



Read the entire SDS for a complete hazard assessment.

Section 1. Product and Company Identification

1.1 Product Identifiers:

Product Names: DEP (Kanatol 200-KLJ)
Synonyms: Diethyl 1,2-benzenedicarboxylate; Diethyl phthalate
Chemical Name: 1,2-Benzenedicarboxylic acid, 1,2-diethyl ester
CAS Number: 84-66-2 **EINECS Number:** 201-550-6
Recommended use: Laboratory and other commercial uses including plasticizer in PVC.
Restrictions on use: Commercial use only.

1.2 Manufacturer and Supplier/Distributor:

Manufacturer

KLJ PLASTICIZERS LIMITED
Sr.no.98/1, Village Silli
Silvassa-396230 (D&NH), INDIA
Phone: +91 9909996425/426/427/428

E-mail: silvassa2002@kljindia.com

Distributor

R.E. Carroll, Inc.
1570 North Olden Avenue
Trenton, NJ 08638-3204 USA
Phone: 609-695-6211
Fax: 609-695-0102
Responsible Party
John Boruta Quality Assurance / Compliance Manager
Email: johnb@recarroll.com
Web Site: www.recarroll.com

1.4 Emergency telephone number:

In the US: For a transport accident or leak, fire or major spill, call CHEMTREC, (800) 424-9300.
For International CHEMTREC assistance, call 1-703-527-3887 (collect calls accepted).

Section 2. Hazards Identification

2.1 Globally Harmonized System (GHS) Hazard Classification:

OSHA Classification in accordance with 29 CFR 1910 (OSHA HCS): non-hazardous.
This SDS meets the requirements of GHS Revision 3, HCS 2012 (29 CFR 1910.1200).
US GHS Classifications: Not classified as Hazardous

2.2 GHS Label elements including precautionary statements:

Hazard pictograms: None

GHS Signal word: None

Hazard Statement: None.



Precautionary Statements:

Prevention: Do not breathe gas/mist/vapors/spray. Wear protective gloves, eye and skin protection
Avoid release to the environment.

Response:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

If exposed or concerned, get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs, get medical attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation occurs: Get medical advice/ attention.

STORAGE: Store in accordance with local/regional/national/international regulation.

DISPOSAL: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. See section 13 of this SDS for disposal instructions.

2.3 Other hazards which are not included in the classification criteria: None

Section 3. Composition/Information on Ingredients

Chemical Name	CAS No	EINECS No.	Weight percent
Diethyl phthalate	84-66-2	201-550-6	<= 100

Section 4. First-Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Remove contaminated clothing.

4.1 Inhalation:

Move to fresh air. If breathing is difficult, give oxygen and continue to monitor. If not breathing, give artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. Call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

4.2 Skin contact:

Wash skin with plenty of soap and water. Remove contaminated clothing and shoes. If symptoms persist, seek medical attention. Wash contaminated clothing before use.

4.3 Eye contact:

Immediately flush eyes thoroughly with water for several minutes. Remove contact lenses after one to two minutes and continue flushing for several more minutes. If redness, itching or burning sensation develops, seek medical attention.



4.4 Ingestion:

Give nothing by mouth. Call a poison center or physician. **DO NOT INDUCE VOMITING.** Never give anything by mouth to an unconscious person. Gently wipe or rinse the inside of the mouth with water. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

4.5 Most important acute and delayed symptoms/effects:

Eye Contact: Excessive exposure may cause temporary redness and mild irritation to eyes.

Skin Contact: May cause redness, defatting, and cracking of skin.

Ingestion: May cause gastric disturbance.

Inhalation: May cause mild irritation.

Chronic health effects: Chronic exposure may cause respiratory irritation.

Relevant routes of exposure: Eye, skin, inhalation.

4.6 Indication of immediate medical attention and notes for physicians:

Persons with pre-existing skin, eye, or respiratory conditions may be at an increased risk from the irritant properties of this material. Attending physician should treat exposed patients symptomatically

Protection of First Aiders: No action should be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Section 5. Fire-Fighting Measures

5.1 Flammable Properties:

Flash point: 162 7°C- closed cup

Lower explosion limit: No Data

Upper explosion limit: No Data

Auto ignition temperature No Data

Thermal decomposition: When heated, hazardous gases may be released.

Fire and Explosion Hazard: Material will burn. Not a fire or explosion hazard.

5.2 Extinguishing media:

Suitable extinguishing media: Combustible material. Use CO₂, dry chemical, or foam. Water can be used to cool and protect product.

Unsuitable extinguishing media: Forceful application of fire extinguishing agents or water spray may spread burning material. Material will float on water.



5.3 Special hazards arising from the chemical:

Unusual fire and explosion hazards: None known.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition, which may be toxic and/or irritating.

5.4 Special protective equipment and precautions for firefighters:

Fire Fighting Procedures: Keep personnel away. Isolate fire and deny unnecessary entry. Do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.

Special Protective Equipment for Firefighters: No special protective equipment required. Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves) to protect against other burning material. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid breathing mists. Avoid skin and eye contact. Evacuate personnel to safe areas. Spilled material may cause a slipping hazard. Use appropriate safety equipment. See Section 8 for information on personal protection equipment.

6.2 Environmental precautions and protective procedures:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains, sewers, waterways, and/or groundwater. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

6.3 Methods and material for containment and cleaning up:

Contain spilled material if possible. Eliminate all ignition sources including smoking, flares, sparks or flames in immediate area. All equipment used when handling the product must be grounded. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Section 7. Handling and Storage

7.1 Precautions for safe handling:

Avoid breathing process mists. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Do not eat, drink and/or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.



7.2 Conditions for safe storage (including any incompatibilities):

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store in accordance with good manufacturing practices. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

Section 8. Exposure Controls and Personal Protection

Consult with a Health and Safety Professional for specific selections.

8.1 Control parameter: Occupational exposure limits:

ACGIH	TLV	5 mg/m ³
NIOSH REL	TWA	5 mg/m ³
OSHA	PEL	5 mg/m ³

8.2 Appropriate engineering controls: Use adequate general or local exhaust ventilation to control airborne concentrations.

8.3 Personal protective equipment:

Eye protection: Use safety glasses with side shields.

Body protection: Use protective clothing as needed.

Hand protection: Contact should be minimized. Protective gloves are recommended

Respiratory protection: Concentration in air determines the level of respiratory protection needed. Wear respiratory protection if ventilation is inadequate. Use NIOSH certified respiratory equipment. (NIOSH certified organic vapor/particulate respirator as needed. Consult OSHA regulations for proper respiratory use (29 CFR 1910.134)

Other: Remove contaminated clothing and wash before reuse. For non-fire emergencies, respiratory protection may be necessary and wear appropriate protective clothing to avoid contact with material. Have eyewash station, safety showers, and water supply in work area.

Do not consume or store food in the work area. Wash hands before smoking or eating.

Section 9. Physical and Chemical Properties

Physical state:	Liquid
Color:	Clear
Odor:	Nearly odorless
Odor threshold:	No Data Available
pH:	No Data
Freezing Point:	-3 °C
Boiling Point	298 °C at 4mm Hg
Flash Point (COC):	162.7 °C
Evaporation rate:	No Data Available
Upper Explosive Limits (% air):	NA



Lower Explosive Limits (%air):	No data
Flammability (solid, gas):	Not Applicable
Vapor pressure:	14mm @163°C
Vapor density (air=1):	7.66(Air=1)
Density:	No Data
Specific gravity	1.12 - 1.125 at 20 °C
Auto-ignition temperature:	457 °C
Decomposition temperature:	Not Determined
Solubility in water:	Insoluble
Solubility in organic solvents	Soluble
Partition coefficient, n-octanol/water:	No data
Viscosity @ 20 °C:	12± 2 cps
Percent Volatile	0.1% max
Refractive Index @ 27°C	1.498 - 1.502

Section 10. Stability and Reactivity

- 10.1 Chemical stability:** Stable under normal temperature conditions and recommended use.
- 10.2 Possibility of hazardous reactions:** No hazardous reactions if stored and handled as prescribed.
- 10.3 Conditions to avoid:** Avoid heat, sparks, open flames and other ignition sources.
- 10.4 Incompatible materials:** Strong oxidizers
- 10.5 Hazardous decomposition products:**

Decomposition products depend upon temperature, air supply and the presence of other materials. Smoke, carbon monoxide, and other petroleum decomposition products in the case of incomplete combustion. Processing may release fumes and other decomposition products. Fumes can be irritating.

- 10.6 Hazardous Polymerization:** Will not polymerize.

Section 11. Toxicological Information

- 11.1 Information on the likely routes of exposure:** Inhalation, ingestion, skin and eye contact.
- 11.2 Information on toxicological effects:**

Acute toxicity

LD50 Oral - rat - 8,600 mg/kg

Remarks: Behavioral: Somnolence (general depressed activity).

LC50 Inhalation - rat - 6 h - > 4,640 mg/m³

LD50 Dermal - rat - male and female - > 10,000 mg/kg



Skin corrosion/irritation:	Did not cause skin irritation in human patch tests Classification: Not classified as irritant
Serious eye damage/irritation:	Slight eye irritation (Rabbit) Classification: Not classified as irritant
Inhalation:	May cause mild respiratory tract irritation Classification: Not classified
Respiratory sensitization:	Did not cause sensitization in humans and laboratory animals, mouse Classification: Does not cause respiratory sensitization
Skin sensitization:	Did not cause sensitization on laboratory animals, guinea pig or humans Classification: Does not cause skin sensitization
Ingestion	May cause gastric disturbances Classification: Not toxic by ingestion.

Repeated dose toxicity

Inhalation Rat:	No toxicologically significant effects were found.
Mutagenicity:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects
Reproductive Toxicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.

Specific target organ toxicity (STOT):

STOT-single exposure:	Classification: Not classified
STOT-repeated exposure:	Classification: Not classified
Aspiration Hazard:	Classification: Not classified.
Chronic effects	Prolonged inhalation may be harmful

Symptoms related to the physical, chemical and toxicological characteristics:

Adverse symptoms may include the following:

Eye contact: Pain or irritation, watering, redness

Inhalation: irritation of respiratory tract, coughing and difficulty breathing.

Skin contact: Irritation, redness, defatting of skin

11.3 Carcinogenicity: Not considered a carcinogen by IARC, NTP, OSHA or ACGIH.

11.4 Other: US Congress and the EU have banned (on an interim basis) three types of phthalates, in any amount greater than 0.1 percent in a children's toy that can be placed in a child's mouth, and in child care articles. . DEP is not banned.

DEP has been tested in reproductive toxicology studies in laboratory rats (two generation studies). There were no effects on fertility, reproductive performance, or evidence of alteration of endocrine processes. A small, statistically significant decrease in offspring survival was observed. In evaluating these and related studies, the EU Risk Assessment for DEP has concluded that classification and labeling is not required for any effect including reproductive and developmental effects. In addition the NTP Center for Evaluation of Risks to Human Reproduction has concluded that there is negligible concern for reproductive effects in adults and minimal concern for developmental effects in fetuses and children due to DEP exposure.



Section 12. Ecological Information

TOX DATA

Toxicity to fish:

LC50-Oncorhynchus mykiss (rainbow trout) > 12 mg/l -96 h

Aquatic invertebrates:

Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water flea) 90 mg/l-48 h

Aquatic plants Desmodemus subspicatus (Scenedesmus subspicatus) - 23 mg/l - 72 h (OECD Test Guideline 201)

Chronic toxicity: No Data

12.1 Mobility: expected to have low to high mobility in soil depending on pH.

12.2 Aquatic and terrestrial ecotoxicity: No Data.

12.3 Persistence and degradability:

Diisodecyl phthalate is confirmed to be degradable with half life of 3- 28 days in the aquatic environment.

12.4 Bioaccumulative potential:

log Pow calculated = 10.28. Bio Concentration Factor, BCF, is 117-potentially bioaccumulative (regulated above 1100). Low with evidence of degradation.

12.5 Other adverse effects: None.

Section 13. Disposal Considerations

13.1 Disposal methods:

Uncontaminated discarded product is a U listed hazardous waste, RCRA # U088. Do not dump into any sewers, on the ground or into any body of water. All disposal practices must comply with all federal, state, and local laws and regulations. Offer surplus and non-recyclable material to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

13.2 Container disposal:

Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue. Puncture or otherwise destroy empty container and dispose of in a permitted facility.

Section 14. Transport Information

14.1 US DOT Regulations: Not regulated

14.2 UN number: Not regulated

14.3 UN proper shipping name: Not regulated

14.4 Transport hazard class: Not regulated

14.5 Packing group (if applicable): Not regulated



14.6 Marine Pollutant (Yes/No): No

14.7 Special precaution: No information available

14.8 DOT BULK:

UN number: 3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(DIETHYL PHTHALATE RQ = 1000 LBS)

Hazard class: 9

Packing group: III

Environmental hazards:

Marine pollutant: no

Packaging exceptions: 155

Packaging bulk: 241

Reportable quantity: 1000 lb.

Label required: 9

Section 15. Regulatory Information

U.S. Regulations

15.1 USA TSCA: All intentionally added ingredients are listed on the TSCA Inventory or exempt.

15.2 SARA Section 311/312 Hazard Categories:

Acute Hazard: No

Chronic Hazard: No

Fire Hazard: No

Reactive Hazard: No

Sudden Pressure Release: No

15.3 CERCLA Hazardous Substance SARA Section 304 Release Reporting:

Component(s)

Reportable Quantity

None

15.4 SARA Section 302 Extremely Hazardous Substances:

Component(s)/

CAS Number

Concentration

Min _____ Max

None

SARA 311-312 Hazardous Chemicals

Component(s)/

DEP



15.5 SARA Section 313 Toxic Chemicals:

Component(s)/ <u>CAS Number</u>	Reporting <u>Threshold</u>	Concentration <u>Min</u> <u>Max</u>
None		

15.6 California Proposition 65: This product is NOT known to contain chemical(s) known to the State of California to cause cancer or reproductive harm.

15.7 Pennsylvania Worker and Community Right To Know Act: Hazardous Substances: NONE

15.8 New Jersey Worker and Community Right To Know Act: Hazardous Substances: NONE

15.9 International Regulations:

Canadian Regulations:

WHMIS Statement: This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations*. This product is classified as not controlled in accordance with the Canadian Controlled Products Regulations.

This product complies with RoHS (Restriction on Hazardous Substances).

Other requirements: Inventory Listing:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory	LISTED
DSL - Canadian Domestic Substances List	LISTED
NDSL - Non-Domestic Substances List	NOT LISTED
EINECS - European Inventory of Existing Chemical Substances/European	LISTED
ELINCS - List of Notified Chemical Substances	NOT LISTED
ENCS - Japan Existing and New Chemical Substances	LISTED
KECL - Korean Existing and Evaluated Chemical Substances	LISTED
AICS Australia - Australian Inventory of Chemical Substances	LISTED
IECS China - Inventory of Existing Chemical Substances Produced or Imported in China	LISTED
TCSI Taiwan - Chemical Substance Inventory	LISTED
PICCS :Philippine Inventory	LISTED
NZIoC New Zealand	LISTED

Section 16. Other Information

16.1 NFPA and HMIS Hazard Ratings:

We assigned NFPA and HMIS ratings to this product based on the hazards of its ingredient(s). Because the customer is most aware of the application of the product, the customer must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product SDS. This information is intended solely for the use of individuals trained in the particular hazard rating system.



Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

NFPA (National Fire Protection Association) - Classification

Health 1 slight
Flammability 1 slight
Instability or Reactivity 0 minimal

HMIS® [Hazardous Materials Identification System (Paint & Coating)] - Classification

Health 1 slight
Flammability 1 slight
Reactivity 0 minimal

NFPA and HMIS® ratings involve data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this SDS must be considered. This information is supplied solely for the use of individuals trained in the particular hazard rating system.

16.2 Revision information:

Previous version: 06/21/2015 Verson 7
Date of this revision: 06/22/2017 (Version 8.0)
Revision summary: GHS/OSHA compliant SDS

16.3 Training advice: Provide adequate information, instruction and training for operators.

16.4 Key or legend to abbreviations and acronyms used in the safety data sheet:

ACGIH	American Conference of Governmental Industrial Hygienists
BEI	Biological Exposure Index
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
NOAEL	No observed adverse effect level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
OECD	Organization for Economic Co-operation and Development
OPPTS	Office of Prevention, Pesticides, and Toxic Substances
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
ppm	parts per million
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average
Action Level	An exposure value set by OSHA that is lower than the PEL that will trigger the need for activities such as exposure monitoring and medical surveillance.
<i>DNEL</i>	The derived no-effect level is the level of exposure to a substance above which humans should not be exposed, according to REACH.

Declare to reader:

KLJ GROUP

DEP (Kanatol 200-KLJ)



SAFETY DATA SHEET
GHS HCS-2012 §1910.1200

The opinions expressed herein are those of qualified experts within R.E. Carroll, Inc. 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 guidance 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 SDS
