Storchem Inc.

Safety Data Sheet

Diisononyl Phthalate (DINP)

CAS # 28553-12-0

Section 1 – Product and Company Identification

1.1 Product identifiers

Product name:	Diisononyl Phthalate
Product code:	DINP
CAS No.:	28553-12-0

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:	Used as a plasticizer.
Uses advised against:	No information available

1.3 Details of the supplier of the safety data sheet

Company:	Storchem Inc. 855 Harrington Court Burlington, Ontario L7N 3P3 Canada
Telephone:	+1 905 639 9700
Fax:	+1 905 639 5244

1.4 Emergency telephone number

Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703 527 3887
Storchem Chemtrec registration number: **CCN650563**

Section 2 – Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 1B), H360

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram:

Signal word:	Danger
Hazard statement(s):	
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
Precautionary statement(s):	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308 + P313	IF exposed or concerned: Get medical advice / attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents / container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

Section 3 – Composition / Information on Ingredients

3.1 Substances

Product name:	Diisononyl Phthalate
Product code:	DINP
Synonyms:	*i*-Nonyl phthalate; Phthalic acid Diisononyl ester
Formula:	$C_{26}H_{42}O_4$
Molecular weight (g/mol):	418.61
CAS No.:	28553-12-0

3.2 Hazardous components

Component	Classification	Concentration
Diisononyl Phthalate	Repr. 1B; H351, H360	≤ 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4 – First Aid Measures

4.1 Description of first aid measures

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

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically and supportively.

Section 5 – Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Further information
For disposal see section 13.

Section 7 – Handling and Storage

7.1 Precautions for safe handling
Avoid inhalation of vapor or mist. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8 – Exposure Controls / Personal Protection

8.1 Control parameters

Components with workplace control parameters

Component	CAS No.	Value	Control Parameters	Basis
Diisononyl Phthalate	28553-12-0	TWA	5 mg/m^3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Lower Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans.		
		TWA	5 mg/m^3	USA. NIOSH Recommended Exposure Limits

	Remarks	Potential Occupational Carcinogen		
		STEL	10 mg/m^3	USA. NIOSH Recommended Exposure Limits
	Remarks	Potential Occupational Carcinogen		
		TWA	5 mg/m^3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection
Wear protective eyeglasses or chemical safety goggles, eye- and face-protection regulations. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Skin protection
Wear chemically protective gloves, boots, aprons, and gauntlets to prevent skin contact. Take off contaminated clothing and wash before reuse.

Body protection
The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9 – Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: clear, liquid Color: colorless
b)	Odor	No data available
c)	Odor Threshold	No data available
d)	pH	No data available
e)	Melting / freezing point	-48 °C (-54 °F)
f)	Boiling point	252 °C (486 °F) at 7 hPa (5 mmHg)
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Relative density	0.972 g/mL at 25 °C (77 °F)
n)	Water solubility	0.0002 g/L at 20 °C (68 °F)
o)	Partition coefficient n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temp.	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

No data available

Section 10 – Stability and Reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
No data available.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
No data available.

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - No data available. In the event of fire: see section 5.

Section 11 – Toxicological Information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat – 10,000 mg/kg

LC50 Inhalation - Rat – 4 h - > 4.4 mg/L

LD50 Dermal - Rabbit – 3,160 mg/kg

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation

Respiratory or skin sensitization
Maximization Test (GPMT) - Guinea pig
Result: Does not cause skin sensitization

Germ cell mutagenicity
Ames test
S. typhimurium
Result: negative

Carcinogenicity

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Diisononyl Phthalate).

NTP: Reasonably anticipated to be a human carcinogen (Diisononyl Phthalate).

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

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional Information

RTECS: No data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 – Ecological Information

12.1 Toxicity

Toxicity to fish	LC50 - Danio rerio (zebra fish) - 102 mg/L - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) – 74 mg/L - 48 h

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d Result: 81 % - Readily biodegradable

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

Adsorbs on soil.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

No data available.

Section 13 – Disposal Considerations

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

Section 14 – Transport Information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

Section 15 – Regulatory Information

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Diisononyl phthalate	28553-12-0	2007-07-01

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Diisononyl phthalate	28553-12-0	2007-07-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Diisononyl phthalate	28553-12-0	2007-07-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Diisononyl phthalate	28553-12-0	2007-07-01

California Prop. 65 Components
WARNING! This product contains a chemical known to the State of California to cause cancer.

	CAS-No.	Revision Date
Diisononyl phthalate	28553-12-0	2007-07-01

Section 16 – Additional Information

Full text of H-Statements referred to under sections 2 and 3.

H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
Repr.	Reproductive toxicity

HMIS Rating

Health hazard:	0
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard:	0

NFPA Rating

Health hazard:	0
Fire Hazard:	0
Reactivity Hazard:	0

Further information
The information above is believed to be accurate and represents the best information currently available provided in good faith by Storchem but makes no representation as to its comprehensiveness or accuracy. A properly trained individual using this product should reference this document only as a guide to the appropriate precautionary handling of this material. Personnel receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Storchem be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Storchem has been advised of the possibility of such damages.

Preparation Information
Storchem Inc.
Revision Date: 01/28/2016
Revision Number: 1