MATERIAL SAFETY DATA SHEET(MSDS)

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

·CHEMICAL PRODUCT NAME : CFC-504

·NAME OF MANUFACTURER : CHEONGWOO CFC CO., LTD.

·ADDRESS : 14-1, Eogokgongdan 3-gil, Yangsan-city, Gyeongnam. Korea
·TEL No. : 82-55-382-7576
·FAX No. : 82-55-382-7584
·EMERGENCY TEL No. : 82-55-338-7576 FAX No. : 82-55-338-7856

2. HAZARD IDENTIFICATION

·2.1 Hazard Classification: Flammable liquids: Cat. 3
Acute toxicity (inhalation - dust and mist): Cat. 4
Skin corrosion/irritation: Cat. 2
Serious eye damage/eye irritation: Cat. 2
Respiratory sensitizer: Cat. 1
Skin sensitizer: Cat. 1

2.2 Label Elements Including Precautionary Statements:

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· CAUTION MARK IN KOREA

Symbol:

Signal Word: Warning

Hazard Risk Statement: Flammable liquids or steam
Slightly irritating to the skin
Mildly to severely irritating to the eyes.
Harmful if inhaled.

Precautionary Statements (Prevention):

P280c Wear protective gloves.
P280d Wear eye/face protection.
P271 Use only outdoors or in a well-ventilated area.
P280f Wear protective gloves and eye/face protection.
P260i Do not breathe dust/gas/mist/vapours.
P210 Keep away from heat/sparks/open flames/hot surfaces.
P264 Wash with plenty of water and soap thoroughly after handling.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P272 Contaminated work clothing should not be allowed out of the workplace

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS REGISTRY NUMBER	COMPOSITION (%)
Unsatd.fatty acid with polyethylenepolyamines	68410-23-1	50-54
Solvent naphtha, light arom	64742-95-6	15-19
1-Methoxy 2-propanol	107-98-2	29-33

4. FIRST-AID MEASURES

·EYE CONTACT : First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

·SKIN CONTACT : Wash with soap and water. Get medical attention if irritation develops or persists.

·INHALATION : Remove to fresh air. If not breathing, give artificial respiration. If breathing difficult, give oxygen. Get immediate medical attention.

·INGESTION : If swallowed, do not induce vomiting. Give victim a glass of water. Call a physician immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

·EXTINGUISHING MEDIA : Use powder, alcohol-resistant foam, water spray, carbon dioxide.

·SPECIFIC HAZARDS WITH REGARD TO FIRE-FIGHTING MEASURES :
Keep personnel removed from and upwind of fire. As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

·PERSONAL PRECAUTION : Evacuate non essential personnel.
Shut off all sources of ignition : No flares, smoking, or flames in area.
Wear proper protective equipment.

·ENVIRONMENTAL PRECAUTION : Do not let this chemical enter the environment.

·PROCEDURE FOR CLEAN UP OF SPILLS AND LEAKS :
Collect leaking and spilled liquid in closed containers as far as possible.

7. HANDLING & STORAGE

·HANDLING : Wash thoroughly after handling. Avoid contact with eyes, skin and

clothing. Do not reuse this container. Use only in a well-ventilated area. Use spark proof tolls and explosion-proof equipment.

·STORAGE : Keep container closed when not in use. Do not store in direct sunlight. Keep away from heat and flame.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

·ENGINEERING MEASURES : Facilities storing or utilizing this substance should be equipped with an eyewash facility and a safety shower. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this substance.

·RESPIRATORY PROTECTION : Chemical cartridge respirator with an organic vapor cartridge. Positive-pressure self-contained breathing apparatus.

·EYE PROTECTION : Wear safety glasses with side shields or goggles and a face shield.

·HANDS, SKIN AND BODY PROTECTION : Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots. Butyl rubber is recommended.

9. **PHYSICAL & CHEMICAL PROPERTIES**

·APPEARANCE : Yellowish brown liquid

·PH : Not available

·MELTING POINT : Not available

·BOILING POINT : Not available

·FLASH POINT : Approx 33℃

·DENSITY : 0.93±0.02 (20℃)

·VAPOUR PRESSURE : Not available

10. PHYSICAL HAZARD(STABILITY & REACTIVITY)

·FLASH POINT : 33 ℃

·AUTOIGNITION TEMPERATURE : Not available

·UPPER AND LOWER EXPLOSION LIMIT : Not available
·FLAMMABILITY : Flammable
·SPONTANEOUS COMBUSTIBILITY : Not available
·REACTIVITY WITH WATER : Not available
·OXIDIZIBILITY : This substance is not oxidant.
·SELF-REACTIVITY : This substance is not self-reactive.
·STABILITY & REACTIVITY : This substance will be not react to blend with other material.
·HAZARDOUS DECOMPOSITION PRODUCTS : Not available

11. TOXICOLOGICAL INFORMATION

·CORROSIVE AND IRRITANT PROPERTIES
: Primary skin irritation/corrosion in the rabbit. Slightly irritating.
: Acute eye irritation/corrosion in the rabbit. Mildly to severely irritating.

·ACUTE TOXICITY : Oral-rat LD50 exceeding 917mg/Kg

·CARCINOGENICITY : Not established on IARC, NTP, EU, OSHA.

·MUTAGENIC EFFECTS : Reverse-mutation assay in bacteria : Positive
The micronucleus test with rodents : Negative

12. ECOLOGICAL INFORMATION

·BIODEGRADATION : Not available
·BIOACCUMULATION : Not available
·FISH TOXICITY : Not available

13. DISPOSAL CONSIDERATION

Burn in a chemical incinerator equipped with an afterburner and scrubber. Do not dump into severs, on the ground or into any body of water. Do not pressurize, cut, weld. braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity or other sources of ignition. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

14. TRANSPORT INFORMATION

CLASS : 3
·UN No. : 1263

·Description of the goods : paint related material·

·Any transportation practice must e in compliance with laws and regulation in your country or region.

15. LEGAL REGULATION

·Industry safety health measure law :

Solvent naphtha, 1-Methoxy 2-propanol

- control harmful material, working environment measurement material, exposure standard setting material.

·hazard chemistry substance administration law :

Toxic Chemicals: No subject chemicals
Observational Chemicals: No subject chemicals
Prohibited Chemicals: No subject chemicals
Restricted Toxic Chemicals: No subject chemicals
Korean TRI Chemicals: No subject chemicals
Accident Release Prevention Chemicals: No subject chemicals·

·dangerous material safety administration law : No data available

The fire services Act : 4 class - 2 oil class

16. REFERENCE MATERIALS

·Material source : product handbook issued by manufacturing company

MSDS from Korea occupational safety & health agency

·The framing date : 2013.03.21

·The final revision date : 2013.03.21