Safety Data Sheet SDS	Form No	SDS-DINP-EN
	Issue Date	01.01.2013
INAFLEKS BIS-(ISONONYL) PHTHALATE	Revision Date	24.06.2025
	Revision No	12

Prepared in accordance with the REACH Regulation (EC)1907/2006, CLP Regulation (EC) 1272/2008 and Regulation (EU) 2020/878

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade Name : Inafleks

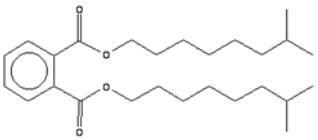
IUPAC Name : Bis-(isononyl) phthalate

EC Number : 249-079-5

CAS Number : 28553-12-0

Common Synonyms : DINP; -Bis(isononyl) phthalate; Di(isononyl) phthalate ;1,2-Benzenedicarboxylic acid, di-isononyl ester; Di(7-methyloctyl) phthalate; Phthalic acid, bis-(7-methyloctyl) ester

Molecular Structure :



Molecular Formula : $C_{26}H_{42}O_4$

Molecular Weight : 418,61

REACH Registration Number : 01-2119430798-28-0006

Chemical Structure : Mono-constituent substance-organic

Prepared in accordance with the REACH Regulation (EC)1907/2006, CLP Regulation (EC) 1272/2008 and Regulation (EU) 2020/878

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

Table 1: Description of Identified Uses

Identified Use	Process category (PROC)	Preparation Category (PC)	Sector of Use (SU)	Article category (AC)
Phlegmatizer (to dilute organic peroxides)	Mixing of solids and liquids in open or closed batch process.	Dispersant	C20 - manufacturing: manufacture of chemicals and chemical products	
		Solvent	C20 - manufacturing: manufacture of chemicals and chemical products	
Construction Chemicals	Mixing of solids and liquids in open or closed batch process	Dispersant	C20 - manufacturing: manufacture of chemicals and chemical products	
		Solvent	C20 - manufacturing: manufacture of chemicals and chemical products	
Manufacture of Coatings, Inks and Artist's Colors	Mixing of solids and liquids in open or closed batch process.	Dispersant	C20.3 - manufacturing: manufacture of paints, varnishes and similar coatings, printing ink and mastics	
		Solvent	C20.3 - manufacturing: manufacture of paints, varnishes and similar coatings, printing ink and mastics	
Preparation of Lubricants	Mixing of solids and liquids in open or closed batch process.	Lubricating agent or slip promotor	C20 - manufacturing: manufacture of chemicals and chemical products	
Preparation of Adhesives	Mixing of solids and liquids in open or closed batch process.	Adhesives, sealants	C20 - manufacturing: manufacture of chemicals and chemical products	
		Solvent	C20 - manufacturing: manufacture of chemicals and chemical products	
Plasticizer for Polymers	Mixing of solids and liquids in open or closed batch process	Plasticizer	C22.2 - manufacturing: manufacture of plastics products	

Uses by consumers advised against

Shall not be used as substance or in mixtures in concentrations greater than 0.1% by weight of the plasticised material, in toys and childcare articles which can be placed in the mouth by children. (COMMISSION REGULATION (EC) No. 552/209 of 2009-06-22 amending Regulation EC no. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) as regards Annex XVII.

1.3. Details of the supplier of the safety data sheet

Manufacturer **Plastay Kimya San. Tic. A.Ş.**
GGOSB İnönü Mah. Atatürk Bulv. No:22 Gebze /KOCAELİ – TURKEY 41400

Contact Person Melike ÖZKAN (Mrs)-Chemical Assessment Specialist

1.4. Emergency telephone number

24 Hour Emergeny Contact	:	112
National Capital Posion Center	:	114
Emergency Phone of the Company	:	+90 (262) 679 53 00 (08:30-18:00)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Not classified.
Environment	Not classified.

2.2. Label elements

Not a hazardous substance or mixture.

2.3. Other hazards

This product does not contain any PBT or vPvB substances.

Prepared in accordance with the REACH Regulation (EC)1907/2006, CLP Regulation (EC) 1272/2008 and Regulation (EU) 2020/878

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Name	Diisononyl phthalate
PBT/vPvB	no/no
Concentration (%)	Min 99,5
Chemical Formula	C26H42O4
Chemical Type	Phthalic Ester
CAS Number	28553-12-0
EC No	249-079-5
Reach Number	01-2119430798-28-0006
Classification	According to the newly introduced GHS guidelines (1272/2008/EEC), there is no need for any classification or labelling for none of the endpoints considered
Impurities	0% < x < 0,5% (w/w)

Prepared in accordance with the REACH Regulation (EC)1907/2006, CLP Regulation (EC) 1272/2008 and Regulation (EU) 2020/878

The Full Text for all Hazard Statements are Displayed in Section 16.

Composition Comments

- The data shown are in accordance with the latest EC Directives.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice : If exposed or if you feel unwell: Call a Poison Center or doctor/physician. Show this safety data sheet to the doctor in attendance.

Inhalation : Inhalation of mist can cause nausea and is irritating to the respiratory tract. Remove to fresh air and keep at rest. Monitor respiratory function. If breathing is difficult, give oxygen. If necessary, give artificial respiration. Seek medical attention. Take this SDS.

Skin Contact : Remove contaminated clothing and shoes. Wash with plenty of soap and water. Seek medical attention. Take this SDS.

Eye Contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention. Take this SDS.

Ingestion : Rinse mouth of victim with plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention. Take this SDS.

Protection of first-aiders and/or special notes to to a physician : Avoid contact with this product while helping the victim; keep the victim warmed. Symptomatic treatment should include, above all, measured of support as correction of hydro electrolytic and metabolic disturbances.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation : May cause mild eye irritation Causes redness and pain.

Skin contact : May cause mild skin irritation.

Eye contact : May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression

Ingestion : Material has a low vapor pressure, so exposure to vapor is not likely. Exposure to dioctyl phthalate occurs from spray or mist, rather than from the vapor, unless heat is applied. If the product is heated, misted or sprayed, it may cause irritation of the respiratory tract if inhaled

Chronic Effects : The extensive mammalian toxicity database for DINP demonstrates a lack of acute and chronic effects to vertebrates. Further, DINP is not persistent in the environment, demonstrates a low bioaccumulative potential, and is not toxic to aquatic and non vertebrate terrestrial organisms and plants. The sum total of these data establish a weight of evidence that strongly supports the conclusion that DINP will not produce acute or chronic effects in birds, thereby eliminating the need to conduct testing for this endpoint.

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

Avoid contact with this product while helping the victim; keep the victim warmed. Symptomatic treatment should include, above all, measured of support as correction of hydro electrolytic and metabolic disturbances.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media : Compatible with dry chemical, water spray, carbon dioxide and polyvalent foam

Special Hazard arising from the Chemical : May produce acrid smoke and fumes if burning.

Special protective equipment for fire-fighters : Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing.

Unsuitable Extinguishing media : None

5.2. Special hazards arising from the substance or mixture

Exposure Hazards

As organic substance DINP is combustible. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Run off from fire control or dilution water may cause pollution. Use water-spray to cool fire exposed containers. Prevent entry into sewers and water courses of the wastes resulted from fire.

Hazardous Combustion Products

Decomposition product may include the following materials: Carbon monoxide (CO). Carbon dioxide (CO_2)

5.3. Advice for firefighters

Special Precautions for firefighters

Fire water contamined with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Protection of firefighters

Fire-fighters should wear appropriate protective equipment and selfcontained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary and unprotected personnel away from entering. Avoid contact with skin, eyes, and clothing-wear suitable protective equipment (see section 8). Do not touch or walk through spilt material. Shut off all ignition sources.

For emergency responders

Ventilate area of leak or spill. Personnels performing clean-up work should wear personal protective equipment and a self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Remove all sources of ignition.

6.2. Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Contain and recover liquid when possible. Keep closed containers and dispose according to all applicable federal, state or local environment regulations.

6.3. Methods and material for containment and cleaning up

Methods of Cleaning Up: Absorb spills with dry sand, similar non-combustible absorbent material then place into suitable container for later disposal. For large, dike and pump into suitable containers for disposal. Flush area with plenty of water. Waste water will be treated in biological treatment plant.

Special Precautions: Do not use combustible materials, such as saw dust. Do not flush to sewer.

6.4. Reference to other sections

For personal protection, see section 8.

For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Protective Measures: Protect containers from physical damage. The personel which handling the product must wear protective equipment. Sources of ignition such as smoking and open flames prohibited where Bis-(isononyl) phthalate is handled.

Hygiene Measures: Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash hands before eating, drinking, smoking or going to the toilet. Take off all contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Conditions for Safe Storage: Keep only in original container, in a cool, dry, well ventilated place. Keep away from food. Store locked up. Keep out of reach of children. Avoid static electricity by grounding.

Incompatible Products: Strong oxidants, acids and alkalis

Incompatible materials for storage: PVC storage containers

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2. For more information please see the relevant exposure scenario, available via your supplier/given in the Annex I.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values

Not applicable

DNEL values

Endpoint		Quantitative dose descriptor (appropriate unit) or qualitative assessment		Associated relevant effect	Remarks on study
		Local	Systemic		
Acute toxicity	oral	LD50 > 10000 mg/kg			Well documented study report
dermal		LD50 > 3160 mg/kg			Well documented study report
inhalation		LC50 > 4400 mg/m3			Well documented study report
Irritation / Corrosivity	skin			Not classified	
	eye			Not classified	
	resp. tract			Not classified	
Sensitisation	skin			Not classified	
	resp. tract			Not classified	

Endpoint		Quantitative dose descriptor (appropriate unit) or qualitative assessment		Associated relevant effect	Remarks on study
		Local	Systemic		
Repeated dose toxicity (sub-acute / sub-chronic / chronic)	oral	NOAEL = 88 mg/kg/day		Not classified	Well documented study report
dermal		LOAEL = 500 mg/kg/day	NOAEL = 2500 mg/kg/day	Not classified. No systemic effects at limit dose tested.	Adequately documented study report. Not suitable for DNEL derivation.
inhalation		NOAEL = 500 mg/m3		Not classified. No systemic effects at limit dose tested.	Adequately documented study report. Not suitable for DNEL derivation.
Mutagenicity	in vitro	Negative		Not classified	
in vivo		Negative		Not classified	
Carcinogenicity	oral	NOAEL = 88 mg/kg/day		Not classified	Well documented study report
Reproductive toxicity fertility impairment	oral	NOAEL = 1000 mg/kg/day		Not classified. No adverse effects on fertility at the limit dose tested.	Well documented study report
Reproductive toxicity (developmental tox.)	oral	LOAEL = 150 mg/kg/day		Not classified. Slight changes in body weight.	Well documented study report

Available dose-descriptor(s) per endpoint for a certain substance as a result of its hazard assessment

8.2. Exposure controls

8.2.1. Appropriate Engineering Controls

The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Local exhaust ventilation is generally preferred because it can control the emission of the contaminant at its sources, preventing dispersions of it into the general work area. It is recommended safety shower and eye bath available near work side.

Protective equipment

Eye/Face Protection: Use chemical safety googles and/or full face shield where splashing is possible. Maintain eye wash and quick-drench facilities in work area.

Hand Protection: Chemical resistant, impervious gloves complying with an approved standard should be always worn when handling chemical produts.

Skin/Body Protection: Protective gloves of rubber, nitrilic rubber, or neoprene and protective clothing.

Respiratory Protection: For emergencies or instances where the exposure level are not known, there must be half face respirator for organic vapors. In cases of high potential exposure use a supplied-air respirator, full facepiece, operated in positive-pressure mode. **Respirator Type:** Air purifying respirator with an appropriate government approved (where applicable), air-purifying filter, cartridge or canister.

Hygiene Measures: Do not eat, drink or smoke while using this product. Wash hands before eating, drinking, smoking or going to the toilet. Take off all contaminated clothing and wash before reuse.

Thermal Hazards: The substance does not represent a thermal hazard, thus special consideration is not required.

Other Precautions: Maintain shower, eye wash fountain and quick-drench facilities in work area.

Environmental Exposure Controls

Please act in accordance with local and national laws.

Other Precautions

Maintain shower, eye wash fountain and quick-drench facilities in work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

PROPERTY	TEST METHOD	VALUE
Appearance	-	Clear Liquid
Colour (Pt/Co)	ASTM D 1209	≤ 30
Odour	-	Typical
Water Solubility (20 °C, g/L)	-	≤ 0,1
Acidity (mg KOH/g)	ASTM D 1045	≤ 0,07
Boiling Point (°C)	-	~420
Freezing Point (°C)	-	-49
pH-Value	-	Not applicable.
Flash Point (°C)	ASTM D 92	≥ 205
Water Content (%)	ASTM 1364-02	≤ 0,05
Density (20 °C, g/cm^3)	ASTM D 1045	0,9740.974±0,005
Viscosity (20 °C, cP)	ASTM D 1045	85±15
Flammability	-	Slight Flammable
Upper/Lower Explosion Limits (%)	-	0,4-2,9
Vapour Pressure (20°C, Pa)	-	~2,1.10^{-6}
Partition Coefficient (n-octanol/water)	Sparc Calculation Model	10,7
Refractive Index (20°C)	ASTM D 1045	1,4850±0,005
Purity (%)	GC-Home Method	≥ 99,5
Autoignition Temperature (°C)	DIN 51794	370
Oxidizing Properties	-	Not available

9.2. Other information

No information required.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product. No hazardous polymerization will occur.

10.2. Chemical stability

Stable under ordinary conditions of use and storage. There is no specific test for this product.

10.3. Possibility of hazardous reactions

Strong oxidizers, strong bases

10.4. Conditions to avoid

Heat, flame, sources of ignition and incompatibles.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide and dioxide may form when heated to decomposition. May produce irritating fumes when heated to decomposition.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

11.1 Acute Dermal Toxicity **Method:** rabbit (New Zealand White) female; Coverage: occlusive; Vehicle: corn oil; Although no guideline appears to have been followed, the study was undertaken as a classical LD50 determination;

Results: LD50: > 3160 mg/kg bw (male/female)

11.2 Acute oral Toxicity **Method:** rat (Sprague-Dawley) maleoral: gavage, Although no guideline appeares to have been followed, the study was undertaken as a classical LD50 determination ;

Results: LD50: > 10000 mg/kg bw (male)

Value used for CSA:

LD50 (oral): 10000 mg/kg bw ; LD50 (dermal): 3160 mg/kg bw ; LD50 (inhalation): 4400 mg/m^3 air

No classification for acute toxicity is indicated according to the general classification and labeling requirements for dangerous substances and preparations (Directive 67-548-EEC) or the classification, labeling and packaging (CLP) regulation (EC) No 1272/2008.

11.3 Skin Irritation /Corrosion

Method: rabbit (Vienna White); Coverage: occlusive (clipping of fur);Vehicle: unchanged (no vehicle); Method: Draize Test;

Results: Primary dermal irritation index (PDII): 1.5 /

Human: The group mean score for irritation was 0.00

Value used for CSA:

Skin irritation / corrosion: not irritating ; Eye irritation: not irritating ; Respiratory irritation: not irritating

No classification for skin/eye irritation or corrosion is indicated according to the general classification and labeling requirements for dangerous substances and preparations (Directive 67-548-EEC) or the classification, labeling, and packaging (CLP) regulation (EC) No 1272/2008.

11.4 Skin sensitisation Not sensitising

Value used for CSA: not sensitising

No classification for skin/respiratory sensitization is indicated according to the general classification and labeling requirements for dangerous substances and preparations (Directive 67-548-EEC) or the classification, labeling, and packaging (CLP) regulation (EC) No 1272/2008.

11.5a Repeated dose toxicity (oral)

Method: rat (Fischer 344) male/female; subchronic (oral: feed); ca. 175.8, 354.6, 719.6, 1544.7 mg/kg bw/day for males and ca. 218.9, 438.0, 823.8, 1687.1 mg/kg bw/day for females (actual ingested); 2500, 5000, 10000, 20000 ppm (nominal in diet);Exposure: 13 weeks (7 days per week)

EPA Toxic Substances Control Act test guidelines, 40 CFR Part 798;

Results: LOAEL: ca. 176 mg/kg bw/day (actual dose received) (male) (kidney and liver weight)LOAEL: ca. 219 mg/kg bw/day (actual dose received) (female) (kidney weight) **Method:**

11.5b Repeated dose toxicity (inhalation)

rat (Sprague-Dawley) male; subchronic (inhalation: aerosol) (whole body); 500 mg/m3 (nominal conc.); Vehicle: unchanged (no vehicle); Exposure: 5 consecutive days, 2 days recovery and another 5 days exposure (10 total exposures) (6 hours/ day); As described previously, Pegg (1979) GM Research Reports

Results: NOAEC: 500 mg/m³ air (male) (No systemic toxicity)

11.5c Repeated dose toxicity (Dermal)

Method: rabbit (New Zealand White) male/female; subacute(nominal per unit body weight); Vehicle: unchanged (no vehicle); Exposure: 24 hours per day, five days per week for six weeks (0nce a day, five days a week) ; A standard design for repeat dermal application toxicity study

Results: NOAEL (systemic): ca. 500 mg/kg bw/day (nominal) (Mild dermal irritation, but no systemic effects on kidney or liver)

Value used for CSA (route: oral): NOAEL: 88 mg/kg bw/day; Target organs: digestive: liver; urogenital: kidneys

Value used for CSA (route: dermal): NOAEL: 500 mg/kg bw/day;Target organs: other: skin

Value used for CSA (route: inhalation): NOAEC: 500 mg/m³ air;

No classificatio

n for repeated dose toxicity is indicated according to the general classification and labeling requirements for dangerous substances and preparations (Directive 67-548-EEC) or the classification, labeling, and packaging (CLP) regulation (EC) No 1272/2008

11.6 Carcinogenicity

Method: rat (Fischer 344) male/female; oral: feed; ca. 29.2, 88.3, 358.7, and 733.2 mg/kg bw/d for males and ca. 36.4, 108.6, 442.2, and 885.4 mg/kg bw/d for females (actual ingested) ;500, 1500, 6000, 12000 ppm (nominal in diet); Exposure: 104 weeks for the test groups and 78 weeks for the recovery group (high dose level) (7 days per week); EPA OTS 798.3300 (Carcinogenicity)

Results: NOAEL (carcinogenicity): 88.3 mg/kg bw/day (actual dose received) (male) (mononuclear cell leukemia (nominal dose: 1500ppm))NOAEL (carcinogenicity): 108.6 mg/kg bw/day (actual dose received) (female) (mononuclear cell leukemia (nominal dose: 6000ppm)); NOAEL (toxicity): 88.3 mg/kg bw/day (actual dose received) (male) (liver and kidney toxicity); NOAEL (toxicity): 108.6 mg/kg bw/day (actual dose received) (female) (liver and kidney toxicity)

11.7 Toxicity for reproduction

DINP is not toxic (T) based on results from chronic aquatic toxicity studies that show no effects at levels equal to or even exceeding its maximum water solubility and mammalian toxicity studies that support not classifying DINP as carcinogenic, mutagenic, or toxic for reproduction

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The data for DINP show that it is not toxic at its maximally attainable water solubility level, which varies dependent on the conditions of study. Since DINP does not cause acute or chronic aquatic toxic effects at the limits of water solubility, it is not possible to derive NOEC or PNEC values needed for quantitative risk assessment. However, it is possible to qualitatively conclude based on low solubility and the results of acute and chronic aquatic toxicity tests that DINP does not pose an unacceptable risk to the aquatic compartment.

12.1.1 Short-term toxicity to fish

Method: Brachy danio rerio (new name: Danio rerio); freshwater; semi-static EU Method C.1 (Acute Toxicity for Fish)

Results: LC50 (96 h): > 102 mg/L test mat. (meas. (arithm. mean))

DINP does not cause any acute toxicity at its maximum achievable aqueous concentrations.

Method: Oryzias latipes; freshwater; life cycle: reproduction, (sub)lethal effects; flow-throughequivalent or similar to OECD Guideline 210 (Fish, Early-Life Stage Toxicity Test) with evaluation of two generations

12.1.2 Long-term toxicity to fish	Results: NOEC (284 d): >= 18.5 — <= 24.5 ug/g feed test mat. (meas. (not specified)) based on: Survival, development, reproduction, carcinogenicity DINP will not produce chronic toxicity to fish.
12.1.3 Short-term toxicity to aquatic invertebrates	Method: Daphnia magna; freshwater; static; EU Method C.2 (Acute Toxicity for Daphnia) (Study undertaken as specified by 92/69 EEC, Dec 1992. The test method C.2 is not explicitly stated in the report, but can be inferred.) Results: EC50 (24 h): > 74 mg/L test mat. (meas. (geom. mean)) based on: mobility; EC50 (48 h):> 74 mg/L test mat. (meas. (geom. mean)) based on: mobility -Results from short-term invertebrate toxicity studies with several invertebrate species show that DINP does not cause toxicity at its maximum achievable aqueous concentrations investigated in these tests (i. e. in excess of water solubility).
12.1.4 Long-term toxicity to aquatic invertebrates	Results of long-term studies show that DINP will not produce chronic toxicity to invertebrates at or below its maximum attainable water solubility
12.1.5 Algae and aquatic plants	Results from algal toxicity studies show that DINP does not cause toxicity to algae at or below its maximum attainable water solubility.
12.1.6 Toxicity to soil macro-organisms	Results from acute and chronic toxicity studies demonstrate that DINP does not cause any adverse effects up to a nominal concentration of 10000 mg/kg soil d. w.
12.1.7 Toxicity to terrestrial plants	DINP has been tested in short- and long-term studies with terrestrial plants. No adverse effects were observed up to 1000 mg/kg d. w. soil.
12.1.8 Toxicity to birds	No test with birds have been performed with DINP. Testing is not deemed to be necessary as DINP is ready biodegradable and has been demonstrated to not biomagnify along the food-chain.

12.2. Persistence and Degradability

DINP is not persistent (P) or very persistent (vP) based on standard test guideline results.

Abiotic Degradation

DINP has the potential to photodegrade in air at a relatively rapid rate (5.5 hour half-life based on a 12-hour day). However, it is not expected to partition to the air to a great extent where this process could significantly influence its fate. Therefore, abiotic degradation processes including hydrolysis and photo transformation in water will not significantly contribute to the removal of DINP from the environment.

Biotic Degradation

DINP is readily biodegradable and is not expected to persist in the environment, based on results from standard ready biodegradation tests, simulation tests, and a study that assessed DINP loss from soil. The biological half-life of DINP in the aquatic environment is 10.3 days, approximately 1 day under wastewater treatment conditions, and 51 days in the soil compartment. Studies are not available to assess the biodegradability of DINP in sediment. However, the monoester of DINP (mono-isononyl phthalate) demonstrated an average half-life of 23 hours in aerobic marine sediments. Because the formation of the monoester occurs as the first step in the biotic degradation of DINP and because this step does not appear to be rate limiting, as evidenced by the high extent of biodegradation demonstrated by DINP in a ready test, the degradation of the diester in aerobic sediment is expected to occur at a similarly high rate as demonstrated in soil.

Degradation rate in water	:	T ½ = 10.3 d (readily biodegradable)
Degradation rate in sediment	:	T ½ = 51 d (analogous from soil data)
Degradation rate in soil	:	T ½ = 51 d
Degradation rate in air	:	T ½ = 5 h

12.3. Bio accumulative potential

DINP is not classified or labelled for the environment based on the lack of acute and chronic aquatic toxicity, ready biodegradability, and low bio accumulative potential according to criteria identified in 67/548/EEC.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Should not be released to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Whatever cannot be saved for recovery, or recycling should be handled as nonhazardous waste and sent to an approved incinerator or disposed in an approved waste facility. Dispose of contaminated products, container residues and spill clean-up materials in accordance with federal, state and local requirements. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers. The classification of the product may meet the criteria for hazardous waste.

13.2. Contaminated Packaging:

The empty containers, tank cars and tank trucks are treated with steam and rinsed with plenty of hot water. The resulting effluent are treated in the same way as waste. The empty and clean containers are to be reused in conformity with regulations. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

General The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID). Also it is not applicable for DOT list. This product is not regulated as a dangerous good.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es) Transport Labels

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)Annex XIV - List of substances subject to authorization Substances of very high concern (Authorizations): DINP is listed Shall not be used as substances or as constituents of preparations, at concentrations higher than 0,1 % by mass of the plasticised material, in toys and childcare articles 1 which can be placed in the mouth by children. Toys and childcare articles containing these phthalates in a concentration higher than 0,1 % by mass of the plasticised material shall not be placed on the market. The Commission shall re-evaluate, by 16 January 2010, the measures provided for in relation to this point in the light of new scientific information on such substances and their substitutes, and if justified, these measures shall be modified accordingly.

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59): Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances: Not applicable

Restriction on use: see Restriction 52 from Appex. XVII.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

European union/EEA: In the event of purchase from an Arkema legal entity based in the European Economic Area (EEA), it is established that this product complies with the registration provisions of REACH Regulation (EC) No. 1907/2006, given that all of its components are excluded, exempted and / or registered. If purchasing from a legal entity established outside the EEA, please contact your local representative for more information.

TSCA (USA): The components of this product are all on the TSCA Inventory.
DSL/NDSL (CA): All components of this product are on the Canadian DSL.
IECSC (CN): All components of this product are listed or exempted.
ENCS (JP): All components of this product are listed or exempted.
ISHL (JP): Not all components of this product are listed or exempted.
KECI (KR): All components of this product are listed or exempted.
PICCS (PH): All components of this product are listed or exempted.
NZIOC (NZ): All components of this product are listed or exempted.
AIIC (AU): All components of this product are listed or exempted.
TCSI (TW): All components of this product are listed or exempted.

SECTION 16: OTHER INFORMATION

16.1. Labeling: health, safety and environmental information, H-Statements, R-phrases, P-Statements, S-Statements

EC Classification, Hazard Classes, Hazard statements, Precautionary statements: None

Risk Phrases (R codes), Safety Phrases (S codes), Hazard Pictogram / Signal Word: None

Recommended restrictions on use

This chemical is a phthalate esters. Shall not be used as substances or as constituents of preparations, at concentrations higher than 0.1 % by mass of the plasticized material, in toys and childcare articles. Toys and childcare articles containing these phthalates in a concentration higher than 0.1 % by mass of plasticised material shall not be placed on the market.

Interdictions

Do not drink or eat in working area.

Do not smoke in or near working area.

The use of open flame in working areas is prohibited.

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC_{50}: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative. DNEL: Derived No Effect Level
PNEC: Predicted No-Effect Concentration NOAEL: No observable adverse effect level NOEC: No Observed Effect Concentration

16.2. Revision: Revision 12; refractive index, density and viscosity values are revised.

16.3.SDS Information

Key literature references and sources for data: This SDS has been arranged in accordance with the regulations of the KKDIK with in the information received from our raw material suppliers. The date on which the SDS was first prepared is included. Toxilogical information has been updated. Density, viscosity and refractive index limit ranges have been updated. SDS preparatory information has changed.

Revision No: 12. Revision

Revision Date:24.06.2025

Issued By
Melike ÖZKAN / **Chemical Engineer-Chemical Assessment Specialist**
E-Mail: melike.ozkan@plastay.com
Phone: +90 530 548 0420
Certificate No: GBF01.60.03