

Safety data sheet

Page: 1/13

BASF BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

1. Identification

Product identifier

Lugalvan® G 35

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

Relevant identified uses: chemical for industrial metal-working

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Care Chemicals

Telephone: +49 621 60-57579

E-mail address: emd-ems-ehs-masterdata@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 4 (oral)

Skin Corr./Irrit. 3

Eye Dam./Irrit. 1

Skin Sens. 1B

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

Aquatic Acute 2
Aquatic Chronic 2

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

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318	Causes serious eye damage.
H316	Causes mild skin irritation.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye protection or face protection.
P261	Avoid breathing mist or vapour or spray.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P330	Rinse mouth
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
------	---

Other hazards

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

According to UN GHS criteria

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

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

polyethyleneimine
in water

Hazardous ingredients (GHS)

According to UN GHS criteria

polyethyleneimine

Content (W/W): 50 %
CAS Number: 9002-98-6

Acute Tox. 4 (oral)
Skin Corr./Irrit. 3
Eye Dam./Irrit. 1
Skin Sens. 1B
Aquatic Acute 2
Aquatic Chronic 2
H318, H316, H302, H317, H401, H411

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

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

On ingestion:

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

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

Indication of any immediate medical attention and special treatment needed

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

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

Suitable extinguishing media:
water spray, dry powder, foam

Special hazards arising from the substance or mixture

harmful vapours, carbon oxides

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:

Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Use personal protective clothing. Information regarding personal protective measures, see section 8.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For large amounts: Dike spillage. Pump off product.

For residues: Pick up with suitable absorbent material.

Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

No special measures necessary provided product is used correctly.

Protection against fire and explosion:

No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: Stainless steel 1.4401, Stainless steel 1.4301 (V2), Polyester resin, glass reinforced (Palatal A410), High density polyethylene (HDPE), glass, Low density polyethylene (LDPE)

Further information on storage conditions: Keep container tightly closed and in a cool place.

Protect from temperatures above: 40 °C

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:

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:

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):

e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other

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.

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

Eye protection:

Tightly fitting safety goggles (cage goggles) (e.g. EN 166) and face shield.

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).

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

General safety and hygiene measures

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:	colourless to yellowish	
Odour:	product specific	
pH value:	11	(ISO 1148)
	(1 %(m))	
solidification temperature:	approx. -20 °C	(DIN ISO 3013)
boiling temperature:	approx. 100 °C	
Flash point:	> 100 °C	(DIN 51758)
Evaporation rate:		
	not determined	
Flammability:	not flammable	
Lower explosion limit:		
	For liquids not relevant for classification and labelling.	
Upper explosion limit:		
	For liquids not relevant for classification and labelling.	
Ignition temperature:	> 200 °C	(DIN 51794)
Vapour pressure:	23,4 mbar	
	(20 °C)	
<i>Information on: Water</i>		
Vapour pressure:	23 hPa	
	(20 °C)	

Density:	approx. 1,08 g/cm ³	(DIN 51757)
	(20 °C)	
Solubility in water:	miscible	
Partitioning coefficient n-octanol/water (log K _{ow}):		
	not applicable	
Self ignition:	not self-igniting	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	approx. 2.000 mPa.s	
	(20 °C)	
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	

Other information

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

Self heating ability:	It is not a substance capable of spontaneous heating according to UN transport regulations class 4.2.
Miscibility with water:	miscible
Grain size distribution:	The substance / product is marketed or used in a non solid or granular form.
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

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

No hazardous reactions when stored and handled according to instructions.

Conditions to avoid

See SDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:

aldehydes, ketones, chlorinated hydrocarbons, strong acids

Hazardous decomposition products

Hazardous decomposition products:

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

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Experimental/calculated data:

LD50 rat (oral): > 300 - 2.000 mg/kg

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

Irritation

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (Draize test)

Serious eye damage/irritation rabbit: irreversible damage

Respiratory/Skin sensitization

Assessment of sensitization:

May cause sensitization by skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

*Information on: polyethyleneimine**Assessment of sensitization:**May cause sensitization by skin contact.*
-----Germ cell mutagenicity

Assessment of mutagenicity:

| No data available.

Carcinogenicity

Assessment of carcinogenicity:

| No data available.

Reproductive toxicity

Assessment of reproduction toxicity:

| No data available.

Developmental toxicity

Assessment of teratogenicity:

| No data available.

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

Assessment of repeated dose toxicity:

| No data available.

12. Ecological Information

Toxicity

Toxicity to fish:

LC50 (96 h) > 1 - 10 mg/l, *Leuciscus idus*

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

Aquatic invertebrates:

LC50 (48 h), daphnia

not determined

Aquatic plants:

EC50 (72 h), algae

not determined

Microorganisms/Effect on activated sludge:

EC10 (0,5 h) 0,4 mg/l, bacteria (DIN 38412 Part 27 (draft))

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Chronic toxicity to fish:

No data available.

Chronic toxicity to aquatic invertebrates:

No data available.

Assessment of terrestrial toxicity:

No data available concerning terrestrial toxicity.

Persistence and degradability

Elimination information:

Poorly biodegradable.

Well eliminable from water by adsorption on activated sludge.

*Information on: polyethyleneimine**Assessment biodegradation and elimination (H2O):**Not readily biodegradable (by OECD criteria).*

Bioaccumulative potential

Assessment bioaccumulation potential:

The product has not been tested.

Bioaccumulation potential:

Because of the product's consistency and low water solubility, bioavailability is improbable.

Mobility in soil

Assessment transport between environmental compartments:

Volatility: No data available.

Results of PBT and vPvB assessment

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

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).

Other adverse effects

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

Additional information

Sum parameter

Chemical oxygen demand (COD): 950 mg/g

Add. remarks environm. fate & pathway:

Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:

Do not allow to enter soil, waterways or waste water channels.

13. Disposal Considerations

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.

14. Transport Information

Land transport

ADR

UN number UN3082

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains POLYETHYLENEIMINE)

Transport hazard class(es): 9, EHSM

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

RID

UN number UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains POLYETHYLENEIMINE)
Transport hazard class(es): 9, EHS
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 POLYETHYLENEIMINE)
Transport hazard class(es): 9, EHS
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 POLYETHYLENEIMINE)
Transport hazard class(es): 9, EHS
Packing group: III
Environmental hazards: yes
Marine pollutant: YES
Special precautions for user: None known

Air transport**IATA/ICAO**

UN number: UN 3082

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains POLYETHYLENEIMINE)

Transport hazard class(es): 9, EHSN

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

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

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.

16. Other Information

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 classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Eye Dam./Irrit.	Serious eye damage/eye irritation
Skin Sens.	Skin sensitization
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H318	Causes serious eye damage.
H316	Causes mild skin irritation.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

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

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.08.2021

Version: 2.0

Product: **Lugalvan® G 35**

(ID no. 30042724/SDS_GEN_00/EN)

Date of print 01.08.2022

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.

Vertical lines in the left hand margin indicate an amendment from the previous version.