SAFETY DATA SHEET

Issue Date: May 14, 2015 **Revision Date: May 14, 2015** **Version 2015**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: mMa Catalyst

Other Means of Identification: SDS #: F5320

Recommended Use: Methyl Methacrylate Catalyst
Restrictions on Use: No Data

Supplier of the Safety Data Sheet including Address:
ChemMasters Inc.
300 Edwards Street
Madison, OH 44057

Telephone Numbers
Company Phone Number Phone: 800-486-7866, 440-428-2105
Fax: 440-428-7091

Emergency Telephone: ChemTrec 800-424-9300 (United States & Canada), International Call: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Heating may cause a fire, Harmful if swallowed, Causes eye irritation, May cause allergic skin reaction, May cause respiratory irritation, Suspected of damaging fertility or the unborn child, Very toxic to aquatic life , May cause long lasting harmful effects to aquatic life

Target Organs: Eyes, Skin, Respiratory System, Liver & Kidneys

GHS Classification

Organic Peroxides – Category Type D
Acute Toxicity, Oral Category 4
Sensitization – Skin – Category 1B
Eye Damage/Irritation – Category 2B
Specific Target Organ Toxicity (Single Exposure) - Category 3
Reproductive Toxicity – Category 2
Hazardous to the Aquatic Environment – Short-Term (Acute) Hazard – Category 1
Hazardous to the Aquatic Environment – Long-Term (Chronic) Hazard – Category 4

Label Elements, including precautionary statements

Pictograms: 

Signal Word: Danger

Hazard Statements:

H242	Heating may cause a fire
H303	May be harmful if swallowed
H317	May cause allergic skin reaction
H320	Causes eye irritation
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child
H400	Very toxic to aquatic life
H413	May cause long lasting harmful effects to aquatic life

Precautionary Statement(s)

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P234	Keep only in original packaging
P235	Keep Cool
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands and exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated 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:

P308+P313	**General Advice:** IF exposed or concerned: Get medical advice/attention
P391	Collect spillage
P305+P351+P338	**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice or attention.
P302+P352	**IF ON SKIN:** Wash with plenty of soap & water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P312	**If swallowed** Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P304+P340	**IF INHALED:** Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P370+P378	**In case of fire** use, dry chemical, alcohol resistant foam, sand, or carbon dioxide to extinguish.

Storage:	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	P405	Store locked up
	P410	Protect from sunlight
	P411	Store at temperatures not exceeding 25^{o}C/77^{o}F
	P420	Store separately

Disposal:	P501	Dispose of contents/container in accordance with local/regional/national regulations.
	P405	Store locked up.

Hazards not otherwise classified: Heat or contamination may cause hazardous decomposition. Peroxides and peroxide decomposition products are flammable and can ignite with explosive force if confined.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component

Dicyclohexyl phthalate	CAS#: 84-61-7	50-51%
Dibenzoyl peroxide	CAS#: 94-36-0	49-50%

Ingredients not listed on this safety data sheet are considered to be non-hazardous according to OSHA 1910.1200 or are not present above their cutoff levels. Where a range is displayed, the exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. If you feel unwell get medical advice or attention.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if irritation persists.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Skin Contact: IF ON SKIN: Wash with plenty of soap & water. If skin irritation or rash occurs: Get medical advice/attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Alcohol-resistant foam, water spray, sand, dry chemical powder or carbon dioxide

Un-Suitable Extinguishing Media: Halons

Specific Hazards Arising from the Chemical: Caution: re-ignition may occur. Decomposition occurs under effect of heating. If involved in a fire, it will support combustion. Dust explosion hazard. In case of fire and/or explosion do not breathe fumes.

Hazardous Combustion Products: Carbon oxides, Benzoic acid, Benzene

Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus and full protective gear for firefighting.

Further Information: Evacuate all non-essential personnel. Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition. Cool closed containers with water. Water used to extinguish a fire should not be allowed to enter the drainage system or water courses. After a fire, ventilate and thoroughly soak the area with water, clean the walls and metallic surfaces.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains or waterways.

Methods and Material for Containment and Cleaning Up
Contain spillage and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Wash hands and skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Additional Safe Handing Information: None

Conditions for Safe Storage, Including any Incompatibilities
Keep container tightly closed in a dry, cool and well ventilated place. Keep away from direct sunlight. Store separate from other chemicals. Containers which are opened must be carefully resealed and kept upright to prevent leakage. **Do not store at temperatures above 77°F/25°C**.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Component Exposure Limits
Dibenzoyl peroxide, CAS#: 94-36-0: OSHA TLV/TWA: 5 mg/m3; ACGIH TLV/TWA: 5 mg/m3; NIOSH REL/TWA: 5 mg/m3; NIOSH IDLH 1500 mg/m3

Appropriate Engineering Controls
Local Ventilation: Recommended
General Ventilation: Recommended

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: Use proper protection – Tightly fitting Safety Goggles.

Skin and Body Protection: Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.

Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Wash hands before & after breaks and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State: Solid
Appearance: Powder
Color: White
Odor: Faint
Odor threshold: No Data

Property	Value	Remarks – Method
Vapor Pressure	Not Relevant	
Vapor Density	Not Relevant	
Relative Density	Not Available	
pH:	Not Available	
Melting/Freezing Point	Not Relevant	
Solubility	Not Soluble in Water	
Evaporation Rate	Not Relevant	
Flash Point	Not Relevant	
SADT	55^0C	
Flammability	Decomposition products may be flammable.	
Flammability Limits	Not Available	
Flammability (Solid, gas)	Not Relevant	
Auto Ignition Temperature	Not Relevant	
Initial Boiling Point/Boiling Range	Not Relevant	
Decomposition Temperature	Not Available	
Viscosity	Not Relevant	
Density	1230 kg/m^3 (20^0C/68^0F)	Specific Gravity = 1.23

10. STABILITY AND REACTIVITY

Chemical Stability: SADT (Self accelerating decomposition temperature) is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and ablove the following temperature: 55^0C (77^0F). Contact with incompatible substances can cause decomposition at or below the SADT 55^0C.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Heat, Flames and Sparks. Minimize exposure to air.

Incompatible Materials: Rust, Iron, Copper. Contact with acids, alkalies, heavy metals and reducing agents. Use only Stainless steel 316, PP, PE or glass containers/equipents.

Hazardous Decomposition Products:
Hazardous decomposition products formed under fire conditions, Carbon oxides, Benzoic acid, Benzene

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Skin Contact, Eye Contact.
Ingestion is not an anticipated route of exposure for this material in industrial use.

Symptoms of Exposure:
Dust may be irritating to the respiratory tract and cause symptoms of bronchitis.
Harmful if swallowed, Causes eye irritation, May cause allergic skin reaction

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified by ACGIH, OSHA or NTP as a carcinogen or suspected carcinogen.

Other Chronic Effects: Possible risk of impaired fertility.

Numerical Measures of Toxicity
Dicyclohexyl phtahlate:
Acute Toxicity: LD50 Oral Rat: >2000 mg/kg; LD50 Dermal Rat >2000 mg/kg, Skin & Eye: Non irritating
Dibenzoyl peroxide:
Acute Toxicity: LD50 Oral Rat: >5000 mg/kg; LC50 Inhalation (Dust) Rat >24300 mg/m^3, Skin: Minimal irritating; Eye: Irritating; Sensitizing (Skin)

12. ECOLOGICAL INFORMATION

Ecotoxicity: Material is expected to be toxic to aquatic organisms. It may cause long-term adverse effects in the aquatic environment.

Component: Dicyclohexyl phtahlate:
Fish: LC50 Japanese rice fish (Oryzias latipes), >2 mg/l 96 h
Crustaceans: EC50 Water Flea (Daphnia magna) >2 mg/l 48 h
Algae; 3 Days; >2 mg/l
Bacteria: 3 h Activated Sludge, No observed effect Concentration (NOEC): >100 mg/l
May cause long-term adverse effects in the aquatic environment.

Component: Dibenzoyl peroxide:
Fish: LC50 Japanese rice fish (Oryzias latipes), 0.06 mg/l 96 h
Crustaceans: EC50 Water Flea (Daphnia magna) 0.11 mg/l 48 h
Algae; 72 h; EC50: 0.06 mg/l
Bacteria: Activated Sludge respiration inhibition test EC50: 35 mg/l
Very Toxic to aquatic life.

Persistence and Degradability: No data

Bioaccumulation: No Data

Mobility: No Data

Other Adverse Effects: No Data Available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes: Under RCRA 40 CFR 261 this material is a hazardous waste. Dispose of in accordance with all federal, state, and local regulations. If uncertain of local requirements, contact the proper environmental authorities for information on waste disposal in your area. Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated Packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT
UN3106, Organic Peroxide Type D, Solid (Dibenzoyl Peroxide, 50%), 5.2, II

IATA
UN3106, Organic Peroxide Type D, Solid (Dibenzoyl Peroxide, 50%), 5.2, II

IMDG
UN3106, Organic Peroxide Type D, Solid (Dibenzoyl Peroxide, 50%), 5.2, II
Marine Pollutant: Yes

15. REGULATORY INFORMATION

International Inventories
TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

US Federal Regulations
SARA 302: Not listed
SARA 311/312 Hazard Categories: Acute: Yes, Fire: Yes, Chronic: Yes

SARA 313 Hazard List: Dibenzoyl Peroxide
CERCLA Hazardous Substance List: Dicyclohexyl phthalate, **Dibenzoyl Peroxide**

CWA (Clean Water Act): This product is subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

Supplemental State Compliance Information
California:
Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm**; Dicyclohexyl phthalate, Dibenzoyl Peroxide**

States Right To Know:
Dibenzoyl Peroxide: Massachusetts, New Jersey, Pennsylvania, Connecticut, Minnesota, Rhode Island
Dicyclohexyl phthalate: New Jersey, Pennsylvania, Connecticut, Illinois

U.S. EPA Label Information: No Data

Canada
WHMIS Classification: Class C, D2A, D2B, F (Oxidizing Material, Toxic, Dangerously Reactive Material)
Symbol: Oxidizing Material, Toxic (Div. 1 & 2), Dangerously Reactive Material

16. OTHER INFORMATION

HMIS Classification:

Health hazard:	**2***
Flammability:	**2**
Physical Hazards:	**3**

NFPA Rating:

Health hazard:	**2**
Fire:	**2**
Reactivity Hazard:	**3**

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Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet