50 1.23 to 1.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

Conclusion/Summary : Not available.

Bioaccumulative potential

Product/ingredient name	LogP_{ow}	BCF	Potential
2-methoxy-1-methylethyl acetate	0.56	-	low
xylene	3.16	8.1 to 25.9	low
titanium dioxide	-	352	high
n-butyl acetate	1.78	-	low
2-ethoxyethyl acetate	0.24	-	low
N-methyl-2-pyrrolidone	-0.38	-	low

Other adverse effects : No known significant effects or critical hazards.









13. DISPOSAL CONSIDERATIONS

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste product residues should not be disposed of via the sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Type y

14. TRANSPORT INFORMATION

International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADR/RID Class	1263	UN1263 - Paint, Paint related Material, Flammable	3	-	 	Tunnel code (D/E)
ADN/ADNR Class	1263	UN1263 - Paint, Paint related Material, Flammable	3	-	 	-
IMDG Class	1263	UN1263 - Paint, Paint related Material, Flammable. Marine pollutant (Xylene, Hexamethylene diisocyanate, oligomers)	3	-	 	-
IATA Class	1263	UN1263 - Paint, Paint related Material, Flammable	3	-	 	-

PG* : Packing group

15. REGULATORY INFORMATION

Hazard symbol or symbols :



Toxic

Risk phrases

: R10- Flammable.
R60- May impair fertility.
R61- May cause harm to the unborn child.
R20/21/22- Also harmful by inhalation, in contact with skin and if swallowed.
R38- Irritating to skin.

15. REGULATORY INFORMATION

Safety phrases	:	S53- Avoid exposure - obtain special instructions before use. S36/37- Wear suitable protective clothing and gloves.
Contains	:	Acrylic Polymer xylene 2-ethoxyethyl acetate
Product use	:	Industrial applications.

16. OTHER INFORMATION

National Fire Protection Association (U.S.A.) :

**History**

Date of printing	08-25-2019
Date of issue Date of revision	08-25-2019
Date of previous issue	08-24-2014
Version	: 2

Indicates information that has changed from previously issued version.

Disclaimer

Information contained in this material safety data sheet is believed to be reliable and given in good faith, but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them.

The user of this material decides what safety measures are necessary to safely use this material, either alone or in combination with other materials.

Asian Paints Limited makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

APCOTHANE CF 678

MATERIAL SAFETY DATA SHEET



APCOTHANE CF 678 LIGHT GREY

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Identification of the substance or mixture

Product name : APCOTHANE CF 678 LIGHT GREY
Product code : 25850608
Chemical name : Not available.
Synonyms : Not available.
Chemical formula : Not applicable.
CAS number : Not applicable.

Use of the substance/mixture : Painting/Coating

Company/undertaking identification

Manufacturer : Asian Paints Ltd.
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e-mail address of person responsible for this SDS : aplmsds@asianpaints.com

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R20/21/22- Also harmful by inhalation, in contact with skin and if swallowed.
R38- Irritating to skin.

Physical/chemical hazards : Flammable.

Human health hazards : May impair fertility. May cause harm to the unborn child. Also harmful by inhalation, in contact with skin and if swallowed. Irritating to skin.

Additional hazards : None known.

See Section 11 for more detailed information on health effects and symptoms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Mixture

Ingredient name	CAS number	%
Acrylic Polymer	Not Available	30 - 50
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xylene	1330-20-7	5 - 15
Hexamethylene diisocyanate, oligomers	28182-81-2	5 - 15
titanium dioxide	13463-67-7	5 - 15
n-butyl acetate	123-86-4	1 - 5
2-ethoxyethyl acetate	111-15-9	1 - 5
Hydroxyphenyl benzotriazole derivatives		0 - 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

N-methyl-2-pyrrolidone	872-50-4	0 - 1
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

- Inhalation** : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

See Section 11 for more detailed information on health effects and symptoms.

5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable** : Recommended: alcohol-resistant foam, CO₂, powders, water spray or mist.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. HANDLING AND STORAGE

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

Ingredient name

2-methoxy-1-methylethyl acetate

Occupational exposure limits

EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values

TWA: 50 ppm 8 hours.

TWA: 275 mg/m³ 8 hours.

STEL: 100 ppm 15 minutes.

STEL: 550 mg/m³ 15 minutes.

xylene

EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values

TWA: 50 ppm 8 hours.

TWA: 221 mg/m³ 8 hours.

STEL: 100 ppm 15 minutes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

titanium dioxide	STEL: 442 mg/m ³ 15 minutes. ACGIH TLV (United States, 3/2012).
n-butyl acetate	TWA: 10 mg/m ³ 8 hours. ACGIH TLV (United States, 3/2012). TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes.
2-ethoxyethyl acetate	EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values TWA: 11 mg/m ³ 8 hours. TWA: 2 ppm 8 hours.
N-methyl-2-pyrrolidone	EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values TWA: 40 mg/m ³ 8 hours. TWA: 10 ppm 8 hours. STEL: 80 mg/m ³ 15 minutes. STEL: 20 ppm 15 minutes.
2-methoxy-1-methylethyl acetate	AIHA WEEL (United States, 10/2011). TWA: 50 ppm 8 hours.
Xylene	ACGIH TLV (United States, 3/2012). TWA: 100 ppm 8 hours. TWA: 434 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m ³ 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 435 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m ³ 15 minutes. OSHA PEL (United States, 6/2010). TWA: 100 ppm 8 hours. TWA: 435 mg/m ³ 8 hours.
titanium dioxide	ACGIH TLV (United States, 3/2012). TWA: 10 mg/m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2010). TWA: 15 mg/m ³ 8 hours. Form: Total dust
n-Butyl acetate	OSHA PEL 1989 (United States, 3/1989). TWA: 150 ppm 8 hours. TWA: 710 mg/m ³ 8 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m ³ 15 minutes. NIOSH REL (United States, 1/2013). TWA: 150 ppm 10 hours. TWA: 710 mg/m ³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m ³ 15 minutes. ACGIH TLV (United States, 3/2012). TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes. OSHA PEL (United States, 6/2010). TWA: 150 ppm 8 hours. TWA: 710 mg/m ³ 8 hours.
2-ethoxyethyl acetate(Cellosolve acetate)	ACGIH TLV (United States, 3/2012). Absorbed through skin. TWA: 5 ppm 8 hours. TWA: 27 mg/m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 100 ppm 8 hours. TWA: 540 mg/m ³ 8 hours. NIOSH REL (United States, 1/2013). Absorbed through skin. TWA: 0.5 ppm 10 hours. TWA: 2.7 mg/m ³ 10 hours. OSHA PEL (United States, 6/2010). Absorbed through skin. TWA: 100 ppm 8 hours. TWA: 540 mg/m ³ 8 hours.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ethylbenzene

ACGIH TLV (United States, 3/2012).

TWA: 20 ppm 8 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

STEL: 125 ppm 15 minutes.

STEL: 545 mg/m³ 15 minutes.**NIOSH REL (United States, 1/2013).**

TWA: 100 ppm 10 hours.

TWA: 435 mg/m³ 10 hours.

STEL: 125 ppm 15 minutes.

STEL: 545 mg/m³ 15 minutes.**OSHA PEL (United States, 6/2010).**

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Exposure controls

Occupational exposure controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eye protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid.
Odor	: Not available.
Odor threshold	: 0.05 ppm
pH	: Not applicable.
Boiling point	: Not available.
Melting point	: Not available.
Flash point	: Closed cup: >24°C (>75.2°F) [Abel's close cup]
Explosion limits	: Lower: 1% Upper: 10%
Vapor pressure	: 0.32 kPa (2.4 mm Hg) [room temperature]
Relative density	: 1.05
Solubility	: Not available.
Vapor density	: 4.6 [Air = 1]
Evaporation rate	: <1 (Butyl Acetate = 1)
Auto-ignition temperature	: 380°C (716°F)
Density	: 1.05 g/cm ³ [30°C (86°F)]
Flammability	: Not available.

10. STABILITY AND REACTIVITY

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Materials to avoid	: No known incompatibility

11. TOXICOLOGICAL INFORMATION

Potential acute health effects

Inhalation	: Harmful by inhalation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Harmful if swallowed. Irritating to mouth, throat and stomach.
Skin contact	: Harmful in contact with skin. Irritating to skin.
Eye contact	: May cause eye irritation.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Hexamethylene diisocyanate, oligomers	LC50 Inhalation Vapor	Rat	18500 mg/m ³	1 hours
	LD50 Oral	Rat	>5000 mg/kg	-
n-butyl acetate	LC50 Inhalation Gas.	Rat	390 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
2-ethoxyethyl acetate	LD50 Oral	Rat	2700 mg/kg	-
Hydroxyphenyl benzotriazole derivatives	LD50 Oral	Rat	>2000 mg/kg	-
N-methyl-2-pyrrolidone	LD50 Dermal	Rabbit	8 g/kg	-
	LD50 Oral	Rat	3914 mg/kg	-

Potential chronic health effects

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
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11. TOXICOLOGICAL INFORMATION

xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Hexamethylene diisocyanate, oligomers	Skin - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
n-butyl acetate	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
2-ethoxyethyl acetate	Skin - Mild irritant	Rabbit	-	490 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-

Product name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
2-ethoxyethyl acetate N-methyl-2-pyrrolidone			Repr. Cat. 2; R61 Repr. Cat. 2; R61	Repr. Cat. 2; R60

- Chronic effects** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : May cause birth defects.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : May impair fertility.
- Denmark Carcinogen list** : Contains a substance or substances listed under National Working Environment Authorities Executive Order 908/2005.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Eyes** : No specific data.

12. ECOLOGICAL INFORMATION

- Ecotoxicity** : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
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12. ECOLOGICAL INFORMATION

xylene	-	Acute LC50 8500 µg/l Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 13400 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
Hexamethylene diisocyanate, oligomers	-	EC50 >1 mg/l	Algae - Scenedesmus subspicatus	72 hours
titanium dioxide	-	Acute EC50 5.83 mg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	-	Acute LC50 3 mg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	-	Acute LC50 1000000 µg/l Marine water	Fish - Mummichog - Fundulus heteroclitus	96 hours
	-	Chronic NOEC 0. 984 mg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
n-butyl acetate	-	Acute LC50 32000 µg/l Marine water	Crustaceans - Brine shrimp - Artemia salina - Nauplii	48 hours
	-	Acute LC50 62000 µg/l	Fish - Zebra danio - Danio rerio	96 hours
2-ethoxyethyl acetate	-	Acute LC50 40000 µg/l Marine water	Fish - Inland silverside - Menidia beryllina	96 hours
N-methyl-2-pyrrolidone	-	Acute LC50 1.23 to 1.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

Conclusion/Summary : Not available.

Bioaccumulative potential

Product/ingredient name	LogP_{ow}	BCF	Potential
2-methoxy-1-methylethyl acetate	0.56	-	low
xylene	3.16	8.1 to 25.9	low
titanium dioxide	-	352	high
n-butyl acetate	1.78	-	low
2-ethoxyethyl acetate	0.24	-	low
N-methyl-2-pyrrolidone	-0.38	-	low





Other adverse effects : No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste product residues should not be disposed of via the sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADR/RID Class	1263	UN1263 - Paint, Paint related Material, Flammable	3	-		Tunnel code (D/E)
ADN/ADNR Class	1263	UN1263 - Paint, Paint related Material, Flammable	3	-		-
IMDG Class	1263	UN1263 - Paint, Paint related Material, Flammable. Marine pollutant (Xylene, Hexamethylene diisocyanate, oligomers)	3	-		-
IATA Class	1263	UN1263 - Paint, Paint related Material, Flammable	3	-		-

PG* : Packing group

15. REGULATORY INFORMATION

Hazard symbol or symbols :



Toxic

Risk phrases

: R10- Flammable.
R60- May impair fertility.
R61- May cause harm to the unborn child.
R20/21/22- Also harmful by inhalation, in contact with skin and if swallowed.
R38- Irritating to skin.

15. REGULATORY INFORMATION

Safety phrases	: S53- Avoid exposure - obtain special instructions before use. S36/37- Wear suitable protective clothing and gloves.
Contains	: Acrylic Polymer xylene 2-ethoxyethyl acetate
Product use	: Industrial applications.

16. OTHER INFORMATION

National Fire Protection Association (U.S.A.) :

**History**

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