

**CM – 600**

Version 1

Print date: 12/17/2019

**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY / UNDERTAKING****Product information**

Product name : CM – 600

COMPANY : PT. Crystal Anugerah Abadi  
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**2. PHYSICAL DATA**

Appearance : Water clear to a slight greenish-yellow, or light yellow aqueous solution

Form : Liquid

Odour : Chlorine odor

Freezing point : 14 F(8% w/w Cl<sub>2</sub> solution), 7 F(10% w/w Cl<sub>2</sub> solution), -3 F (12% w/w Cl<sub>2</sub> solution)

Boiling point : Approximately 230° F (110° C)

Density : Appx. 10 lbs. per gallon

pH : 11-14, dependent upon % weight as CM 600

Solubility : Freely soluble in water in all proportions

**3. HAZARDS IDENTIFICATION**

**Hazardous Ingredient(s)** : % (w/w) as CM 600 : 10.5-16%.

**Exposure Standards** : None established for CM 600

**Emergency Overview** : May cause burns to the eyes, skin and mucous membranes.

**4. FIRST AID MEASURES**

Inhalation : Move expose person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. If breathing is difficult, have trained person administer oxygen. Call a poison control center or medical physician for further treatment advice. Have the product label or MSDS with you when calling or going for medical treatment.

Eye contact : Hold eye open and rinse slowly and gently with plenty of water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing

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eye for 10-15 minutes. Do not transport victim until the recommended flushing period is completed unless irrigation can be continued during transport. Call a poison control center or medical physician for further treatment advice. Have the product label and/or MSDS with you when calling or going to medical treatment..

**Skin contact** : Take off all contaminated clothing and rinse skin immediately with plenty of water for 15-20 minutes. If irritation persists, repeat flushing. Do not transport victim unless the recommended irrigation period is completed unless flushing can be continued during transport. Call a poison control center or medical physician for treatment advice. Have the product label or MSDS with you when calling or going for medical treatment.

**Ingestion** : Call poison control center or medical physician immediately for treatment advice. Have the product label or MSDS with you when calling or going for medical treatment. Have exposed person sip a glass of water if able to swallow, and dilute immediately by giving milk, melted ice cream, starch paste or antacids such as milk of magnesia. Avoid sodium bicarbonate because of carbon dioxide release. **DO NOT INDUCE VOMITING, LAVAGE OR ACIDIC ANTIDOTES** unless told to do so by poison control center or medical physician. **DO NOT** give anything by mouth to an unconscious person. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water.

**5. FIRE AND EXPLOSION HAZARD DATA**

**Fire and explosion Hazard** : This material is nonflammable but is decomposed by heat and light, causing a pressure build-up which could result in an explosion. When heated, it may release chlorine gas or hydrochloric acid. Vigorous reaction with oxidizable or organic materials may result in fire.

**Extinguishing Media** : Use agents appropriate for surrounding fire. Foam, dry chemical, carbon dioxide, water fog or spray. If leak or spill has not ignited, use water spray to disperse the vapors and to protect persons attempting to stop the leak.

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Fire Fighting Procedures : Water spray should be used to cool containers and may be used to knock down escaping vapor. Remove storage vessels from the fire zone.

Fire Fighting Protective Equipment : Full protective clothing, including a NIOSH approved self-contained breathing apparatus, must be worn in a fire involving this material. Toxic gas vapors are produced upon decomposition.

**6. ACCIDENTAL RELEASE MEASURES**

Personnel precautions : Wear appropriate personal protective equipment

Environmental precautions : Ventilate area of leak or spill. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible.

Methods & materials for containment & cleaning up : Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

**7. HANDLING AND STORAGE**

Handling precautions : Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Avoid contact with eyes and skin.

Storage conditions : Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and recautions listed for the product. Do not store near acids, heat, oxidizable materials or organics.

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**8. EXPOSURE CONTROLS / PERSONNEL PROTECTION**

Eye protection	: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.
Skin & body protection	: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact
Respiratory protection	: If the exposure limit is exceeded, a full facepiece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. <b>WARNING:</b> Air purifying respirators do not protect workers in oxygen-deficient atmospheres

**9. STABILITY AND REACTIVITY**

Stability / incompatibility	: Slowly decomposes on contact with air. Rate increases with the concentration and temperature. Exposure to sunlight accelerates decomposition. CM 600 becomes less toxic with age
Conditions to Avoid	: Light, heat, air and incompatibles. Do not mix with other chemicals.
Hazardous de-composition products	: Emits toxic fumes of chlorine when heated to decomposition. Sodium oxide at high temperatures..

**10. TOXICITY INFORMATION**

The concentrated solution is corrosive to skin, and a 5% solution is a severe eye irritant. Solutions containing more than 5% available chlorine are classified by DOT corrosive (please see section 10 of this MSDS). Toxicity described in animals from single exposures by ingestion include muscular weakness, and hypoactivity. Repeated ingestion exposure in animals caused an increase in the relative weight of adrenal glands in one study, but no pathological changes were observed in two other studies. Long-term administration of compound in drinking water of rats caused depression of the immune system. No adverse changes were observed in an eight week dermal study of a 1% solution in guinea pigs. Tests in animals demonstrate no carcinogenic activity by either the oral or dermal routes. Tests in bacterial and mammalian cell cultures demonstrate mutagenic activity.

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Carcinogenicity : None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as carcinogen

Mutagenicity : CM 600 has been shown to produce damage to genetic material when tested in vitro. Studies in vivo have shown no evidence of mutagenic potential for this material. It is judged that the risk of genetic damage is insignificant for CM 600 because of its biological activity, lack of mutagenicity in vivo, and failure to produce carcinogenic response.

**11. ECOLOGICAL INFORMATION**

Ecotoxicity : This material will not harm biological sewage treatment work in normal use. The surfactant(s) contained in this preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents..

Fate and transport : This material is not expected to bio-accumulate under normal use.

**12. DISPOSAL CONSIDERATIONS**

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State, and Local regulations. Do not burn. Do not flush to surface water or sanitary sewer system. If pH of material is equal to or greater than a 12.5, the material is a RCRA Hazardous Waste D002, corrosive..

**13. TRANSPORT INFORMATION**

U.S. DOT Hazardous Substance : Yes, RQ 100 pounds (CM 600)

U.S. DOT Packaging Exception : Yes, if package meets the criteria of a limited quantity or consumer commodity as defined by 49 CFR §171.8, §173.144 and .154, and §172.312 and .316

**14. OTHER INFORMATION**

Recommended use : for Water Treatment

**NOTICE** : This information relates specifically to the product designated and may not be valid for the product when used in combination with any other materials or products or in a particular process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's

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responsibility to review this information, satisfy itself as to its suitability and completeness and pass on the information to its employees or customers in accordance with applicable federal, state or local hazard communications requirement. We do not accept responsibility for any loss or damage which may occur from the use of this information.