

MATERIAL SAFETY DATA SHEET

Hercules Incorporated
Resins Division
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(302) 594-5000 (24 HRS)

1 PRODUCT IDENTIFICATION

PRODUCT NAME DI-CUP® 40KE DICUMYL PEROXIDE
CHEMICAL DESCRIPTION dicumyl peroxide supported on carrier of silane modified clay
CAS NUMBER mixture

2 COMPOSITION / INFORMATION ON INGREDIENTS

OSHA Hazardous Ingredient	CASRN	Amount
dicumyl peroxide	80-43-3	40 %
silane modified clay	66402-68-4	60 %

3 HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW****WARNING!**

Reactive: Exposure to temperatures above 55° C (131° F) may cause violent decomposition.

Reactive: Exposure to incompatible materials may cause violent decomposition.

May cause mild eye irritation.

May cause mild skin irritation.

Inhalation of dust may cause mild respiratory tract irritation.

Static charges generated by emptying package in or near flammable vapors may cause flash fire.

May form flammable dust-air mixtures.

POTENTIAL HEALTH EFFECTS

Prolonged or repeated exposure may cause nasal irritation and nosebleeds persisting after termination of exposure.

Refer to Section 5 for Hazardous Combustion Products, and Section 10 for Hazardous Decomposition/Hazardous Polymerization Products.

4 FIRST AID MEASURES**SKIN**

Wash thoroughly with soap and water. Remove contaminated clothing. Thoroughly wash clothing before reuse. Get medical attention if irritation develops or persists.

EYE

Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get medical attention if irritation persists.

MARKETED BY
**HARWICK STANDARD
DISTRIBUTION CORPORATION**
60 S. Seiberling Street • Akron, Ohio 44305.

INHALATION

Remove to fresh air. If nasal or throat irritation persists for more than a day, get medical attention.

INGESTION

Not an ingestion hazard under anticipated conditions of use. For accidental ingestion: If conscious, drink one to two glasses of water (8-16 oz.). Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person.

5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Water spray, dry chemical or carbon dioxide may be used on fires involving this product.

FIRE FIGHTING PROCEDURES

Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear when fighting fires involving this product.
Evacuate area and fight fire from a safe distance.
Cool containers with water to prevent rupture.

CONDITIONS TO AVOID

Avoid exposing containers to fire as rapid product decomposition, container pressure buildup and failure, and vigorous burning with flare effect will occur.

HAZARDOUS COMBUSTION PRODUCTS

If heated to combustion, the following substances may be formed: carbon monoxide, carbon dioxide and irritating partial combustion products

FLASH POINT 260 ° F Setflash

6 ACCIDENTAL RELEASE MEASURES

If product is not contaminated, collect into clean, properly labeled containers for use as soon as possible. As an additional precaution, do NOT return material to original container. If product is contaminated, collect into clean, properly labeled containers and dispose appropriately. Do NOT mix with vermiculite, Oil-Dri® absorbent, or any other comparable materials that may be acidic. Recommended absorbents include soda ash, calcium carbonate, clean sand, and clay if known to be inert and non-acidic. In case of accidental spill or release, refer to Section 8, Personal Protective Equipment and General Hygiene Practices. For additional disposal information, refer to Section 13, Disposal Considerations.

7 HANDLING & STORAGE

GENERAL MEASURES

Ground all equipment.
Blanket vessel with inert gas when emptying bags where flammable vapors may be present.
Ground operator and pour material slowly into conductive, grounded chute.
For large bags (1000 lbs or greater) a ground cable MUST be attached to the bag ground connection.
Store in a cool, dry, well ventilated area.
Keep container closed when not in use.

MATERIALS OR CONDITIONS TO AVOID

Avoid temperatures above 55° C (131° F) which may cause decomposition and the release of flammable gases.
Avoid conditions that generate dust; product may form flammable dust-air mixtures.
Avoid emptying package in or near flammable vapors; static charges may cause flash fire.
Keep away from heat, flame, sparks and other ignition sources.
Do not store near flammable materials.
Avoid storing product near incompatible materials. See MSDS Section 10.
Do not store in direct sunlight.
To avoid lumping, store below 35° C (95° F).

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

WORK PRACTICES & ENGINEERING CONTROLS

Eyewash fountains and safety showers should be easily accessible.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Discharge from the ventilation system should comply with applicable air pollution control regulations.

GENERAL HYGIENIC PRACTICES

Avoid contact with eyes, skin, and clothing.

Avoid breathing dust, vapor or mist.

Avoid contamination of food, beverages, or smoking materials.

Wash thoroughly after handling, and before eating, drinking or smoking.

Remove contaminated clothing promptly and clean thoroughly before reuse.

RECOMMENDED EXPOSURE LIMITS

PARTICULATES (dust): If used under conditions that generate particulates (dust), the ACGIH TLV-TWA of 3 mg/m³ respirable fraction (10 mg/m³ total) should be observed.

PERSONAL PROTECTIVE EQUIPMENT

Chemical goggles

Impervious gloves

Appropriate respiratory protection is required when exposure to airborne contaminants may exceed acceptable limits. Respirators should be selected and used in accordance with OSHA, Subpart I (29 CFR 1910.134) and manufacturers recommendations.

Appropriate protective clothing

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE

Eliminate ignition sources and prevent build-up of static electrical charges.

Completely isolate and thoroughly clean all equipment, piping, or vessels before beginning maintenance or repairs.

Keep area clean. Product will burn.

9 PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE:	powder
COLOR:	off-white
ODOR:	acrid
Boiling Point	decomposes before boiling
Specific Gravity	1.6
Melting Point	86 - 95 ° F
Percent Volatile	negligible at 68° F
Solubility in Water	negligible at 68° F
Bulk Density	30 lbs/cu ft

10 STABILITY & REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS

If heated to decomposition, the following substances may be formed: acetophenone , alpha, alpha-dimethyl benzyl alcohol , alpha-methyl styrene , methane and ethane . Phenol and acetone may be formed under acid conditions. Decomposition products are flammable. Decomposition products may cause eye, skin or respiratory irritation, and may be skin sensitizers.

HAZARDOUS POLYMERIZATION

Not anticipated under normal or recommended handling and storage conditions.

GENERAL STABILITY CONSIDERATIONS

Stable under recommended handling and storage conditions. Temperatures above 55° C (131° F) may lead to exothermic decomposition.

INCOMPATIBLE MATERIALS

Incompatible with: acids, acidic-type materials such as Friedel-Crafts catalysts, oxidizing agents and reducing agents

11 TOXICOLOGICAL INFORMATION

CARCINOGENICITY INFORMATION

Not listed as a carcinogen by NTP. Not regulated as a carcinogen by OSHA. Not evaluated by IARC.

REPORTED HUMAN EFFECTS

No human toxicity studies have been carried out with this product. Due to the physical nature of this material, may cause eye, skin and respiratory irritation.

COMPONENT - dicumyl peroxide: Mild skin irritant. Reported to cause nasal inflammation and dilation of the blood vessels, which persisted for a significant time after exposure was terminated. Hercules Incorporated has received reports of respiratory and eye irritation from heated vapor or dust of organic peroxides when proper respiratory protection was not used.

REPORTED ANIMAL EFFECTS

No animal toxicity studies have been carried out with this product.

COMPONENT - dicumyl peroxide: Oral LD50 (rat): > 2000 mg/kg. Eye irritation (rabbit): mild conjunctivitis; no corneal effects. Not a skin irritant or sensitizer in guinea pig test using Buehler protocol. Rabbit insufflation test, repeated three times per day for up to four weeks at levels comparable with workplace exposure, indicated nasal inflammation that persisted for two months after termination of treatment.

MUTAGENICITY/GENOTOXICITY INFORMATION

No mutagenicity studies have been carried out with this product.

12 ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No ecological studies have been carried out on this product.

COMPONENT - dicumyl peroxide: Acute aquatic 96-hour static LC50 value falls within the moderately toxic range of 1-10 mg/L, according to the U. S. Fish and Wildlife criteria. Fathead minnow was the species tested. The bacterial multiplication inhibition test revealed no evidence of bacteriostatic activity at 5000 ppm. *Pseudomonas putida* was the species tested.

13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Incineration at an authorized disposal facility is the recommended method of disposal. Solidify the material (if required) by mixing with absorbent in a fiber drum (no larger than 30 gallons in size) to a peroxide level of 40% or lower. Recommended absorbents include soda ash, calcium carbonate, clean sand, and clay if known to be inert and non-acidic. Do NOT mix with vermiculite, Oil-Dri® absorbent, or any other comparable materials that may be acidic. The disposal facility must incinerate the entire drum without shredding, and without mixing with other chemical wastes, to avoid exposure to heat or incompatible materials. For more information regarding disposal of this product, please contact your Hercules representative.

14 TRANSPORT INFORMATION

GENERAL

This product is not subject to DOT, ICAO, IMDG or ADR regulations.

For specific information regarding transportation of this product, please contact the Hercules Transportation Department at (302) 594-7356 or FAX at (302) 594-7256.

15 REGULATORY INFORMATION

CHEMICAL INVENTORIES

U.S. TSCA: The components of this product are included on the TSCA Inventory.

European EINECS : Included on EINECS list.

Canadian CEPA : Included on DSL Inventory.

Japanese MITI : Included on MITI Gazette.

SARA TITLE III - SECTIONS 302/304

This product is not an Extremely Hazardous Substance subject to reporting under 40CFR355.

SARA TITLE III - SECTION 311 AND 312

HC-1: Acute health hazard

HC-2: Chronic health hazard

HC-3: Fire hazard

HC-4: Sudden release of pressure hazard

SARA TITLE III - SECTION 313

This product does not contain any chemicals subject to reporting under Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40CFR372.

CERCLA

This product does not contain any chemicals subject to reporting as a CERCLA Hazardous Substance under 40CFR302.4.

RCRA

This product is not a hazardous waste as listed in 40CFR261.33. It does not exhibit any of the hazardous characteristics listed in 40CFR261, Subpart C.

16 OTHER INFORMATION

HMIS RATINGS:

Health 1 Slight Hazard

Flammability 1 Slight Hazard

Reactivity 1 Slight Hazard

NFPA 432 - Organic Peroxide Classification: Class V

LIST OF ACRONYMS

ACGIH: American Conferences of Governmental Industrial Hygienists
AIHA WEEL: American Industrial Hygienists Association - Workplace Environmental Exposure Level
CASRN: Chemical Abstracts Service Registry Number
CERCLA: Comprehensive Emergency Response, Compensation and Liability Act
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: OSHA Permissible Exposure Limit
RCRA: Resource Conservation and Recovery Act
RQ: Reportable Quantity
SARA: Superfund Amendment Reauthorization Act
STEL: Short-Term Exposure Limit
TLV: Threshold Limit Values (registered trademark of ACGIH)
TPQ: Threshold Planning Quantity
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average

DISCLAIMER

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.