

ANSHUL SPECIALTY MOLECULES LIMITED				
Title : MSDS OF HEXACHLOROACETONE			Document No.	QD/ EHS/ 15
			Rev. No.	0
Prepared by	Approved by		Page No.	1 OF 5
			Effective Date	01 .01 .2005

1. PRODUCT IDENTIFICATION

Product Name : HEXACHLOROACETONE
 Synonyms : Hexachloro- 2- Propanone.
 Manufacturer : Anshul Specialty Molecules Ltd.
 Ram House, 1st Floor, 4-Gaiwadi Indu. Estate,
 Goregaon (west)
 Mumbai 400 062 INDIA
 Telephone No : 0091-22-2872 1479 –82
 Fax No : 0091-22-2872 1486
 Emergency Contact No : Dr. Unnikrishanan (Vice President)
 0091-22-28721479 / 0091-22-28597650
 Mr. M.Murtuza Chief Manager (Operations)
 0091-2194-263582 / 0091-2194-232437

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient : Hexachloroacetone
 CAS No : 116 – 16 – 5
 EINECS No : 204 – 129 –5
 Molecular Formula : C₃Cl₆O

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW : Appearance : clear ,colorless.
 Warning ! Toxic . May cause eye and skin
 irritation .May cause respiratory and digestive
 tract irritation. Harmful if inhaled or swallowed.
 Target Organs : No data found.

POTENTIAL HEALTH EFFECTS

Eyes : May cause eye irritation
 Skin : May cause skin irritation
 Ingestion : Harmful if swallowed .May cause irritation of the
 digestive tract.
 Inhalation : May cause respiratory tract irritation .Harmful if
 inhaled .

ANSHUL SPECIALTY MOLECULES LIMITED				
Title : MSDS OF HEXACHLOROACETONE			Document No.	QD/EHS/ 15
			Rev. No.	0
Prepared by	Approved by		Page No.	2 OF 5
			Effective Date	01 . 01 . 2005

4. FIRST AID MEASURES

- Eyes : Immediately flush eyes with plenty of water for at least 15 minutes. Occasionally lifting the upper and lower eyelids. Get medical aid
- Skin : Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical Aid.
- Ingestion : Never give anything by mouth to an unconscious person. DO NOT induce vomiting. If conscious and alert, rinse mouth and drink 2- 4 cupfuls of milk or water. Get medical aid.
- Inhalation : Remove from exposure to fresh air . If not breathing give artificial respiration. If breathing is difficult ,give oxygen .Get medical aid .DO NOT use mouth - to – mouth respiration. .
- Notes to Physician : Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

- Extinguishing Media : Use water spray , Dry chemical Powder, Carbon Dioxide or Foam. Cool containers with flooding quantities of water until well after fire is out.
- Flash Point : > 100 °C (> 212° F).
- General Information : As in any fire , wear a self - contained breathing apparatus with full face piece operated in a positive pressure mode. MSHA /NIOSH (approved or equivalent) and full protective gear. During a fire, irritation and highly toxic gases may be generated by thermal decomposition or combustion .Use water spray to keep fire exposed containers cool. Vapors may be heavier than air . They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

6. SPILLAGE, ACCIDENTAL RELEASE MEASURES

General Information :

Use proper personal protective equipment as indicated in section 8.

Spills /Leaks :

Absorb spill with inert material (e.g. Dry sand or earth) then place into chemical waste container. Avoid runoff into storm sewers and ditches which lead to water ways. Clean up spills immediately, observing precaution in the protective equipment section .Remove all source of ignition . Provide ventilation.

ANSHUL SPECIALTY MOLECULES LIMITED				
Title : MSDS OF HEXACHLOROACETONE			Document No.	QD/ EHS/ 15
			Rev. No.	0
Prepared by	Approved by		Page No.	3 OF 5
			Effective Date	01.01.2005

7. HANDLING AND STORAGE

- Handling : Wash thoroughly after handling .Use with adequate ventilation .Avoid contact with eyes ,skin, and clothing .Keep container tightly closed . Avoid contact with heat , sparks and flame Avoid ingestion and inhalation.
- Storage : Store in a cool, dry well ventilated area away from incompatible substances .Store in a tightly closed container.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Engineering Controls : Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep air borne concentrations low.

Personal Protective Equipment

- Eyes : Wear Chemical Safety Goggles..
- Skin : Wear appropriate protective gloves to prevent skin exposure.
- Clothing : Wear a chemical apron
- Respirators : Wear a NIOSH /MSHA or European standard EN 149. Approved full face piece airline respirator in the positive pressure mode with emergency escape provisions.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State : Liquid
- Appearance : Colorless to yellow, refractive liquid.
- Odour : Slight phenolic odor
- Vapour Pressure : 0.103 @ 25°C(77°F)
- Solubility : Moderate soluble.
in water
- Vapor Density : 4.3
- Melting Point : -3 °C
- /Freezing point :
- Specific Gravity / : 1.73
- Density
- Boiling Point : 204 °C @ 760 mm Hg

ANSHUL SPECIALTY MOLECULES LIMITED				
Title : MSDS OF HEXACHLOROACETONE			Document No.	QD/ EHS/ 15
			Rev. No.	0
Prepared by	Approved by		Page No.	4 OF 5
			Effective Date	01 .01 .2005

10. STABILITY AND REACTIVITY

Chemical Stability : Stable under normal temperatures and pressures.
Conditions to : Incompatible materials, ignition sources , excess heat ,
avoid electrical sparks.
Incompatibility with : Oxidizing agents.
other materials
Hazardous : Hydrogen chloride, Carbon Monoxide, irritating and toxic
Decomposition fumes and gases, Carbon dioxide.
Hazardous : Has not been reported
Polymerization

11. TOXICOLOGICAL INFORMATION

LC50 : 920 mg/ m3 /2H.
(Inhalation mouse)
LC50 : 360 ppm /6H.
(Inhalation rat)
LD50 : 240MG /KG.
(Oral rat)
LD50 : 2980 mg /kg.
(Skin rabbit)
Carcinogenicity : Not listed by ACGIH, IARC , NTP, NIOSH or OSHA
STEL : 0.5 mg/m3

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

Chemical waste generator must determine whether a discarded chemical is classified as a hazardous waste.

Dispose off in a manner consistent with Federal, State and Local Regulations.

14. TRANSPORT INFORMATION

Shipping Name : Hexachloroacetone
Hazard Class : 6.1
U.N.Number : UN2661
Packing Group : III

ANSHUL SPECIALTY MOLECULES LIMITED			
Title : MSDS OF HEXACHLOROACETONE		Document No.	QD/ EHS/ 15
		Rev. No.	0
Prepared by	Approved by	Page No.	5 OF 5
		Effective Date	01.01.2005

15. REGULATORY INFORMATION

RISK PHRASES

R22 : Harmful if swallowed

SAFETY PHRASES

S 24 / 25 : Avoid contact with skin and eyes.

S 28 A : After contact with skin , wash immediately with plenty of water

S 37 : Wear suitable gloves.

S 45 : In case of accident or if you feel unwell , seek medical advice immediately

NFPA RATING

Health : 2

Flammability : 1

Reactivity : : 0

16. OTHER INFORMATION

The above information is believed to be accurate and represents the best information currently available to us. However we make no warranty of merchantability or any other warranty, express or implied, with respect to such information and we assume no liability resulting from it's use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall ANSHUL SPECIALTY MOLECULES LTD. be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from use or reliance upon this information.

ANSHUL CHEMICALS LIMITED				
Title : MSDS OF 4-CHLOROTHIPHENOL			Document No.	QD/ EHS/ 16
			Rev. No.	0
Prepared by	Approved by		Page No.	1 OF 5
			Effective Date	01 .01 .2005

1. PRODUCT IDENTIFICATION

Product Name 4-CHLOROTHIPHENOL
Synonyms 4-Chlorobenzenethiol; 4-Chlorophenylmercaptan;
P-Mercaptochlorobenzene.
Manufacturer Anshul Chemicals Ltd.
Excel Estate, S.V. Road,
Goregaon (west)
Mumbai 400 062 INDIA
Telephone No : 0091-22-28724091 / 28746933
Fax No : 0091-22-28746932
Emergency Contact No : Dr. Unnikrishanan (Vice President)
0091-22-28727660 / 0091-22-28597650
Mr. M.Murtuza Chief Manager (Operations)
0091-2194-263582 / 0091-2194-232437

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient 4-Chlorothiophenol
CAS No. 106-54-7
EINECS No. 203 -108 -9
Molecular Formula C₆H₅ClS

3. HAZARDS IDENTIFICATION

EMERGENCY Apprance ; white to off –white solid .
OVERVIEW

Warning ! Causes respiratory tract irritation. Irritant. Lachrymator (substance which increases the flow of tears). Stench. Causes eye and skin irritation. May cause digestive tract irritation. May cause central nervous system depression. May cause cardiac disturbances.

Target Organs: Central nervous system, cardiovascular system.

POTENTIAL HEALTH EFFECTS

Eyes

Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. Lachrymator (substance which increases the flow of tears). May cause chemical conjunctivitis.

Skin

Causes skin irritation.

Ingestion

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause cardiac disturbances. May cause central nervous system depression.

ANSHUL CHEMICALS LIMITED				
Title : MSDS OF 4-CHLOROTHIOPHENOL			Document No.	QD/ EHS/ 16
			Rev. No.	0
Prepared by	Approved by		Page No.	2 OF 5
			Effective Date	01 .01 .2005

Inhalation Causes respiratory tract irritation. May cause cardiac abnormalities. Can produce delayed pulmonary edema. Inhalation at high concentrations may cause CNS depression and asphyxiation.

Chronic Effects may be delayed.

4. FIRST - AID MEASURES

Eyes Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

Skin Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical aid.

Ingestion Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Get medical aid.

Inhalation Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Extinguishing Media Use water spray to cool fire-exposed containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray.

Flash Point 81°C (177.80°F)

NFPA Rating

Health :

Flammability 1

Instability 0

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Runoff from fire control or dilution water may cause pollution.

ANSHUL CHEMICALS LIMITED				
Title : MSDS OF 4-CHLOROTHIOPHENOL			Document No.	QD/ EHS/ 16
			Rev. No.	0
Prepared by	Approved by		Page No.	3 OF 5
			Effective Date	01 .01 .2005

6. ACCIDENTAL RELEASE MEASURE

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions.

7. HANDLING AND STORAGE

Handling Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse.

Storage Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Personal Protective

Equipment

Eyes

Wear chemical safety goggles. Maintain eye-wash fountains and quick drench facilities at required places in the work-area.

Skin

Wear appropriate protective gloves and boots.

Clothing

Wear impervious protective clothing to prevent skin contact.

Respiratory protection

In case of brief exposure, use a full face shield. In case of a longer exposure, use self contained breathing apparatus.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid
Appearance White to off-white
Odour None reported
Boiling Range 205 -207 °C (@ 760mm Hg)
Melting Point 49 -51°C
Vapour Pressure 24 mm Hg N@ 100°C

ANSHUL CHEMICALS LIMITED				
Title : MSDS OF 4-CHLOROTHIOPHENOL			Document No.	QD/ EHS/ 16
			Rev. No.	0
Prepared by	Approved by		Page No.	4OF 5
			Effective Date	01 .01 .2005

Vapour Density(Air = 1) Not available

Solubility Insoluble

Molecular Weight 144.62

Decomposition 200°C

:

Temperature

Specific Gravity Not available

10. STABILITY AND REACTIVITY

Chemical Stability Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to avoid Incompatible materials, dust generation, excess heat, strong oxidants.

Incompatibilities Oxidizing agents, strong bases.

Hazardous Decomposition Products Hydrogen chloride, carbon monoxide, oxides of sulfur, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Has not been reported.

Polymerization

11. TOXICOLOGICAL INFORMATION

RTECS No. --

LC 50 --

Draize test, rabbit, eye 50 ug /24H Severe

Draize test, rabbit, skin 20mg /24H Moderate ;<BR

Carcinogenicity : Not listed by ACGIH , IARC, NTP.

12. ECOLOGICAL INFORMATION

Data not yet available

13. DISPOSAL CONSIDERATION

Dispose off in a manner consistent with Federal, State and Local Regulations.

ANSHUL CHEMICALS LIMITED			
Title : MSDS OF 4-CHLOROTHIOPHENOL		Document No.	QD/ EHS/ 16
		Rev. No.	0
Prepared by	Approved by	Page No.	5 OF 5
		Effective Date	01 .01 .2005

14. TRANSPORT INFORMATION

US DOT

Proper Name TOXIC SOLIDS, ORGANIC, N.O.S.
 Hazard Class 8
 UN Number UN 2811
 Packing Group III

Canada TDG

Proper Name TOXIC SOLID ORGANIC NOS (4-CHLOROTHIOPHENOL)
 Hazard Class 8
 UN Number UN 2811
 Packing Group III

15. REGULATORY INFORMATION

RISK PHRASES

R 36 /37 / 38 Irritating to eyes, respiratory system and skin.

SAFETY PHRASES

S 28A After contact with skin, wash immediately with plenty of water.

16. OTHER INFORMATION

The above information is believed to be accurate and represents the best information currently available to us. However we make no warranty of merchantability or any other warranty, express or implied, with respect to such information and we assume no liability resulting from it's use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall ANSHUL CHEMICALS LTD. be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from use or reliance upon this information.