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Safety data sheet

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.
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Product: **Retinol 50 C**

(ID no. 30054549/SDS_COS_EU/EN)
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Retinol 50 C

UFI: MSK5-K0SK-A00U-PSTJ

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

Relevant identified uses: cosmetic ingredient

1.3. Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Operating Division Care Chemicals

Telephone: +49 211 7940-2222
E-mail address: emc-ehs-masterdata@basf.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

According to Regulation (EC) No 1272/2008 [CLP]

Skin Corr./Irrit. 2	H315 Causes skin irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Repr. 1B	H360D May damage the unborn child.
Aquatic Acute 1	H400 Very toxic to aquatic life.
Aquatic Chronic 1	H410 Very toxic to aquatic life with long lasting effects.

According to Regulation (EC) No 1272/2008 [CLP]

M-factor acute: 10
M-factor chronic: 10

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:

Signal Word:
Danger

Hazard Statement:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H360D	May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P273	Avoid release to the environment.
P261	Avoid breathing mist or vapour or spray.

Precautionary Statements (Response):

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.

Precautionary Statements (Storage):
P405 Store locked up.

Precautionary Statements (Disposal):
P501 Dispose of contents and container to hazardous or special waste collection point.

According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: Retinol

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

INCI Name: Retinol (and) Polysorbate 20

Preparation based on: Retinol, Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.

stabilized with: 2,6-di-tert-Butyl-p-cresol, tert-Butyl-4-methoxyphenol

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

Retinol

Content (W/W): >= 30 % - <= 50 %	Eye Dam./Irrit. 2
CAS Number: 68-26-8	Skin Sens. 1
EC-Number: 200-683-7	Repr. 1B (unborn child)
REACH registration number: 01-2119484623-33	Aquatic Chronic 4
	H319, H317, H360D, H413

2,6-di-tert-Butyl-p-cresol

Content (W/W): >= 1 % - <= 5 % CAS Number: 128-37-0 EC-Number: 204-881-4 REACH registration number: 01-2119555270-46, 01-2119565113-46	Aquatic Acute 1 Aquatic Chronic 1 M-factor chronic: 1 H400, H410

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

First aid personnel should pay attention to their own safety. Remove contaminated clothing.

If adverse health effects develop seek medical attention.

If inhaled:
After inhalation of vapor: 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. Seek medical attention.

On ingestion:
Rinse mouth and then drink 200-300 ml of water.

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

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., (Further) symptoms and / or effects are not known so far

Hazards: Allergic skin reaction, bronchospasms and anaphylactic shock possible.

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

Treatment: Symptomatic treatment (decontamination, vital functions).

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:
water spray, carbon dioxide, dry powder, foam

5.2. Special hazards arising from the substance or mixture

Endangering substances: harmful vapours
Advice: Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray.

Use personal protective clothing.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).
For large amounts: Dike spillage. Vacuum up spilled product.
For residues: Contain with absorbent material (e.g. sand, silica gel, acid binder, general purpose binder, sawdust).
Dispose of absorbed material in accordance with regulations.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Processing machines must be fitted with local exhaust ventilation. Avoid contact with the skin, eyes and clothing.

Protection against fire and explosion:
Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

Temperature class: T3 (Autoignition temperature >200 °C).

7.2. Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Aluminium
Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Keep under inert gas. Protect contents from the effects of light. Keep at temperature not exceeding 20 °C.

Storage stability:
Storage temperature: 2 - 8 °C

Protect from temperatures below: 0 °C
Characteristics of the product are irreversibly changed below the limit temperature.
Protect from temperatures above: 50 °C
Damage by exceeding the maximum temperature is not reversible. The packed product must be protected against exceeding the indicated temperature.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

128-37-0: 2,6-di-tert-Butyl-p-cresol

PNEC
Data refer to the lead substance

Components with PNEC

128-37-0: 2,6-di-tert-Butyl-p-cresol

freshwater: 0.004 mg/l
marine water: 0.0004 mg/l
intermittent release: 0.004 mg/l
STP: 100 mg/l
sediment (freshwater): 1.29 mg/kg
sediment (marine water):
Exposure of sediment is not expected
soil: 1.04 mg/kg
oral (secondary poisoning): 16.7 mg/kg

68-26-8: Retinol

freshwater: 0.1 mg/l
marine water: 0.01 mg/l

STP: 10 mg/l
sediment (freshwater): 126 mg/kg
soil: 44.6 mg/kg

DNEL
Data refer to the lead substance

Components with DNEL

68-26-8: Retinol
No DNEL value available.

8.2. Exposure controls

Personal protective equipment

Respiratory protection:
Respiratory protection in case of vapour/aerosol release. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.
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:
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
Under no circumstances should the product come into contact with the skin of pregnant women or be inhaled by them. Handle in accordance with good industrial hygiene and safety practice. No eating, drinking, smoking or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
Do not discharge product into the environment without control.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	highly viscous, liquid	
Colour:	yellow to amber	
Odour:	characteristic	
Odour threshold:		
	not determined	
pH value:		
	substance/mixture is non-soluble (in water), not relevant	
Freezing point:	-35 °C	
Boiling point:	134 °C	(OECD Guideline 103)
Flash point:	202 °C	(ISO 2592)
Evaporation rate:		
	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	not highly flammable	
Flammability of Aerosol Products:		
	not applicable, the product does not form flammable aerosoles	
Lower explosion limit:		
	For liquids not relevant for classification and labelling.	
Upper explosion limit:		
	For liquids not relevant for classification and labelling.	
Ignition temperature:	286 °C	(DIN EN 14522)
Vapour pressure:	12 hPa (29 °C) approx. 44 hPa (50 °C)	
Density:	1.025 g/cm3 (20 °C)	(ISO 2811-3)
Relative vapour density (air):		
	not determined	
Solubility in water:	of low solubility	
Partitioning coefficient n-octanol/water (log Kow):		
	not determined	
Self ignition:	not self-igniting	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:		
	not determined	
Viscosity, kinematic:		
	not determined	

Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.

9.2. Other information

Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.
No further information available.

SECTION 10: Stability and Reactivity

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

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

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

10.4. Conditions to avoid
Avoid prolonged exposure to extreme heat. Avoid contact with air.

10.5. Incompatible materials

Substances to avoid:
oxidizing agents

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Virtually nontoxic after a single ingestion.

Experimental/calculated data:
LD50 rat (oral): > 2,000 mg/kg (BASF-Test)

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

Irritation

Assessment of irritating effects:
Not irritating to the eyes. Irritating to skin.

Experimental/calculated data:
Skin corrosion/irritation: Non corrosive. (Epiderm Corrosivity Test)

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

Respiratory/Skin sensitization

Assessment of sensitization:
May cause sensitization by skin contact.

Experimental/calculated data:
Open epicutaneous test (OET) guinea pig: Caused skin sensitization in animal studies. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Experimental/calculated data:
Ames-test
Bacteria: negative (Modified OECD Guideline 471)

Carcinogenicity

Assessment of carcinogenicity:
Results from a number of long-term carcinogenity studies are available. Taking into account all of the information, there is no indication that the substance itself is carcinogenic. Literature data.

Reproductive toxicity

Assessment of reproduction toxicity:
The chemical structure does not suggest a specific alert for such an effect.

Developmental toxicity

Assessment of teratogenicity:
The substance caused malformations/developmental toxicity in laboratory animals. Literature data.

May cause harm to the unborn child.

Experiences in humans

Experimental/calculated data:

There are indications of coherence between the incorporation of high doses during pregnancy and deformations at humans (newborn child).

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on available Data, the classification criteria are not met.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Repeated exposure to large quantities may affect certain organs.

Aspiration hazard

No aspiration hazard expected.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:
The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Very toxic (acute effect) to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Aquatic invertebrates:
EC50 (48 h) 0.018 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The statement of the toxic effect relates to the analytically determined concentration.

Microorganisms/Effect on activated sludge:
EC20 (3 h) > 1,000 mg/l, activated sludge, domestic (OECD Guideline 209, aerobic)
The details of the toxic effect relate to the nominal concentration.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by OECD criteria). Moderately/partially biodegradable.

Elimination information:

40 - 50 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, domestic)

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
No data available.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Volatility: not applicable

12.5. 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 contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification

12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

SECTION 14: Transport Information

Land transport

ADR

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains RETINOL, SORBITAN, MONOLAURATE,

	ETHOXYLATED)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

RID

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains RETINOL, SORBITAN, MONOLAURATE, ETHOXYLATED)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Inland waterway transport

ADN

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains RETINOL, SORBITAN, MONOLAURATE, ETHOXYLATED)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains RETINOL, SORBITAN, MONOLAURATE, ETHOXYLATED)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes

	Marine pollutant: YES
Special precautions for user:	None known

Air transport

IATA/ICAO

UN number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains RETINOL, SORBITAN, MONOLAURATE, ETHOXYLATED)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15: Regulatory Information

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

Prohibitions, Restrictions and Authorizations

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 3

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):
List entry in regulation: E1

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

15.2. Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

Assessment of safe use has been performed for the mixture and the result is documented in section 7 and 8 of the SDS

SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version)

M-factor acute: 10
M-factor chronic: 10

Information on intended use: This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use. This includes the mentioned and recommended usage. Any other intended applications should be discussed with the manufacturer. In particular this concerns the application for products that are the object of special standards and regulations.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Skin Corr./Irrit.	Skin corrosion/irritation
Skin Sens.	Skin sensitization
Repr.	Reproductive toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Eye Dam./Irrit.	Serious eye damage/eye irritation
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H360D	May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

H319	Causes serious eye irritation.
H413	May cause long lasting harmful effects to aquatic life.

Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

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.