



SAFETY DATA SHEET

REVISE DATE: 07/15/2015

SECTION 1: IDENTIFICATION

PRODUCT: Diisononyl Phthalate

SYNONYMS: DINP, dialkyl (C7-C13) phthalates

RECOMMENDED USE: Plasticizers for polymers; phlegmatizer (to dilute organic peroxides); construction chemicals; manufacture of coatings, inks and artist's colors; preparation of lubricants; preparation of adhesives.

SUPPLIER: Everchem Specialty Chemicals
1400 N. Providence Rd., Suite 302
Media, PA 19063

GENERAL INFORMATION: 484-234-5030

EMERGENCY INFORMATION: CHEMTREC
800-424-9300

SECTION 2: HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW:

Form: liquid
Color: colorless, clear
Odor: odorless
No specific hazards are known.
Eye contact: No hazard expected in normal use.
Skin contact: No hazard expected in normal use.
Inhalation: No hazard expected in normal use.
Ingestion: No hazard expected in normal use.
GHS Classification: Not Listed
Classification (29CFR1910.1200 Appendix A): Not Listed
GHS Physical Hazard: Not Listed
GHS Health Hazard: Not Listed
GHS Environmental Hazard: Not Listed
GHS Labeling
Symbol: Not Listed
Signal Word: Not Listed
Hazard Statements: Not Listed
Precautionary Statements: Not Listed

HAZARD	HMIS	NFPA
Toxicity	1*	1
Fire	1	1
Reactivity	0	0

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

No.	Component CAS REG.NO.	Amount %	OSHA		ACGIH	
			TWA	STEL	TWA	STEL
1	di-isononyl phthalate 28553-12-0	100%				

Other Information: in a non-stabilized form

SECTION 4: FIRST AID MEASURES

Emergency first aid procedures by route of exposure:

General Advice: Take care of your own personal safety. Remove victims from hazardous area. Take off all contaminated clothing immediately. Keep warm and in a quiet place. Do not leave victim unattended.

Inhalation: After inhalation of vapors/spray mist. Bring affected person outside and ensure that he/she is comfortable. If symptoms persist, call a physician. In case of difficulties in breathing, supply oxygen. Employ artificial respiration if breathing ceases. Consult a physician immediately.

Ingestion: If swallowed, rinse mouth with water (only if person is conscious). Immediately give large quantities of water to drink. Seek medical advice immediately.

Skin: Wash off with plenty of water and soap immediately. If symptoms persist, call a physician.

Eyes: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In case of persistent discomfort: Consult an ophthalmologist.

Notes to physician: Low level toxicity. No specific antidote known.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: 200° C, 392° F; Method: DIN EN 22 719

Auto-ignition Temperature: ca. 400° C; Method: DIN 51 794

Lower Explosion Limit: 218° C; 0.3% (V); Method: DIN EN 1839; The temperature refers to the explosion container.

Upper Explosion Limit: Owing to the product characteristics of DINP (e.g., thermal decomposition), it is not possible to indicate the upper explosion limit as described in EN 1839.

Flammability Classification: Not Listed

Suitable Extinguishing Media: Water spray, foam, CO₂, dry powder

Extinguishing Media Which Must Not Be Used for Safety Concerns: High volume water jet

Products of Combustion: Not Listed

Specific Hazards during Fire Fighting: In case of fire cool endangered containers with water.

Fire Fighting Equipment/Instructions: In the case of respirable dust and/or fumes, use self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Protection: Wear personal protective equipment; see section 8. Avoid contact with skin and eyes. Ensure adequate ventilation.

Special Properties: Not Listed

Environmental Precautions: Do not allow entrance in sewage water, drainage systems, stretches of water, soil. Issue an immediate alarm report to the company environmental protection department if the product unintentionally leaves the production area.

Method for Containment: Not Listed

Methods for Clean-up: Take up mechanically or with an absorbent material. Fill into marked, sealable containers. To be disposed of in compliance with existing regulations. Suitable binder: universal absorbent, diatomaceous earth, oil absorbent.

SECTION 7: HANDLING AND STORAGE

Handling:

Safe handling advice: Handle in accordance with good industrial hygiene and safety practices. Wear personal protective equipment; see section 8. If possible, use material transfer/filling, metering and blending plants that are closed.

Advice on protection against fire and explosion: Normal measures for preventive fire protection. When handling DINP in closed systems, additional safety requirements are necessary if handling temperature exceeds 150° C. For example: explosion protection equipment required.

Storage:

Requirements for storage areas and containers: Keep container tightly closed. Keep in a dry place. Suitable materials: aluminum (min. 99.5 %), Material number: 3.0255; aluminum magnesium alloy, (Quality Class F 18), Material number: 3.3535; stainless steel, for example, Material number: 1.4301; Austenitic steel, for example, Material number: 1.4541, 1.4571; PVC. Recommended sealing materials: for example graphite flat gaskets with metal insert made of 1.4401; PTFE flat gaskets with 25% by weight glass fibres, especially for manhole cover seals.

Advice on common storage: Observe prohibition against storing together!

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: If possible, use material transfer/filling, metering and blending plants that are closed.

Occupational Exposure Controls: Further information, ACGIH (American Conference of Governmental Industry Hygienists)

Personal Protective Equipment (PPE)

Respiratory Protection: In case of dusts/vapors/aerosols being formed or if the limit values like TKV are exceeded: use respiratory equipment with suitable filter (filter type A) or wear a self-contained respiratory apparatus. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Eye/Face Protection: Safety glasses

Hand Protection: Chemical-resistant protective gloves (EN 374): glove material, suitable protective gloves, e.g. nitrile-butadiene rubber (NBR) gloves; material thickness, 0.4 mm; break through time, \geq 480 min; Method, Source: KCL GmbH. The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use.

Body: Select materials and equipment for physical protection depending on the concentration and volume of hazardous substances and the workplace involved.

Other Protective Equipment: Wear suitable protective clothing.

Hygiene Measures: Do not inhale vapors/aerosols. Avoid contact with skin and eyes. Remove contaminated or saturated clothing. Smoking, eating and drinking should be prohibited in the application area.

Environmental Exposure Controls: Emissions from venting and processing equipment should be checked in order to ensure that the requirements of the Environmental Protection Law are satisfied. In some cases, exhaust air scrubbers, filters or technical changes to the processing plant will be required in order to decrease emissions to acceptable values. See sections 6 and 7.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: colorless, clear liquid

Odor: odorless

Odor threshold: Not Listed

pH: (20° C) neutral, aqueous extract

Melting point/freezing point: ca. -54° C; Pour point

Glass transition temperature: -88° C; Method: OECD TG 102, DSC analysis

Initial boiling point and boiling range: 270.0-280.0 °C (5 hPa); 341° C (1013 hPa); Method: OECD TG 103, DSC analysis

Flash point: ca. 200° C; Method: DIN EN 22 719

Evaporation rate: Not Listed

Flammability: Not applicable liquid

Explosiveness: Not to be expected in view of structure.

Upper/lower flammability or explosive limit: Upper: Owing to the product characteristics of DINP (e.g. thermal decompositions), it is not possible to indicate the upper explosion limit as described in EN 1839. Lower: 218° C; 0.3% (V); Method: DIN EN 1839; The temperature refers to the explosion container.

Vapor pressure: 0.00006 Pa (20° C)

Vapor density: Not Listed

Density: 0.972 - 0.977 g/cm³ (20° C)

Relative density: 0.9740 (20° C); Method: OECD Test Guideline 109

Meal corrosion: Not to be expected. Information derived from practical experience.

Solubility: < 1.4 mg/l (20° C); Method: OECD Test Guideline 105

Partition coefficient: n-octanol/water: log Pow: 8.8 - 9.7 (25° C); Method: OECD TG 117, measured

Auto-ignition temperature: ca. 400° C; Method: DIN 51 794

Decomposition temperature: Not Listed

Viscosity, dynamic: 72.00 - 82.00 mPa/s (20° C); Method: DIN 53 015

Viscosity, kinematic: 77.6 mm²/s (20° C); Method: OECD 114, 27.7 mm²/s (40° C); Method: OECD 114

Molecular weight: 419 g/Mol

Further Information:

Surface tension: Method: OECD 115, Cannot be determined due to low level of solubility in water.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Not Listed

Chemical stability: Not Listed

Possibility of hazardous reactions: None Known

Conditions to avoid: Keep away from heat and sources of ignition.

Incompatible materials: Strong oxidizing agents, hydrogen peroxide

Hazardous decomposition products: Not Known

Thermal decomposition: > 280° C

Safety notes: When handling DINP in closed systems, additional safety requirements are necessary if handling temperature exceeds 150° C. for example: Explosion protection equipment required.

SECTION 11: TOXICOLOGICAL INFORMATION

Product acute oral toxicity: LD50 rat (male/female): > 10,000 mg/kg; Method: OECD Guideline 401; Labelling not required by GHS regulation.

Product acute inhalation toxicity: LC50 rat (male/female): > 4.4 mg/l/4h/aerosol; Method: US-EPA-method (limit test), Labelling not required by GHS regulation.

Product acute dermal toxicity: LD 50 rabbit (male/female): > 3160 mg/kg; Labelling not required by GHS regulation.

Product skin irritation: Rabbit/4h: not irritating; Method: OECD Test Guideline 404

Product eye irritation: Rabbit: not irritating; Method: OECD Test Guideline 405

Product sensitization: Buehler Test guinea pig: not sensitizing to the skin; Method: Directive 67/548/EEC, Annex V, B.6.

Product repeated dose toxicity: Oral rat (male) / 2 years, number of exposures: 7 days a week, NOAEL: ca. 88.3 mg/kg, target organ/effect: liver, kidney; Method: OECD method

Oral rat (female) / 2 years, number of exposures: 7 days a week, NOAEL: ca. 108.6 mg/kg, target organ/effect: liver, kidney; Method: OECD method

Dermal rabbit (male/female) / 6 weeks, NOAEL: ca. 500 mg/kg

Inhalative rat (male) / 2 weeks, number of exposures: 6 hours/day, NOAEL: > 0.5 mg/l; Only one dosage was tested.

The available data do not suffice for classification. This information is derived from evaluation of or a test result for a similar compound (conclusion based on analogy).

Product genotoxicity in vitro: Ames test Salmonella typhimurium: negative; Metabolic activation: with or without, Method: OECD TG 471, S-9 rat liver mix

Chromosome aberration test in vitro Chinese hamster: negative; Metabolic activation: with or without, Method: OECD TG 473, CHO-cells

Genetic mutation in mammal cells TK +/- mouse lymphoma cell (L5178Y): negative; Metabolic activation: with or without, Method: OECD TG 476, S-9 rat liver mix

Product genotoxicity in vivo: No evidence of mutagenic effects, literature.

Product carcinogenicity: Peroxisome proliferation: the mechanism of action is not relevant for humans.

Component carcinogenicity assessment: Di-isononyl phthalate: 28553-12-0, the observed tumors do not appear to be relevant for men.

Product toxicity to reproduction: Two-generation study oral rat (male/female), number of exposures: daily, NOAEL (No Observed Adverse Effect Level) of parents: ca. 500 mg/kg, NOAEL F1: 200-260 mg/kg; Method: Directive 67/548/EEC, Annex V, B.35, reduced body weight gain.

Two-generation study oral rate (male/female), number of exposures: daily, NOAEL (No Observed Adverse Effect Level) of parents: 1000 mg/kg; Method: Directive 67/548/EEC, Annex V, B.35, no evidence of reproductiontoxin properties.

Product teratogenicity: Oral rat (female), number of exposures: daily, NOEL maternal (No Observed Effect Level): 200 mg/kg, NOAEL (No Observed Adverse Effect Level) teratogenesis: 1000 mg/kg; Method: OECD TG 414

SECTION 12: ECOLOGICAL INFORMATION

Elimination Information (Persistence and Degradability):

Photo-decomposition: Method: (calculated): literature

Biodegradability: aerobic, inoculum: activated sludge, readily biodegradable: 81%, exposure time: 28 d; Method: (CO₂; modif. Sturm test - 92/69/EEC part C.4-C)

Further information: The substance does not geoaccumulate.

Behavior in Environmental Compartments:

Bioaccumulation: Species: Oncorhynchus mykiss (rainbow trout), bioconcentration factor (BCF): < 3; The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). The substance does not bioaccumulate.

Mobility: logKOC: 6, adsorption on the floor occurs; Method: calculated

Ecotoxicity Effects:

Toxicity to fish: LC50 semi-static test Brachydanio rerio: > 100 mg/l / 96 h; Method: EC 92/69, Fish, acute toxicity test, tested in the presence of emulsifiers. In the range of water solubility not toxic under test conditions.

LCO semi-static test Brachydanio rerio: >= 100 mg/l / 96 h; Method: Directive 92/69/EEC C.1, Fish, acute toxicity test, tested in the presence of emulsifiers. In the range of water solubility not toxic under test conditions.

Toxicity to daphnia: EC50 static test Daphnia magna: >= 74 mg/l / 24 h; Method: Directive 92/69/EEC C.2

EC50 static test Daphnia magna: >= 74 mg/l / 48 h; Method: Directive 92/69/EEC C.2

Toxicity to algae: ErC50 scenedesmus subspicatus: >= 88 mg/l / 72 h, analytical monitoring: yes; Method: EC 92/69, cell multiplication inhibition test, tested in the presence of emulsifiers

NOEC scenedesmus subspicatus: 88 mg/l / 72 h, analytical monitoring: yes; Method: EC 92/69, cell multiplication inhibition test, tested in the presence of emulsifiers

Toxicity to bacteria: EC50 Respiration inhibition Community sewage sludge: > 83.9 mg/l / 30 min, analytical monitoring: yes; test substance: This information is derived from evaluation of or a test result for a similar compound (conclusion based on analogy). Method: OECD TG 209

Chronic toxicity in fish: NOEC flow-through test Oryzias latipes / 284 d; Method: Analogy OECD-method, feeding experiments, no toxicological effects relevant to classification

Chronic toxicity in daphnia: NOEC semi-static test Daphnia magna (Water flea): >= 100 mg/l / 21 d; Method: OECD 202 part 2, tested in the presence of emulsifiers, In the range of water solubility not toxic under test conditions.

Toxicity in organisms which live in the soil: EC50 Eisenia foetida: > 7270 mg/kg / 14 d, end point: mortality; Method: OECD 207

NOEC Eisenia foetida: 7270 mg/kg / 14 d, end point: mortality; Method: OECD 207

Toxicity in terrestrial plants: EC50 Lepidium sativum: > 1000 mg/kg; Method: OECD 208

EC50 Triticum aestivum: > 1000 mg/kg; Method: OECD 208

EC50 Lactuca sativa (lettuce): > 1000 mg/kg; Method: OECD 208

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:

Advice on disposal: Waste must be disposed of in accordance with local, state, provincial and federal laws and regulations. Empty containers must be handled with care due to product residue.

SECTION 14: TRANSPORTATION INFORMATION

Transport/Further Information: Not dangerous according to transport regulations. IBC Code Product Name: Dialkyl (C7-C13) Phthalates; MARPOL Category: X; Ship Type: 2

SECTION 15: REGULATORY INFORMATION

US Federal Informations:

OSHA: If listed below, chemical specific standards apply to the product or components:

- None Listed

Clean Air Act Section (112): If listed below, components present at or above the de minimus level are hazardous air pollutants:

- None Listed

CERCLA Reportable Quantities: If listed below, a reportable quantity (RQ) applies to the product based on the percent on the named component:

- None Listed

SARA Title III Section 311/312 Hazard Categories: The product meets the criteria only for the listed hazard classes:

- No SARA Hazards

SARA Title III Section 313 Reportable Substances: If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- None Listed

Toxic Substances Control Act (TSCA): If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None Listed

State Regulations:

California Proposition 65: A warning under the California Drinking Water Act is required only if listed below:

WARNING! This product contains a chemical known in the State of California to cause cancer.

- di-isononyl phthalate, CAS-No. 28553-12-0

International Chemical Inventory Status: Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below. For information on listing for countries not shown, contact the Product Regulatory Services Department.

- Europe (EINECS/ELINCS): Listed/Registered
- USA (TSCA): Listed/Registered
- Canada (DSL): Listed/Registered
- Australia (AICS): Listed/Registered
- Japan (MITI): Listed/Registered
- Korea (TCCL): Listed/Registered
- Philippines (PICCS): Listed/Registered
- China: Listed/Registered

SECTION 16: OTHER INFORMATION

HMIS Ratings:

Health: 1*

Flammability: 1

Physical Hazard: 0

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The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container.

The Environmental Information included under Section 12 hereof as well as the Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) ratings have been included by Everchem Specialty Chemicals, in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with Everchem Specialty Chemical's interpretation of the available data.

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