

# Safety data sheet

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BASF Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 28.07.2023

Version: 4.0

Product: **PLASTOMOLL® DNA**

(ID no. 30034726/SDS\_GEN\_00/EN)

Date of print 08.10.2025

## 1. Identification

### Product identifier

### **PLASTOMOLL® DNA**

Chemical name: diisononyl adipate

CAS Number: 33703-08-1

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

Relevant identified uses: plasticizers

### Details of the supplier of the safety data sheet

#### Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Petrochemicals

Telephone: +49 621 60-42151

E-mail address: sds-petrochemicals@basf.com

### Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

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## 2. Hazards Identification

### Classification of the substance or mixture

#### According to UN GHS criteria

No need for classification according to GHS criteria for this product.

## Label elements

### Globally Harmonized System (GHS)

The product does not require a hazard warning label in accordance with GHS criteria.

## Other hazards

### According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

See section 12 - Results of PBT and vPvB assessment.

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## 3. Composition/Information on Ingredients

### Substances

#### Chemical nature

Diisononyl adipate

CAS Number: 33703-08-1

EC-Number: 251-646-7

### Mixtures

Not applicable

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## 4. First-Aid Measures

### Description of first aid measures

| Remove contaminated clothing.

| If inhaled:

| Keep patient calm, remove to fresh air.

| On skin contact:

| Wash thoroughly with soap and water

| On contact with eyes:

| Wash affected eyes for at least 15 minutes under running water with eyelids held open.

| On ingestion:

| Rinse mouth and then drink 200-300 ml of water.

### Most important symptoms and effects, both acute and delayed

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Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

**Indication of any immediate medical attention and special treatment needed**

| Treatment: Symptomatic treatment (decontamination, vital functions).

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**5. Fire-Fighting Measures****Extinguishing media**

Suitable extinguishing media:

dry powder, water spray, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:

water jet

Additional information:

Use extinguishing measures to suit surroundings.

**Special hazards arising from the substance or mixture**

Do not breathe gas/vapour. The product is combustible. Burning produces harmful and toxic fumes.

Shut off or stop released substance/product under safe conditions. Cool endangered containers with water-spray. Due to the organic compound content of the preparation, fire will produce dense black smoke. Inhalation of dangerous decomposition products may cause serious damage to health.

Do not release chemically contaminated water into drains, soil or surface water. Sufficient measures must be taken to retain the water used for extinguishing. Dispose of contaminated water and soil according to local regulations.

**Advice for fire-fighters**

Special protective equipment:

Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:

Evacuate area of all unnecessary personnel. Fight fire from maximum distance.

Extend fire extinguishing measures to the surroundings. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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**6. Accidental Release Measures**

High risk of slipping due to leakage/spillage of product.

Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

**Personal precautions, protective equipment and emergency procedures**

Handle in accordance with good industrial hygiene and safety practice.

### **Environmental precautions**

Discharge into the environment must be avoided.

### **Methods and material for containment and cleaning up**

Pick up with suitable appliance and dispose of. Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations.

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## **7. Handling and Storage**

### **Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

### **Conditions for safe storage, including any incompatibilities**

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

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## **8. Exposure Controls/Personal Protection**

### **Control parameters**

#### Components with occupational exposure limits

No substance specific occupational exposure limits known.

### **Exposure controls**

#### Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):

nitrile rubber (NBR) - 0.4 mm coating thickness

butyl rubber (butyl) - 0.7 mm coating thickness

Manufacturer's directions for use should be observed because of great diversity of types.

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

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Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

#### General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Form:	liquid	
Colour:	almost colourless	
Odour:	almost odourless	
Odour threshold:	not determined	
pH value:	not applicable, of very low solubility	
pour point:	-65 °C	
Boiling point:	232 °C (6,7 hPa) Literature data. Cannot be distilled without decomposition at normal pressure.	
Flash point:	210 °C Literature data.	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	not flammable	(other)
Lower explosion limit:	For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	330 °C	(DIN 51794)
Vapour pressure:	< 0,00001 Pa (20 °C)	(measured)
Density:	0,9225 g/cm <sup>3</sup> (20 °C)	(pycnometer)
Relative density:	0,918 - 0,922 (20 °C)	
Relative vapour density (air):	13,7 (20 °C) Heavier than air.	(calculated)
Solubility in water:	< 0,1 mg/l (25 °C)	(Directive 84/449/EEC, A.6)

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Solubility (qualitative) solvent(s):	organic solvents soluble
Partitioning coefficient n-octanol/water (log Kow):	9,56 - 10,4 (OECD Guideline 117) (25 °C)
Self ignition:	Temperature: 20 °C not self-igniting
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	17 - 21 mPa.s (calculated (from kinematic viscosity)) (20 °C) The value was determined by calculation from the detected kinematic viscosity.
Explosion hazard:	not explosive (other)
Fire promoting properties:	not fire-propagating (other)

**Other information**

pKA:	The substance does not dissociate.
Adsorption/water - soil:	KOC: 140800; log KOC: 5,15 (calculated) Adsorption to solid soil phase is expected.
Volatility/water - air:	(calculated) The substance will slowly evaporate into the atmosphere from the water surface.
Surface tension:	Based on chemical structure, surface activity is not to be expected.
Molar mass:	398,63 g/mol

**10. Stability and Reactivity****Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

**Chemical stability**

The product is stable if stored and handled as prescribed/indicated.

**Possibility of hazardous reactions**

Reacts with strong oxidizing agents.

**Conditions to avoid**

No special precautions other than good housekeeping of chemicals.

**Incompatible materials**Substances to avoid:  
strong oxidizing agents

## Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

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## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation.

Experimental/calculated data:

LD50 rat (oral): > 5.000 mg/kg (OECD Guideline 401)

No mortality was observed.

LC50 rat (by inhalation): > 5,7 mg/l 4 h (OECD Guideline 403)

No mortality was observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. An aerosol was tested.

#### Irritation

Assessment of irritating effects:

Not irritating to eyes and skin.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

#### Respiratory/Skin sensitization

Assessment of sensitization:

The chemical structure does not suggest a sensitizing effect.

Experimental/calculated data:

Non-sensitizing. ((Q)SAR Model)

Draize test guinea pig: Non-sensitizing.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Literature data.

#### Germ cell mutagenicity

Assessment of mutagenicity:

No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in a test with mammals. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

#### Carcinogenicity

**Assessment of carcinogenicity:**

In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Reproductive toxicity****Assessment of reproduction toxicity:**

The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Developmental toxicity****Assessment of teratogenicity:**

Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Specific target organ toxicity (single exposure)****Assessment of STOT single:**

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

**Repeated dose toxicity and Specific target organ toxicity (repeated exposure)****Assessment of repeated dose toxicity:**

The information available on the product provides no indication of toxicity on target organs after repeated exposure. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Aspiration hazard**

No aspiration hazard expected.

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## 12. Ecological Information

### **Toxicity**

**Assessment of aquatic toxicity:**

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.

**Toxicity to fish:**

LC50 (96 h) > 500 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

Nominal concentration.

**Aquatic invertebrates:**

EC50 (48 h) > 100 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)



Nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

**Aquatic plants:**

EC50 (72 h) > 100 mg/l (growth rate), *Scenedesmus subspicatus* (other, static)

Nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

**Microorganisms/Effect on activated sludge:**

EC20 (0,5 h) > 1.000 mg/l, activated sludge, domestic (DIN EN ISO 8192-OECD 209-88/302/EEC, P. C, aerobic)

**Chronic toxicity to fish:**

Study scientifically not justified.

**Chronic toxicity to aquatic invertebrates:**

No observed effect concentration (21 d) > 0,77 mg/l, *Daphnia magna* (OECD Guideline 202, part 2, semistatic)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. No toxic effects occur within the range of solubility.

Analogous: Assessment derived from products with similar chemical character.

**Assessment of terrestrial toxicity:**

Toxic effects have been observed in studies with soil living organisms.

**Soil living organisms:**

LC50 (14 d) 865 mg/kg, *Eisenia foetida* (Directive 88/302/EEC, part C, p. 95, artificial soil)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Analogous: Assessment derived from products with similar chemical character.

**Other terrestrial non-mammals:**

Study scientifically not justified.

## **Persistence and degradability**

**Assessment biodegradation and elimination (H2O):**

Readily biodegradable (according to OECD criteria).

**Elimination information:**

> 90 % BOD of COD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, domestic) Readily biodegradable.

**Assessment of stability in water:**

According to structural properties, hydrolysis is not expected/probable.

## **Bioaccumulative potential**

**Assessment bioaccumulation potential:**

Does not accumulate in organisms.

**Bioaccumulation potential:**

Bioconcentration factor: 27 (28 d), *Lepomis macrochirus* (measured)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Analogous: Assessment derived from products with similar chemical character.

### **Mobility in soil**

Assessment transport between environmental compartments:

Volatility: The substance will slowly evaporate into the atmosphere from the water surface.

Adsorption in soil: Adsorption to solid soil phase is expected.

### **Results of PBT and vPvB assessment**

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

### **Other adverse effects**

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

### **Additional information**

Other ecotoxicological advice:

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. Do not release untreated into natural waters.

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## **13. Disposal Considerations**

### **Waste treatment methods**

Dispose of in accordance with national, state and local regulations.

Contaminated packaging:

Disposal must be made according to official regulations.

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## **14. Transport Information**

### **Land transport**

ADR

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

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UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

**Inland waterway transport**

ADN

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

**Transport in inland waterway vessel**

Not evaluated

**Sea transport**

IMDG

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

**Air transport**

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

**Maritime transport in bulk according to IMO instruments**

Maritime transport in bulk is not intended.

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**15. Regulatory Information****Safety, health and environmental regulations/legislation specific for the substance or mixture**

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

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**16. Other Information**

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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