

Safety data sheet

Page: 1/14

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

Date / Revised: 10.07.2024

Version: 8.2

Product: **929-33 1L VOC HARDENER NORMAL G2**

(ID no. 50411444/SDS_GEN_00/EN)

Date of print 11.07.2024

1. Identification

Product identifier

929-33 1L VOC HARDENER NORMAL G2

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

Relevant identified uses: hardener

Details of the supplier of the safety data sheet

Company:BASF Coatings GmbH
Postfach 6123
48136 Muenster
Deutschland

Telephone: +49/2501/143688

E-mail address: product-safety-coatings@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

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

Date / Revised: 10.07.2024

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Product: **929-33 1L VOC HARDENER NORMAL G2**

(ID no. 50411444/SDS_GEN_00/EN)

Date of print 11.07.2024

Acute Tox. 4 (Inhalation - vapour)
Skin Corr./Irrit. 3
Skin Sens. 1
STOT SE 3 (irritating to respiratory system)
Aquatic Acute 3
Aquatic Chronic 3
Flam. Liq. 3
STOT SE 3 (May cause drowsiness and dizziness.)

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, UN (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

| | |
|------|--|
| H226 | Flammable liquid and vapour. |
| H316 | Causes mild skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary Statements (Prevention):

| | |
|------|--|
| P280 | Wear protective gloves, protective clothing and eye protection or face protection. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P242 | Use non-sparking tools. |
| P241 | Use explosion-proof electrical, ventilating and lighting equipment. |
| P243 | Take action to prevent static discharges. |
| P233 | Keep container tightly closed. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P240 | Ground and bond container and receiving equipment. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |

Precautionary Statements (Response):

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

Date / Revised: 10.07.2024

Version: 8.2

Product: **929-33 1L VOC HARDENER NORMAL G2**

(ID no. 50411444/SDS_GEN_00/EN)

Date of print 11.07.2024

| | |
|--------------------|--|
| P312 | Call a POISON CENTER or physician if you feel unwell. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P370 + P378 | In case of fire: Use water spray for extinction. |
| P362 + P364 | Take off contaminated clothing and wash it before reuse. |
| P333 + P313 | If skin irritation or rash occurs: Get medical attention. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |

Precautionary Statements (Storage):

| | |
|-------------|--|
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |

Precautionary Statements (Disposal):

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

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.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

organic solvent

Hazardous ingredients (GHS)

According to UN GHS criteria

Hexamethylen-1,6-diisocyanat Homopolymer

Content (W/W): >= 50 % - < 75 %
 CAS Number: 28182-81-2
 EC-Number: 500-060-2
 REACH registration number: 01-2119485796-17

Acute Tox. 4 (Inhalation - dust)
 Acute Tox. 4 (Inhalation - vapour)
 Skin Sens. 1
 STOT SE 3 (irr. to respiratory syst.)
 H332, H317, H335

Heptan-2-one

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

Date / Revised: 10.07.2024

Version: 8.2

Product: **929-33 1L VOC HARDENER NORMAL G2**

(ID no. 50411444/SDS_GEN_00/EN)

Date of print 11.07.2024

| | |
|---------------------------------------|--------------------------------------|
| Content (W/W): $\geq 20\%$ - $< 25\%$ | Flam. Liq. 3 |
| CAS Number: 110-43-0 | Acute Tox. 4 (Inhalation - vapour) |
| EC-Number: 203-767-1 | Acute Tox. 4 (oral) |
| INDEX-Number: 606-024-00-3 | Skin Irrit. 3 |
| | STOT SE 3 (drowsiness and dizziness) |
| | Aquatic Acute 3 |
| | H226, H316, H336, H302 + H332, H402 |

2-Butoxyethyl acetate

| | |
|--------------------------------------|-------------------------|
| Content (W/W): $\geq 7\%$ - $< 10\%$ | Flam. Liq. 4 |
| CAS Number: 112-07-2 | Acute Tox. 4 (oral) |
| EC-Number: 203-933-3 | Acute Tox. 4 (dermal) |
| INDEX-Number: 607-038-00-2 | Aquatic Acute 3 |
| | H227, H302 + H312, H402 |

2-Methoxy-1-methylethyl acetate

| | |
|--------------------------------------|--------------------------------------|
| Content (W/W): $\geq 7\%$ - $< 10\%$ | Flam. Liq. 3 |
| CAS Number: 108-65-6 | STOT SE 3 (drowsiness and dizziness) |
| EC-Number: 203-603-9 | H226, H336 |
| INDEX-Number: 607-195-00-7 | |

Solventnaphtha (petroleum), light aromatic

| | |
|---|---------------------------------------|
| Content (W/W): $\geq 3\%$ - $< 5\%$ | Asp. Tox. 1 |
| CAS Number: 64742-95-6 | Flam. Liq. 3 |
| REACH registration number: 01-2119455851-35 | STOT SE 3 (drowsiness and dizziness) |
| | STOT SE 3 (irr. to respiratory syst.) |
| | Aquatic Chronic 2 |
| | H411, H226, H304, H336, H335 |
| | EUH066 |

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

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Remove affected person from danger area. Immediately remove contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. If symptoms persist, seek medical advice. If breathing is irregular or stopped, administer artificial respiration.

On skin contact:

If symptoms persist, seek medical advice. Remove contaminated clothing. Wash skin with soap and water, rinse abundantly. Do NOT use solvents or thinners.

On contact with eyes:

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

Date / Revised: 10.07.2024

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(ID no. 50411444/SDS_GEN_00/EN)

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If symptoms persist, seek medical advice. Contact lenses should be removed. Hold eyelids open and flush with copious amounts of clean, fresh water or a special eyewash solution.

On ingestion:

Do not induce vomiting. Rinse mouth thoroughly with water, seek medical attention. If adverse health effects develop seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: allergic symptoms, dazed state, irritation of respiratory tract, dizziness, 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.

Antidote: No known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

carbon dioxide, alcohol-resistant foam, dry powder, water spray

Unsuitable extinguishing media for safety reasons:

water jet

Special hazards arising from the substance or mixture

Fire will produce dense black smoke. Inhalation of dangerous decomposition products may cause serious damage to health.

Advice for fire-fighters

Special protective equipment:

Appropriate breathing apparatus may be required.

Further information:

Cool closed containers in the vicinity of the source of fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours. For non-emergency personnel: Use personal protective clothing. Ensure adequate ventilation. Keep away from sources of ignition. For emergency responders: Advice on product handling can be found in sections 7 and 8 of this safety data sheet. Information regarding personal protective measures, see section 8.

Environmental precautions

Do not allow to enter drains or waterways. If the product enters drains or sewers, the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the Environment Agency. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth. Place in a suitable container. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): ethanol or isopropyl alcohol (50 parts); water (45 parts); concentrated ammonia solution (5 parts). A non-flammable alternative is: sodium carbonate (5 parts); water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in non-sealed container. Once this stage is reached, close container and dispose according to the waste regulations (see section 13). Ensure adequate ventilation.

7. Handling and Storage

Precautions for safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Do not return residues to the storage containers. Smoking, eating and drinking are forbidden in application area. For personal protection see section 8. Comply with the health and safety at work laws. When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits. Avoid inhalation of vapour and spray mist. The workplace should be equipped with an emergency shower and eye-rinsing facility. Avoid contact with the skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame. Product may charge electrostatically: always use earthing leads when transferring from one container to another and earth containers. It is recommended that operators should wear antistatic clothing and footwear. Solvent vapours are heavier than air and spread along floors. Vapour forms explosive mixtures with air. The relevant fire protection measures should be noted. Use explosion-proof equipment.

Conditions for safe storage, including any incompatibilities

Keep away from oxidising agents, from strongly alkaline and strongly acid materials.

Suitable materials for containers: Carbon steel (Iron), tinned carbon steel (Tinplate)

Further information on storage conditions: Keep container dry. Keep away from heat. Keep in a cool, well-ventilated place. Avoid direct sunlight. Close containers carefully once opened and store them upright in order to prevent any leakage. No smoking. No admission for unauthorised personnel.

Always keep in containers of same material as the original one. Observe label precautions.

Specific end use(s)

Please refer to the technical leaflet for further information.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

108-65-6: 2-Methoxy-1-methylethyl acetate

110-43-0: Heptan-2-one

112-07-2: 2-Butoxyethyl acetate

Exposure controls

Personal protective equipment

Respiratory protection:

Suitable respiratory protection: e.g. full face mask with AB2P3 class combination filter

Hand protection:

Further information on penetration time is available from the manufacturer of the glove.

Data are based on information from the glove manufacturer, the raw material manufacturer or according to specifics of the product components.

The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties).

Follow manufacturer's advice on use, storage, maintenance and replacement of gloves.

The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).

Wear protective gloves. Any chemical protection glove certified according to EN ISO 374-1 is suitable: e.g.

butyl rubber gloves - material thickness: 0.5 mm

Eye protection:

Eye protection not required.

Body protection:

chemical-resistant disposable coveralls, Personnel should wear antistatic, flame-retardant clothing made of natural fibres and/or heat-resistant synthetic fibres.

General safety and hygiene measures

Do not breathe vapour/spray. Eye wash fountains and safety showers must be easily accessible.

Avoid contact with the skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. This can be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations at the workplace below the occupational exposure limits, appropriate certified respirators must be worn.

Remove contaminated clothing immediately and dispose of safely. Hands and/or face should be washed before breaks and at the end of the shift. Keep separated from food stuffs and feed stocks.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

| | |
|------------------|------------|
| State of matter: | liquid |
| Form: | liquid |
| Colour: | colourless |

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

Date / Revised: 10.07.2024

Version: 8.2

Product: **929-33 1L VOC HARDENER NORMAL G2**

(ID no. 50411444/SDS_GEN_00/EN)

Date of print 11.07.2024

| | |
|---|--|
| Odour: | ketone-like |
| Melting point: | not determined |
| onset of boiling: | not determined |
| Flammability: | Flammable liquid and vapour. |
| Lower explosion limit: | 36 g/m ³ |
| Flash point: | 45 °C (ISO 3679) |
| Auto-ignition temperature: | > 200,00 °C |
| Thermal decomposition: | No decomposition if stored and handled as prescribed/indicated. |
| pH value: | substance/mixture is non-polar/aprotic |
| Viscosity, kinematic: | (40 °C) No data available. 7,3 mm ² /s (23 °C) |
| Solubility in water: | immiscible |
| Partitioning coefficient n-octanol/water (log Kow): | not applicable for mixtures |
| Vapour pressure: | (20 °C) not determined (50 °C) not determined |
| Density: | 1,014 g/cm ³ (20 °C) |
| Relative vapour density (air): | Heavier than air. |

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard: not explosive

Oxidizing properties

Fire promoting properties: not fire-propagating

Flammable solids

Burning rate: The material doesn't meet the criteria (UN Test N.1 (ready specified in paragraph 33.2.4.4 of UN manual of tests and criteria. combustible solids))

Self-heating substances and mixtures

Self heating ability: It is not a material capable of spontaneous heating

Other safety characteristics

Miscibility with water:

immiscible

Flow time:

> 30 s
(23 °C)

(DIN EN ISO 2431; 3 mm)

10. Stability and Reactivity

Reactivity

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

Chemical stability

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

Possibility of hazardous reactions

Vapours may form ignitable mixture with air.

Conditions to avoid

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

Incompatible materials

Substances to avoid:

Keep away from highly acidic or alkaline substances as well as oxidants in order to prevent exothermal reactions.

Hazardous decomposition products

:

When exposed to high temperatures hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates may be produced., No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated and prolonged exposure to solvents at levels significantly above OELs may lead to the development of long-lasting central nervous system disorders such as chronic toxic encephalopathy, signs of toxicity include changes in behaviour and memory. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

Of moderate toxicity after short-term inhalation.

Information on: Heptan-2-one

Experimental/calculated data:

LC50 rat (by inhalation): > 16,7 mg/l 4 h (OECD Guideline 403)

Mortality was observed. The vapour was tested.

Information on: 2-Butoxyethyl acetate

Experimental/calculated data:

LC50 rat (by inhalation): > 400 ppm 4 h (OECD Guideline 403)

No mortality was observed. Highest concentration technically achievable. The vapour was tested.

Information on: Hexamethylen-1,6-diisocyanat Homopolymer

Experimental/calculated data:

LC50 rat (by inhalation): 1,500 mg/l 4,0 h (OECD Guideline 403)

An aerosol was tested.

Irritation

Assessment of irritating effects:

The liquid splashed in the eyes may cause irritation and reversible damage. Skin contact causes slight irritation.

Respiratory/Skin sensitization

Assessment of sensitization:

Sensitization after skin contact possible.

Germ cell mutagenicity

Assessment of mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity

Assessment of carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity

Assessment of reproduction toxicity:

Based on available data, the classification criteria are not met.

Developmental toxicity

Assessment of teratogenicity:

Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Causes temporary irritation of the respiratory tract. Possible narcotic effects (drowsiness or dizziness).

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

Assessment of repeated dose toxicity:

Based on available data, the classification criteria are not met.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

Based on the properties of the isocyanate components and considering toxicological data on similar product, this product may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the occupational exposure limit. Repeated inhalation may lead to a permanent respiratory disability.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

Harmful to aquatic life. Harmful to aquatic life with long lasting effects. There are no test results available for this product. Do not allow to enter drains or waterways.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Biological degradability of hazardous substances mentioned in section 3:

Information on: Heptan-2-one

Elimination information:

69 % DOC reduction (28 d) (OECD Guideline 310) (aerobic, activated sludge, domestic, non-adapted)

Information on: 2-Butoxyethyl acetate

Elimination information:

88 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EWG, C.4-D) (aerobic, activated sludge, domestic)

Bioaccumulative potential

Bioaccumulation potential:

No data available.

Mobility in soil

Assessment transport between environmental compartments:

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

Date / Revised: 10.07.2024

Version: 8.2

Product: **929-33 1L VOC HARDENER NORMAL G2**

(ID no. 50411444/SDS_GEN_00/EN)

Date of print 11.07.2024

Adsorption in soil: No data available.

13. Disposal Considerations

Waste treatment methods

Do not discharge into drains/surface waters/groundwater.

Observe national and local legal requirements.

Dispose of isocyanate waste in dry containers and never mix together with other wastes (reaction, dangerous pressure build up).

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

Residues in empty containers should be neutralised with decontaminant (see section 6).

14. Transport Information

Land transport

ADR

UN number or ID number: UN1866

UN proper shipping name: RESIN SOLUTION

Transport hazard class(es): 3

Packing group: III

Environmental hazards: no

Special precautions for user: Tunnel code: D/E

RID

UN number or ID number: UN1866

UN proper shipping name: RESIN SOLUTION

Transport hazard class(es): 3

Packing group: III

Environmental hazards: no

Special precautions for user: None known

Inland waterway transport

ADN

UN number or ID number: UN1866

UN proper shipping name: RESIN SOLUTION

Transport hazard class(es): 3

Packing group: III

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

Date / Revised: 10.07.2024

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Date of print 11.07.2024

Environmental hazards: no
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number or ID number: UN 1866
UN proper shipping name: RESIN SOLUTION

Transport hazard class(es): 3
Packing group: III
Environmental hazards: no
Marine pollutant: NO
Special precautions for user: EmS: F-E; S-E

Air transport

IATA/ICAO

UN number or ID number: UN 1866
UN proper shipping name: RESIN SOLUTION

Transport hazard class(es): 3
Packing group: III
Environmental hazards: No Mark as dangerous for the environment is needed
Special precautions for user: None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

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

Not applicable

16. Other Information

For multi-pack systems observe material safety data sheets of all components. Restricted to professional users.

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 |
| Skin Sens. | Skin sensitization |
| STOT SE | Specific target organ toxicity — single exposure |
| Aquatic Acute | Hazardous to the aquatic environment - acute |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic |
| Flam. Liq. | Flammable liquids |
| Skin Irrit. | Skin irritation |
| Asp. Tox. | Aspiration hazard |
| H332 | Harmful if inhaled. |
| H317 | May cause an allergic skin reaction. |
| H335 | May cause respiratory irritation. |
| H226 | Flammable liquid and vapour. |
| H316 | Causes mild skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H302 + H332 | Harmful if swallowed or if inhaled. |
| H402 | Harmful to aquatic life. |
| H227 | Combustible liquid. |
| H302 + H312 | Harmful if swallowed or in contact with skin. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H304 | May be fatal if swallowed and enters airways. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

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.

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