

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Version: 4.2

Page: 1/10

(30650754/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Efka® PL 5646

Recommended use of the chemical and restriction on use

Recommended use*: Coating raw material for industrial applications

Recommended use*: plasticizers

Unsuitable for use: Not intended for sale to or use by the general public.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION

100 Park Avenue

Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: dicarboxylic acid esters

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

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

Label elements

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

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27
Version: 4.2

Page: 2/10
(30650754/SDS_GEN_US/EN)

Hazards not otherwise classified

No applicable information available.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Under the referenced regulation, this product does not contain any components classified for health hazards above the relevant cut off value.

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air. If breathing difficulties develop, aid in breathing and seek immediate medical attention.

If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Flush with copious amounts of water for at least 15 minutes. If irritation develops, seek immediate medical attention.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

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

Special hazards arising from the substance or mixture

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Version: 4.2

Page: 3/10

(30650754/SDS_GEN_US/EN)

Hazards during fire-fighting:

The product is combustible. Cool endangered containers with water-spray.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

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

6. Accidental release measures

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

For small amounts: Spills should be contained, solidified, and placed in suitable containers for disposal.

For large amounts: Pump off product.

7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas.

Conditions for safe storage, including any incompatibilities

Segregate from strong oxidizing agents.

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

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Respiratory protection not required.

Hand protection:

Wear chemical resistant protective gloves.

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Version: 4.2

Page: 4/10

(30650754/SDS_GEN_US/EN)

Eye protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Avoid inhalation of mists. Avoid contact with the skin, eyes and clothing.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	almost odourless	
Odour threshold:	not determined	
Colour:	colourless	
pH value:	not applicable, of very low solubility	
pour point:	-54 °C	(DIN ISO 3016)
Freezing point:	No data available.	
Melting point:	No data available.	
boiling temperature:	approx. 394 °C (1,013 hPa) Cannot be distilled without decomposition at normal pressure.	(Directive 92/69/EEC, A.2)
Boiling range:	No data available.	
Flash point:	224 °C When exposed to high temperatures over a long period of time, formation of outgassing flammable decomposition products may occur.	(Directive 92/69/EEC, A.9, closed cup)
Flammability:	hardly combustible	(derived from flash point)
Lower explosion limit:	(approx. 170 °C, approx. 1013 hPa) The lower explosion point of the substance/mixture has been determined. The explosion point describes the temperature of a flammable liquid at which the concentration of the saturated vapour mixed with air equals the lower explosion limit.	(DIN EN 15794, air)
Upper explosion limit:	As a consequence of the thermal decomposition behavior (see Thermal decomposition) it is not possible to determine the upper explosion limit according to standard DIN EN 1839. For liquids not relevant for classification and labelling.	
Autoignition:	330 °C	(Directive 92/69/EEC, A.15)
Vapour pressure:	< 0.000001 hPa (20 °C)	(Directive 92/69/EEC, A.4)
Density:	0.944 - 0.954 g/cm ³ (20 °C)	(DIN 51757)
Vapour density:	not determined	
Partitioning coefficient n- octanol/water (log Pow):	10 (25 °C)	(Directive 92/69/EEC, A.8)

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Page: 5/10

Version: 4.2

(30650754/SDS_GEN_US/EN)

Refractive index:	1.4622 (20 °C)	(DIN 51423-2 (n2D20))
Self-ignition temperature:	20 °C not self-igniting	
Thermal decomposition:	When exposed to high temperatures over a long period of time, formation of outgassing flammable decomposition products may occur.	
Viscosity, dynamic:	44 - 60 mPa.s (20 °C)	(calculated (from kinematic viscosity))
Viscosity, kinematic:	The value was determined by calculation from the detected kinematic viscosity.	
Particle size:	No data available.	
% volatiles:	The substance / product is marketed or used in a non solid or granular form.	
Solubility in water:	0.65 % < 0.02 mg/l (25 °C)	
Solubility (qualitative):	soluble solvent(s): organic solvents,	
Molar mass:	424.66 g/mol	
Evaporation rate:	No data available.	

10. Stability and Reactivity

Reactivity

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.
-------------------------------	----------	--

Chemical stability

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

Possibility of hazardous reactions

The product is chemically stable.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme heat.

Incompatible materials

strong oxidizing agents

Hazardous decomposition products

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

Thermal decomposition:

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Version: 4.2

Page: 6/10

(30650754/SDS_GEN_US/EN)

When exposed to high temperatures over a long period of time, formation of outgassing flammable decomposition products may occur.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

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

Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg (OECD Guideline 423)

Dermal

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg (OECD Guideline 402)

Assessment other acute effects

Assessment of STOT single:

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

Irritation / corrosion

Assessment of irritating effects: May cause slight irritation to the skin. Not irritating to the eyes.

Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

Eye

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Guinea pig maximization test

Species: guinea pig

Result: Non-sensitizing.

Method: OECD Guideline 406

Aspiration Hazard

not applicable

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Version: 4.2

Page: 7/10

(30650754/SDS_GEN_US/EN)

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Effects on the kidney of male rats were detected after repeated exposure. These effects are specific for the male rat and are known to be of no relevance to humans.

Genetic toxicity

Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria, microorganisms and mammalian cell culture. The substance was not mutagenic in studies with mammals.

Carcinogenicity

Assessment of carcinogenicity: In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological Information

Toxicity

Aquatic 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.

Toxicity to fish

LC50 (96 h) > 100 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, static)

Tested above maximum solubility. The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates

EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An eluate has been tested.

Aquatic plants

EC50 (72 h) > 100 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An eluate has been tested.

Chronic toxicity to fish

No data available.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) \geq 0.021 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Limit concentration test only (LIMIT test).

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Version: 4.2

Page: 8/10

(30650754/SDS_GEN_US/EN)

Assessment of terrestrial toxicity

No toxic effects have been observed in studies with soil living organisms. No toxic effects have been observed in studies with terrestrial plants.

Soil living organisms

Toxicity to soil dwelling organisms:

LC50 (14 d) > 1,000 mg/kg, Eisenia foetida (OECD Guideline 207, artificial soil)

No observed effect concentration (56 d) > 1,000 mg/kg, Eisenia foetida (OECD Guideline 222, artificial soil)

EC10 (28 d) > 1,000 mg/kg, soil dwelling microorganisms (OECD 217, natural soil)

EC10 (28 d) 447 mg/kg, soil dwelling microorganisms (OECD 216, natural soil)

Toxicity to terrestrial plants

No observed effect concentration (20 d) > 1.000 mg/kg, Avena sativa (OECD Guideline 208)

No observed effect concentration (21 d) > 1.000 mg/kg, Brassica napus (OECD Guideline 208)

No observed effect concentration (21 d) > 1.000 mg/kg, Vicia sativa (OECD Guideline 208)

Other terrestrial non-mammals

No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

DIN EN ISO 8192-OECD 209-88/302/EEC,P. C aquatic

aerobic bacteria from a domestic water treatment plant/EC20 (180 min): > 1,000 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H2O)

Biodegradable.

Not readily biodegradable (by OECD criteria).

Elimination information

90 - 100 % CO₂ formation relative to the theoretical value (60 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic, non-adapted)

70 - 80 % CO₂ formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic, adapted)

Assessment of stability in water

No data available.

Information on Stability in Water (Hydrolysis)

No data available.

Bioaccumulative potential

Assessment bioaccumulation potential

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Version: 4.2

Page: 9/10

(30650754/SDS_GEN_US/EN)

Accumulation in organisms is not to be expected.

Bioaccumulation potential

Bioconcentration factor: 189 (30 d), Brachydanio rerio (OECD Guideline 305 E)

Mobility in soil

Assessment transport between environmental compartments

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Additional information

Other ecotoxicological advice:

Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:

Dispose of in a licensed facility. Do not discharge substance/product into sewer system. Dispose of in accordance with national, state and local regulations.

Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

Safety Data Sheet

Efka® PL 5646

Revision date : 2020/05/27

Page: 10/10

Version: 4.2

(30650754/SDS_GEN_US/EN)

NFPA Hazard codes:

Health: 1 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 1 Flammability: 1 Physical hazard: 0

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

Skin Corr./Irrit. 3 Skin corrosion/irritation

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2020/05/27

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

Efka® PL 5646 is a registered trademark of BASF Corporation or BASF SE
IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET