



PM
6-28-89
Augusta, Ga

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JUN 30 1989

June 27, 1989

DER - BAQM

John Reynolds
Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL 32399

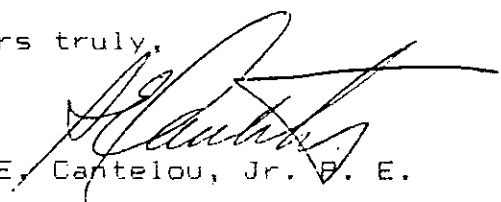
RE: P. D. & E. Air Pollution Permit Application

Dear Mr. Reynolds:

Enclosed is information on the dust collector at the above referenced plant. The daily usage of wood is 10 sheets of plywood, 8 2"X12" fir boards, and 16 2"X16" fir boards.

If you have any questions, please feel free to call.

Yours truly,


G. E. Cantelou, Jr. P. E.

GEC:sc

Enclosures

John Reynolds
CHF/BT

6-30-89 RAN

CANTELOU ASSOCIATES

CONSULTING ENGINEERS • SURVEYORS & PLANNERS
1359 Silver Bluff Rd. Suite B-3 / P.O. Box 3102 / Aiken, S.C. 29802



John Reynolds
Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL 32399



from the desk of... MELANIE L. THOMPSON

date: 6-23-89

Hi Salina,

Attached is information on our Wood Dust Collector and I have listed below information that you requested:

CFPM - 4000 to 5600

Capacity - 8.5 Cubic Feet

Efficiency - 99%

If you have any questions, please feel free to contact me.

Thank you.

Melanie

REQUESTED REPLY

jan.	feb.	mar.	apr.	1	2	3	4	5	6	7	8	9	10	11
may	june	july	aug.	12	13	14	15	16	17	18	19	20	21	22
sept.	oct.	nov.	dec.	23	24	25	26	27	28	29	30	31		

donaldson



TORIT INDUSTRIAL COLLECTORS

CYCLONE MODEL 30

EFFICIENT DESIGN

TORIT's long tapering cone design and high inlet velocity place it in the "high efficiency" class — a cyclone built for top-level proficiency. In laboratory testing, Model 30-FM separated 99.2% of steel grindings, 99% of sawdust and 94% of baking flour by weight. "Fines" not separated in the cyclone are caught in after-filters on FB models. Sturdy steel construction is featured for long-lasting service both inside and out. The doors are felt-gasketed with specially-designed "Positive-Seal" fasteners. A tough weather-resistant finish is available at extra cost for outdoor installation.

UNIQUE FAN

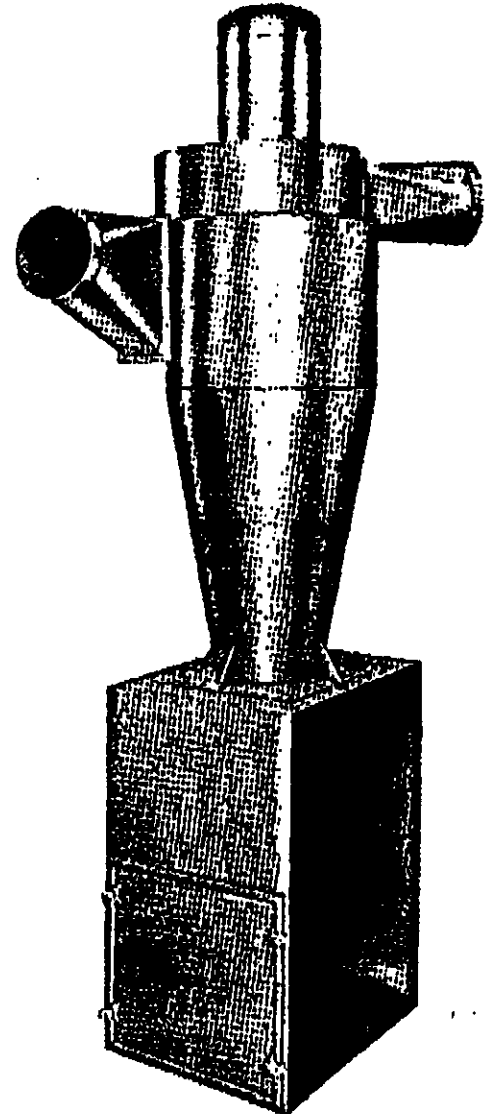
The new material handling fan design delivers constant high performance at a low horsepower requirement (see multiple rating tables on reverse side). You get longer operation at a lower cost. And this fan is on the clean-air side. Grit, dust, chips, tramp iron and other foreign materials are deposited in the base *before the air reaches the fan.*

EASY CLEANING

Standard Model 30 contains 8.5 cubic feet of storage capacity in its handy pull-out drawer, mounted on four heavy-duty, free-rolling industrial casters. Extra-capacity bases or hoppers are available, built to order, as are single and double 55-gallon drum collectors (see specifications on back).

FLEXIBLE USE

Three-phase vertical motor in both 10 and 15 horsepower models is end-mounted; the motor unit and the blower are detachable for easy relocation of outlet ducts. And cones may be rotated on bases for flexible inlet positioning. The Model 30 can exhaust outside, or be used to recirculate air into



the building. The FM model does not include an after-filter and is designed for outside exhaust. A totally enclosed motor couples with the weatherproof finish to ensure long life for outdoor installation. The FB model includes two after-filter sections containing four polyester felt filter tubes each.



TORIT DUST COLLECTORS

CYCLONE MODEL 30

High Efficiency Centrifugal Separators

These ratings cover FM Models — a clean after-filter assembly offers no measurable resistance to airflow. However, resistance will increase during operation — due to dust-loading of filtering media — but can be kept at a minimum by cleaning filter media on a regular maintenance schedule.

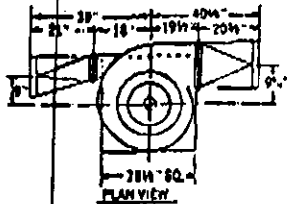
PERFORMANCE TESTED

Performance ratings and A-scale sound level readings are available on all TORIT collectors. Ratings are read and verified under standard test conditions in TORIT's laboratories.

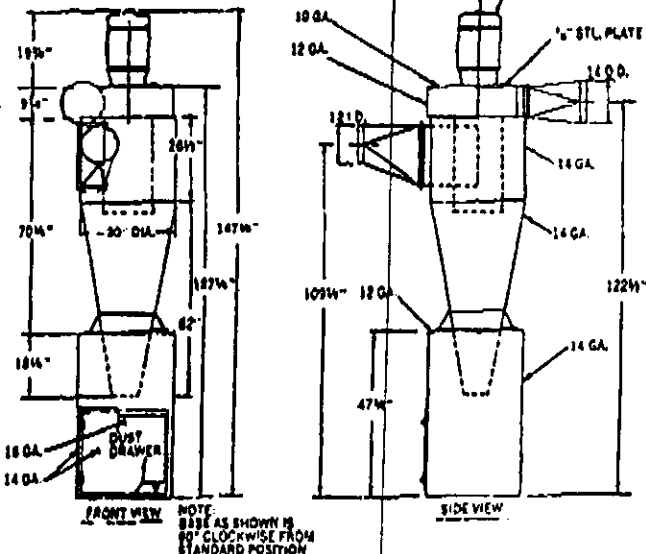
MULTIPLE RATING TABLES

MODEL	C.F.M.	INLET VELOCITY (12" DIA.) (FPM)	OUTLET VELOCITY (12" DIA.) (FPM)	EXTERNAL STATIC PRESSURE (Inches W.G.)
Series 30	5600	7140	8230	4.9"
30-15	5200	6625	4860	6.3"
	4800	6110	4380	7.9"
	4400	5600	4110	9.5"
	4000	6100	3740	11"
Series 30-10	4500	5732	4205	5.0"
	4000	5095	3738	6.7"
	3500	4458	3271	8.4"
	3000	3821	2804	9.9"

MODEL 30



FOR REMOVAL OF MOTOR & FAN WHEEL ASSEMBLY, ADDITIONAL HEAD ROOM REQUIRED



TECHNICAL DATA

	MODEL 30 FM	MODEL 30 FB
Dust storage capacity	8.5 cu. ft.	8.5 cu. ft.
Motor	Model 30-10 includes 10 horsepower, 3600 rpm, 230-460/60/3 phase vertical motor; Model 30-15 includes 15 horsepower, 3600 rpm, 230-460/60/3 phase vertical motor. (specify voltage when ordering)	
Inlet diameter	12 inches	12 inches
Outlet diameter	14 inches	14 inches
Shipping weight	1210 lbs. (Model 30-15) 1175 lbs. (Model 30-10)	1420 lbs. (Model 30-15) 1386 lbs. (Model 30-10)

55-gallon drum stand will increase overall height by 12 inches.

Specifications subject to change without notice
 TORIT district sales representatives are conveniently located throughout the United States and Canada. One will gladly work with you on your in-plant air pollution problems, and offer complete recommendations at no obligation to you. Check your Yellow Pages, under "Dust Collecting Systems", for local listing, or write.

LEADERS IN CONTROL OF IN-PLANT AIR POLLUTION



Donaldson Company Inc.
 Torit Division
 Box 1299
 Minneapolis, Minnesota 55440
 Phone (612) 887-3921
 Telex 291038



file copy

RECEIVED

MAY 19 1989

May 8, 1989

DEK: [unclear]

John Reynolds
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blairstone Road
Tallahassee, FL 32399

RE: Merritt Island Plant and P. D. & E. Facility

Dear Mr. Reynolds:

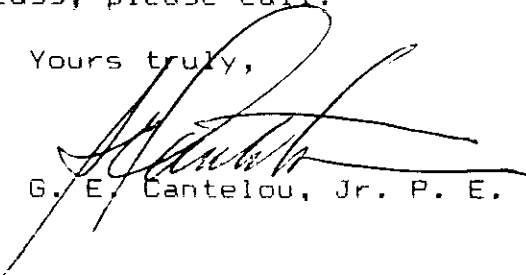
Please accept the attached check from Ray Industries, Inc. in the amount of \$3,500.00. This represents payment of the application fee for air permits for the Merritt Island plant in the amount of \$2,500.00 and the application fee for the Product Development and Engineering operation in the amount of \$1,000.00.

Sea Ray Boats, Inc. by this letter, respectfully requests that the application for the Merritt Island Plant be modified to show acetone usage of 90.2 tons per year which will result in an emission of 46.6 tons per year and also request that the application for the Product Development & Engineering facility be modified to show acetone usage of 74.3 tons per year which will result in an emission of 38.6 tons per year.

Sea Ray is currently utilizing the non-volatile solvent REZ-AWAY and the reduction is based on the introduction of a new solvent D. B. E. (manufactured by DuPont, Co.) having a volatilization/evaporation rate much slower than water (technical data and discussion is attached). It is the goal of Sea Ray to continue reducing their use of acetone, and with the introduction of new products this may be achieved in the near future.

Thank you for your attention and assistance. If you have any questions or care to discuss, please call.

Yours truly,


G. E. Cantelou, Jr. P. E.

GEC:sc

Enclosures

*copied: J. Reynolds
C. Collins*



AIRBILL

USE THIS AIRBILL FOR DOMESTIC SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO.
QUESTIONS? CALL 800-238-5355 TOLL FREE.

PACKAGE TRACKING NUMBER

1044313292

1044313292

RECIPIENT'S COPY

From (Your Name) Please Print Pete Cantelou		Your Phone Number (Very Important) 803 648-9300		To (Recipient's Name) Please Print John Reynolds		Recipient's Phone Number (Very Important) 904 488-...			
Company CANTELLO ASSOCIATES		Department/Floor No		Company Dept. of Environmental Regulation		Department/Floor No			
Street Address 1329 SILVER BLUFF RD STE 2-3				Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 2600 Blairstone Road					
City AIRBN		State SC		City Tallahassee		State FL.			
ZIP Required 29001		ZIP Required 32399							
YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE.)				IF HOLD FOR PICK-UP. Print FEDEX Address Here					
PAYMENT <input checked="" type="checkbox"/> Bill Sender <input type="checkbox"/> Bill Recipient's FedEx Acct No <input type="checkbox"/> Bill 3rd Party FedEx Acct No <input type="checkbox"/> Bill Credit Card <input type="checkbox"/> Cash				Street Address City State ZIP Required					
SERVICES		DELIVERY AND SPECIAL HANDLING		PACKAGES WEIGHT YOUR DECLARED VALUE OVER SIZE		Emp No Date			
1 <input checked="" type="checkbox"/> PRIORITY 1 Overnight Delivery 2 <input type="checkbox"/> COURIER-PAK OVERNIGHT ENVELOPE* 3 <input type="checkbox"/> OVERNIGHT BOX 4 <input type="checkbox"/> OVERNIGHT TUBE 5 <input type="checkbox"/> STANDARD AIR Delivery not later than second business day		1 <input type="checkbox"/> HOLD FOR PICK-UP (date back) 2 <input checked="" type="checkbox"/> DELIVER WEEKDAY 3 <input type="checkbox"/> DELIVER SATURDAY (extra charge) 4 <input type="checkbox"/> DANGEROUS GOODS (extra charge) 5 <input type="checkbox"/> CONSTANT SURVEILLANCE SERVICE (CSS) (extra charge/Release Signature Not Applicable) 6 <input type="checkbox"/> DRY ICE (ins.) 7 <input type="checkbox"/> OTHER SPECIAL SERVICE 8 <input type="checkbox"/> 9 <input type="checkbox"/> SATURDAY PICK-UP (extra charge) 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> HOLIDAY DELIVERY (if offered) (extra charge)		Total Total Total Received At Regular Stop On-Site Stop Drop Box BSC In Station FEDEX Corp Employee No. Date/Time for FEDEX Use		Federal Express <input type="checkbox"/> Cash Received <input type="checkbox"/> Return Shipment <input type="checkbox"/> Third Party <input type="checkbox"/> Chg. To Rec <input type="checkbox"/> Chg. To Hold Street Address City State Zip Received By. Date/Time Received FedEx Employee Number Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom. Release Signature		Base Charges Declared Value Charge Other 1 Other 2 Total Charges PART #11800 REVISION DATE 7/88 PRINTED IN U.S.A. G/FE 009 © 1988 F.E.C.	

Per Sally McCoach, Dupont

90% Evaporation time measured using Shell evapometer, shows evaporation rate of:

Water	1,376
Acetone	82
DBE	56,700

Per phone conversation 5-3-89

Selina Cantelou
Cantelou Associates

ATTACHMENT II

ACTUAL EMISSIONS (1988 USAGE)

EMISSIONS = (EMISSION RATE)(UTILIZATION RATE)(COMPONENT PERCENTAGE)

STRENE: RESIN (.06)(736.4 #/hr)(0.37)
GEL COAT + (.30)(125.7 #/hr)(0.30) = 27.7 #/hr = 53.1 T/yr

METHYL METHACRALATE:
GEL COAT (1.0)(125.7 #/hr)(0.05) = 6.3 #/hr = 12.1 T/yr

ACETONE: **
ACETONE 318,165 (TOTAL) - 97,068 (RECYCLED) =
221,097 # emitted/yr = 38.4 #/hr = 110.6 T/yr

1,1,1-TRICHLOROETHANE:
(1.0)(2.52 #/hr)(0.60) = 1.51 #/hr = 2.9 T/yr

METHYLENE CHLORIDE: (1.0)(2.52 #/hr)(0.30) = 0.76 #/hr = 1.4 T/yr

AROMATIC HYDROCARBON: (1.0)(21.95 #/hr)(.162) = 3.56 #/hr = 6.8 T/yr

XYLENE: (1.0)(21.95 #/hr)(0.63) = 1.38 #/hr = 2.7 T/yr

** ACTUAL EMISSIONS BASED ON NEW WEEKLY USE OF ACETONE WOULD BE:

(600 GAL/WK (USED) - 275 GAL/WK (RECYCLED) X (6.61 #/GAL) X (48 WKS/YR) =
103,116 #/yr = 17.9 #/hr = 51.56 T/yr

Revised to 46.0 T/yr

ACTUAL EMISSIONS FOR 1988

EMISSIONS = (EMISSION RATE)(UTILIZATION RATE)(COMPONENT PERCENTAGE)

STRENE: RESIN (AME) (.06)(24.2 #/hr)(0.42)
 RESIN (RCI) (.06)(81.1 #/hr)(0.50)
 GEL COAT + (.30)(18.3 #/hr)(0.35) = 5.0 #/hr = 9.53 T/yr

METHYL METHACRALATE:
 GEL COAT (1.0)(18.3 #/hr)(0.05) = 0.92 #/hr = 1.76 T/yr

ACETONE: 217,403 #/yr (used) - 109,065 #/yr (recycled) =
 = 28.2 #/hr = 54.2 T/yr

1,1,1-TRICHLOROETHANE:
 (1.0)(0.21 #/hr)(0.68) = .1428 #/hr = 0.27 T/yr

TOLUENE: (1.0)(0.21 #/hr)(0.08) = .0168 #/hr = .032 T/yr

MISC: *** (1.0)(0.13 #/hr)(1.00) = 0.13 #/hr = 0.25 T/yr

** ACTUAL EMISSIONS BASED ON NEW WEEKLY USE OF ACETONE WOULD BE:

(500 GAL/WK USED) - (225 GAL/WK RECYCLED) X (6.61 #/GAL) X (48 WKS/YR) =
 87,252 #/yr = 15.1 #/hr = 43.6 T/yr

*** SEE NOTE ON PAGE 4 OF APPLICATION

REDUCE TO 38.6 T/yr

DU PONT

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

NAME : DBE
 CHEMICAL FAMILY : Aliphatic Dibasic Acid Esters
 TRADE NAMES AND SYNONYMS :
 Dibasic Ester
 DU PONT REGISTRY NO. : 53-60-5
 FORMULA : CH₃OOC(CH₂)_n-COOCH₃, n=2,3 and 4
 MOLECULAR WEIGHT : Ave. 160
 MANUFACTURER/DISTRIBUTOR : E.I. du Pont de Nemours & Co., Inc.
 1007 Market Street
 Wilmington, DE 19898
 PRODUCT INFORMATION PHONE : 1-800-441-7515
 MEDICAL EMERGENCY PHONE : 1-800-441-3637
 TRANSPORTATION EMERGENCY PHONE : CHEMTREC 1-800-424-9300

HAZARDOUS COMPONENTS

CHEMICAL	CAS NUMBER	%
Dimethyl Glutarate	1119-40-0	66
Dimethyl Adipate	627-93-0	17
Dimethyl Succinate	106-65-0	16.5
Methanol	67-56-1	~0.1
Hydrogen Cyanide	74-90-8	<10ppm

PHYSICAL DATA

Boiling Point : 196 to 225 deg C
 Melting Point : ~ -20 deg C
 Specific Gravity : 1.092 at 20 deg C
 Vapor Pressure : 0.2 mm Hg at 20 deg C
 Solubility in H₂O : 5.3 wt % at 20 deg C
 % Volatiles : 100 wt % at 20 deg C
 Evaporation Rate : <.1 (Butyl Acetate = 1.0)
 Odor : Sweet
 Form : Liquid
 Color : Colorless

HAZARDOUS REACTIVITY

INSTABILITY : Stable.
 INCOMPATIBILITY : Incompatible with strong oxidants, acids, alkalies.
 DECOMPOSITION : Decomposes with heat.
 POLYMERIZATION : Polymerization will not occur.

FIRE AND EXPLOSION DATA

Flash Point : 100 deg C
Method : TCC
Autoignition Temperature : 370 deg C
Explosive Limits in Air, % by Vol. :
LEL : 0.9
UEL : 8.0

FIRE AND EXPLOSION HAZARDS

Vapor forms explosive mixture with air. Hazardous gases produced in fire are carbon monoxide.

EXTINGUISHING MEDIA

Water. Chemical Foam. Dry Chemical. CO2.

SPECIAL FIRE FIGHTING INSTRUCTIONS

Flood with water. Wear self-contained breathing apparatus. Wear full protective equipment (eye, body, respiratory).

HEALTH HAZARD INFORMATION

PRINCIPAL HEALTH HAZARDS

Inhalation LC50: 1 hr. >10.7 mg/l in rats
Skin absorption LD50: >2,250 mg/kg in rabbits
Oral LD50: 8,191 mg/kg in rats

DBE is an eye irritant in animal tests. DBE has also been found to be a moderate skin irritant in rabbits. DBE demonstrated no mutagenic activity when tested in bacterial cell cultures. DBE demonstrated no reproductive toxicity and was not uniquely toxic to the fetus in a developmental study. DBE produced mild nasal lesions in rats.

Anticipated human health effects of overexposure include eye and skin irritation.

CARCINOGENICITY

NONE OF THE COMPONENT(S) OF THIS MATERIAL IS LISTED AS A CARCINOGEN BY NTP, IARC, OR OSHA.

EXPOSURE LIMITS

AEL (Du Pont) : 10mg/M3 (8 hr TWA)
TLV * (ACGIH) : None Established
PEL (OSHA) : None Established
* TLV is a registered trademark.

Methanol: AEL: 200ppm, 8hr TWA, skin; 100ppm, 12hr TWA, skin
TLV*: 200ppm, 8hr TWA, skin; 250ppm STEL; PEL: 200ppm
Hydrogen Cyanide: TLV* 10ppm C, skin

SAFETY PRECAUTIONS

Avoid breathing vapors or mist. Avoid contact with eyes. Wash thoroughly after handling.

FIRST AID

INHALATION :

If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT :

Flush skin with water.

EYE CONTACT :

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION :

If swallowed, do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician.

PROTECTION INFORMATION

GENERALLY APPLICABLE CONTROL MEASURES and PRECAUTIONS

Use only with adequate ventilation. Do not mix with strong oxidants, acids, alkalis. Do not consume food, drink or tobacco in areas where they may become contaminated with this material.

PERSONAL PROTECTIVE EQUIPMENT

Coverall chemical splash goggles. Use when splash is likely. Air supplied respirator. Chemical Cartridge Respirator : Half-mask organic vapor cartridge. Full-face organic vapor cartridge if eye protection needed. Impervious gloves such as Neoprene.

AQUATIC TOXICITY : 96 hr, fathead minnows, LC50: >18ppm <24ppm

SPILL, LEAK, OR RELEASE

Review **FIRE AND EXPLOSION HAZARDS** and **SAFETY PRECAUTIONS** before proceeding with clean up. Use appropriate **PERSONAL PROTECTIVE EQUIPMENT** during clean up.

Remove source of heat, sparks, flame, impact, friction or electricity. Dike spill. Prevent liquid from entering sewers, water ways or low areas. Recover free liquid for reuse or reclamation. Recover undamaged and minimally contaminated material for reuse or reclamation. Soak up with sawdust, sand, oil dry or other absorbent material.

WASTE DISPOSAL

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under the authority of the Resource Conservation and Recovery Act (40 CFR, parts 260-271). Recover nonusable free liquid and dispose of in an approved and permitted incinerator. Recover contaminated water and dispose of in an approved and permitted biological treatment system or an approved and permitted deepwell. Remove nonusable solid material and/or contaminated soil, for disposal in an approved and permitted landfill. Do not flush to surface water or sanitary sewer system.

SHIPPING INFORMATION

DOMESTIC OTHER THAN AIR (DOT)

Shipping Name : DIBASIC ESTER MIXTURE
Hazard Class : Not Regulated
Freight Class : Plasticizers + Solvents

INTERNATIONAL WATER OR AIR (IMO/ICAO)

Shipping Name : DIBASIC ESTER MIXTURE
Hazard Class : Not Regulated

BULK WATER (USCG)

Shipping Name : DIBASIC ESTER MIXTURE

OTHER SHIPPING INFORMATION

Shipping Containers :
Tank Car : 170,000 lbs
Tank Truck : 42,000 lbs
Steel Drums : 485 lbs

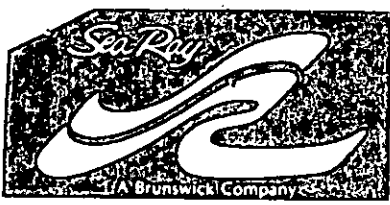
STORAGE CONDITIONS

Store in well ventilated area. Keep container tightly closed. Do not store with strong oxidants, acids, alkalies.

ADDITIONAL INFORMATION AND REFERENCES

The hydrogen cyanide concentration in DBE is so low as to be toxicologically insignificant when DBE is used as a solvent. However, when reacting DBE with an alcohol and subsequent recovery of methanol, concentration of highly volatile impurities to toxicologically significant levels can occur in the light ends when methanol is topped in order to purify the methanol for reuse. Processors should be aware of this potential hazard.

Date of latest Revision : 08-Apr-87
Person Responsible for MSDS : Petrochemicals - Env. Affairs
Address : E.I. du Pont de Nemours & Co., Inc.
Wilmington, DE 19898
Telephone : 302-774-5810



RAY INDUSTRIES, INC.
KNOXVILLE, TENNESSEE

CHECK NUMBER 6154

99-192
1023

First Interstate Bank
of Riverton, N.A.

DATE

MO.	DAY	YR.
5	2	89

Amount
\$3,500.00

PAY
THREE THOUSAND FIVE HUNDRED DOLLAR & NO/100 -----

PAY TO
THE ORDER
OF

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

RAY INDUSTRIES, INC.

James Mottinell

AUTHORIZED SIGNATURE

W J Baunton

AUTHORIZED SIGNATURE

NOT VALID
AFTER 90 DAYS

⑈0066542⑈ ⑆602306924⑆ 600⑈063⑈7⑈

RAY INDUSTRIES, INC. REMITTANCE ADVICE

- 3001-1803 - \$875.00
- 3001-1813 - 875.00
- 3001-1816 - 875.00
- 3001-1600 - 875.00

FEES FOR AIR PERMITS FOR FLORIDA PLANTS