



## 1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx ; xx = B11 gold  
**Relevant identified uses of the substance or mixture and uses advised against**
- Currently no such applications are identified.  
**Application of the substance / the mixture** METALLIC MARKER INK
- **Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

- Lifelines, LLC  
PO Box 5220  
Westport, CT 06881  
T-475-900-7335

**Emergency telephone number:**

- T - 475-900-7335

## 2 Hazard(s) identification

· **Classification of the substance or mixture**

The product is not classified, according to the Globally Harmonized System (GHS).

- **Label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 1  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	1
REACTIVITY	0

Health = 0  
Fire = 1  
Reactivity = 0

· **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

Mixture of the following substances, containing non-hazardous substances and colouring agents.

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7429-90-5	Aluminiumpulver (stabilisiert)	2.2%
2682-20-4	2-methyl-2H-isothiazol-3-one	0.0015-<0.03%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

· **Description of first aid measures**

· **General information:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

(Contd. of page 1)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:**  
None of the ingredients is listed.
  - **PAC-2:**  
None of the ingredients is listed.
  - **PAC-3:**  
None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 57-55-6 Propylene glycol (25-<50%)

WEEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)  
US

(Contd. of page 2)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If only a short-term loading of the glove material by splashes is expected, tricot gloves with higher wearability for the better acceptance of the users are recommended.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Fluid

**Color:**

According to product specification

**Odor:**

Product specific

**Odor threshold:**

Not determined.

**Important information on protection of health and environment, and on safety.**

-

**pH-value at 20 °C (68 °F):**

7.2-8.4

**Change in condition**

**Melting point/Melting range:**

Undetermined.

**Boiling point/Boiling range:**

100 °C (212 °F)

**Flash point:**

>113 °C (>235.4 °F)

**Flammability:**

Not applicable.

**Auto igniting:**

371 °C (699.8 °F)

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**Explosion limits:**

**Lower:**

2.6 Vol %

**Upper:**

12.6 Vol %

**Vapor pressure at 20 °C (68 °F):**

23 hPa (17.251 mm Hg)

**Density at 20 °C (68 °F):**

1.1 g/cm³ (9.2 lbs/gal)

**Relative density**

Not determined.

**Vapor density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with**

**Water:**

Fully miscible.

**Partition coefficient (n-octanol/water):**

Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):**

8.7 mPas

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

Not determined

**Water:**

Not determined

**Solids content:**

Not determined

**Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

(Contd. of page 3)

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.
- **NTP (National Toxicology Program)**

None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable

(Contd. on page 5)

US

(Contd. of page 4)

· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>Class</b>	not applicable
· <b>Packing group</b>	not applicable
· <b>DOT, ADR, IMDG, IATA</b>	not applicable
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not applicable

## 15 Regulatory information

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

- **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **DSL/NDSL (Canada)** All ingredients are listed

- **Cancerogenity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value)**

None of the ingredients is listed.

- **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **GHS label elements** none

- **Hazard pictograms** none

- **Signal word** none

- **Hazard statements** none

- **National regulations:**

- **Technical instructions (air):**

Class	Share in %
NK	25-<50

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**

- **Date of preparation / last revision** 09/03/2025 / -

(Contd. on page 6)  
US

(Contd. of page 5)

**Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*  
*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*  
*ICAO: International Civil Aviation Organisation*  
*ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)*  
*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*  
*IMDG: International Maritime Code for Dangerous Goods*  
*DOT: US Department of Transportation*  
*IATA: International Air Transport Association*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*NFPA: National Fire Protection Association (USA)*  
*HMIS: Hazardous Materials Identification System (USA)*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*NIOSH: National Institute for Occupational Safety & Health*  
*OSHA: Occupational Safety & Health*  
*TLV: Threshold Limit Value*  
*PEL: Permissible Exposure Limit*  
*REL: Recommended Exposure Limit*

**\* Data compared to the previous version altered.**

US

## 1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx ; xx = A silver, B11 gold, C blue, D green, E2 violet, F2 red, G bronze, H black, I copper, J lime green, K1 magenta
- **Relevant identified uses of the substance or mixture and uses advised against**  
Currently no such applications are identified.
- **Application of the substance / the mixture** METALLIC MARKER INK
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Lifelines, LLC  
PO Box 5220  
Westport, CT 06881  
T-475-900-7335
- **Emergency telephone number:**  
T - 475-900-7335

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).

- **GHS label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 1  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	1
REACTIVITY	0

Health = 0  
Fire = 1  
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**  
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7429-90-5	Aluminiumpulver (stabilisiert)	3-<5%
2682-20-4	2-methyl-2H-isothiazol-3-one	0.0015-<0.03%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

(Contd. of page 1)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:**  
None of the ingredients is listed.
  - **PAC-2:**  
None of the ingredients is listed.
  - **PAC-3:**  
None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 57-55-6 Propylene glycol (25-<50%)

WEEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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US

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If only a short-term loading of the glove material by splashes is expected, tricot gloves with higher wearability for the better acceptance of the users are recommended.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Fluid

**Color:**

According to product specification

**Odor:**

Product specific

**Odor threshold:**

Not determined.

**Important information on protection of health and environment, and on safety.**

-

**pH-value at 20 °C (68 °F):**

7.2-8.4

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C (212 °F)

**Flash point:**

>113 °C (>235.4 °F)

**Flammability:**

Not applicable.

**Auto igniting:**

371 °C (699.8 °F)

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**Explosion limits:**

**Lower:** 2.6 Vol %

**Upper:** 12.6 Vol %

**Vapor pressure at 20 °C (68 °F):**

23 hPa (17.251 mm Hg)

**Density at 20 °C (68 °F):**

1.1 g/cm³ (9.2 lbs/gal)

**Relative density**

Not determined.

**Vapor density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with Water:**

Fully miscible.

**Partition coefficient (n-octanol/water):**

Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):** 8.7 mPas

**Kinematic:** Not determined.

**Solvent content:**

**Organic solvents:** Not determined

**Water:** Not determined

**Solids content:** Not determined

**Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

(Contd. of page 3)

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.
- **NTP (National Toxicology Program)**

None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable

(Contd. on page 5)

US

(Contd. of page 4)

· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>Class</b>	not applicable
· <b>Packing group</b>	not applicable
· <b>DOT, ADR, IMDG, IATA</b>	not applicable
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not applicable

## 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>				
· <b>Sara</b>				
· <b>Section 355 (extremely hazardous substances):</b>				
None of the ingredient is listed.				
· <b>Section 313 (Specific toxic chemical listings):</b>				
None of the ingredients is listed.				
· <b>TSCA (Toxic Substances Control Act):</b>				
All components have the value ACTIVE.				
· <b>Hazardous Air Pollutants</b>				
None of the ingredients is listed.				
· <b>Proposition 65</b>				
· <b>Chemicals known to cause cancer:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for females:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for males:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause developmental toxicity:</b>				
None of the ingredients is listed.				
· <b>DSL/NDSL (Canada)</b> All ingredients are listed				
· <b>Cancerogenity categories</b>				
· <b>EPA (Environmental Protection Agency)</b>				
None of the ingredients is listed.				
· <b>TLV (Threshold Limit Value)</b>				
None of the ingredients is listed.				
· <b>MAK (German Maximum Workplace Concentration)</b>				
None of the ingredients is listed.				
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>				
None of the ingredients is listed.				
· <b>GHS label elements</b> none				
· <b>Hazard pictograms</b> none				
· <b>Signal word</b> none				
· <b>Hazard statements</b> none				
· <b>National regulations:</b>				
· <b>Technical instructions (air):</b>				
<table border="1"><tr><th>Class</th><th>Share in %</th></tr><tr><td>NK</td><td>25-&lt;50</td></tr></table>	Class	Share in %	NK	25-<50
Class	Share in %			
NK	25-<50			
· <b>Water hazard class:</b> Water hazard class 1 (Self-assessment): slightly hazardous for water.				
· <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.				

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**
- **Date of preparation / last revision** 09/03/2025 / -

(Contd. on page 6)  
US

(Contd. of page 5)

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit

\* Data compared to the previous version altered.

US

## 1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx ; xx = A silver, B11 gold, C blue, D green, E2 violet, F2 red, G bronze, H black, I copper, J lime green, K1 magenta
- **Relevant identified uses of the substance or mixture and uses advised against**  
Currently no such applications are identified.
- **Application of the substance / the mixture** METALLIC MARKER INK
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Lifelines, LLC  
PO Box 5220  
Westport, CT 06881  
T-475-900-7335
- **Emergency telephone number:**  
T - 475-900-7335

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).

- **GHS label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 1  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	1
REACTIVITY	0

Health = 0  
Fire = 1  
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**  
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7429-90-5	Aluminiumpulver (stabilisiert)	3-<5%
2682-20-4	2-methyl-2H-isothiazol-3-one	0.0015-<0.03%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

(Contd. of page 1)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:**  
None of the ingredients is listed.
  - **PAC-2:**  
None of the ingredients is listed.
  - **PAC-3:**  
None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 57-55-6 Propylene glycol (25-<50%)

WEEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)

US

(Contd. of page 2)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If only a short-term loading of the glove material by splashes is expected, tricot gloves with higher wearability for the better acceptance of the users are recommended.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling.

**9 Physical and chemical properties**

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Fluid

**Color:**

According to product specification

**Odor:**

Product specific

**Odor threshold:**

Not determined.

**Important information on protection of health and environment, and on safety.**

-

**pH-value at 20 °C (68 °F):**

7.2-8.4

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C (212 °F)

**Flash point:**

>113 °C (>235.4 °F)

**Flammability:**

Not applicable.

**Auto igniting:**

371 °C (699.8 °F)

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**Explosion limits:**

**Lower:** 2.6 Vol %

**Upper:** 12.6 Vol %

**Vapor pressure at 20 °C (68 °F):**

23 hPa (17.251 mm Hg)

**Density at 20 °C (68 °F):**

1.1 g/cm³ (9.2 lbs/gal)

**Relative density**

Not determined.

**Vapor density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with**

**Water:** Fully miscible.

**Partition coefficient (n-octanol/water):**

Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):** 8.7 mPas

**Kinematic:** Not determined.

**Solvent content:**

**Organic solvents:** Not determined

**Water:** Not determined

**Solids content:** Not determined

**Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

(Contd. of page 3)

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.
- **NTP (National Toxicology Program)**

None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable

(Contd. on page 5)

US

(Contd. of page 4)

· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>Class</b>	not applicable
· <b>Packing group</b>	not applicable
· <b>DOT, ADR, IMDG, IATA</b>	not applicable
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not applicable

## 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>				
· <b>Sara</b>				
· <b>Section 355 (extremely hazardous substances):</b>				
None of the ingredient is listed.				
· <b>Section 313 (Specific toxic chemical listings):</b>				
None of the ingredients is listed.				
· <b>TSCA (Toxic Substances Control Act):</b>				
All components have the value ACTIVE.				
· <b>Hazardous Air Pollutants</b>				
None of the ingredients is listed.				
· <b>Proposition 65</b>				
· <b>Chemicals known to cause cancer:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for females:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for males:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause developmental toxicity:</b>				
None of the ingredients is listed.				
· <b>DSL/NDSL (Canada)</b> All ingredients are listed				
· <b>Cancerogenity categories</b>				
· <b>EPA (Environmental Protection Agency)</b>				
None of the ingredients is listed.				
· <b>TLV (Threshold Limit Value)</b>				
None of the ingredients is listed.				
· <b>MAK (German Maximum Workplace Concentration)</b>				
None of the ingredients is listed.				
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>				
None of the ingredients is listed.				
· <b>GHS label elements</b> none				
· <b>Hazard pictograms</b> none				
· <b>Signal word</b> none				
· <b>Hazard statements</b> none				
· <b>National regulations:</b>				
· <b>Technical instructions (air):</b>				
<table border="1"><tr><th>Class</th><th>Share in %</th></tr><tr><td>NK</td><td>25-&lt;50</td></tr></table>	Class	Share in %	NK	25-<50
Class	Share in %			
NK	25-<50			
· <b>Water hazard class:</b> Water hazard class 1 (Self-assessment): slightly hazardous for water.				
· <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.				

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**
- **Date of preparation / last revision** 09/03/2025 / -

(Contd. on page 6)  
US

(Contd. of page 5)

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit

\* Data compared to the previous version altered.

US

## 1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx ; xx = A silver, B11 gold, C blue, D green, E2 violet, F2 red, G bronze, H black, I copper, J lime green, K1 magenta
- **Relevant identified uses of the substance or mixture and uses advised against**  
Currently no such applications are identified.
- **Application of the substance / the mixture** METALLIC MARKER INK
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Lifelines, LLC  
PO Box 5220  
Westport, CT 06881  
T-475-900-7335
- **Emergency telephone number:**  
T - 475-900-7335

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).

- **GHS label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 1  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	1
REACTIVITY	0

Health = 0  
Fire = 1  
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**  
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7429-90-5	Aluminiumpulver (stabilisiert)	3-<5%
2682-20-4	2-methyl-2H-isothiazol-3-one	0.0015-<0.03%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

(Contd. of page 1)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:**  
None of the ingredients is listed.
  - **PAC-2:**  
None of the ingredients is listed.
  - **PAC-3:**  
None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 57-55-6 Propylene glycol (25-<50%)

WEEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)

US

(Contd. of page 2)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If only a short-term loading of the glove material by splashes is expected, tricot gloves with higher wearability for the better acceptance of the users are recommended.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Fluid

**Color:**

According to product specification

**Odor:**

Product specific

**Odor threshold:**

Not determined.

**Important information on protection of health and environment, and on safety.**

-

**pH-value at 20 °C (68 °F):**

7.2-8.4

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C (212 °F)

**Flash point:**

>113 °C (>235.4 °F)

**Flammability:**

Not applicable.

**Auto igniting:**

371 °C (699.8 °F)

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**Explosion limits:**

**Lower:** 2.6 Vol %

**Upper:** 12.6 Vol %

**Vapor pressure at 20 °C (68 °F):**

23 hPa (17.251 mm Hg)

**Density at 20 °C (68 °F):**

1.1 g/cm³ (9.2 lbs/gal)

**Relative density**

Not determined.

**Vapor density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with**

**Water:** Fully miscible.

**Partition coefficient (n-octanol/water):**

Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):** 8.7 mPas

**Kinematic:** Not determined.

**Solvent content:**

**Organic solvents:** Not determined

**Water:** Not determined

**Solids content:** Not determined

**Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

US

(Contd. on page 4)

(Contd. of page 3)

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.
- **NTP (National Toxicology Program)**

None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable

(Contd. on page 5)

US

(Contd. of page 4)

· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>Class</b>	not applicable
· <b>Packing group</b>	not applicable
· <b>DOT, ADR, IMDG, IATA</b>	not applicable
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not applicable

## 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>				
· <b>Sara</b>				
· <b>Section 355 (extremely hazardous substances):</b>				
None of the ingredient is listed.				
· <b>Section 313 (Specific toxic chemical listings):</b>				
None of the ingredients is listed.				
· <b>TSCA (Toxic Substances Control Act):</b>				
All components have the value ACTIVE.				
· <b>Hazardous Air Pollutants</b>				
None of the ingredients is listed.				
· <b>Proposition 65</b>				
· <b>Chemicals known to cause cancer:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for females:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for males:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause developmental toxicity:</b>				
None of the ingredients is listed.				
· <b>DSL/NDSL (Canada)</b> All ingredients are listed				
· <b>Cancerogenity categories</b>				
· <b>EPA (Environmental Protection Agency)</b>				
None of the ingredients is listed.				
· <b>TLV (Threshold Limit Value)</b>				
None of the ingredients is listed.				
· <b>MAK (German Maximum Workplace Concentration)</b>				
None of the ingredients is listed.				
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>				
None of the ingredients is listed.				
· <b>GHS label elements</b> none				
· <b>Hazard pictograms</b> none				
· <b>Signal word</b> none				
· <b>Hazard statements</b> none				
· <b>National regulations:</b>				
· <b>Technical instructions (air):</b>				
<table border="1"><tr><th>Class</th><th>Share in %</th></tr><tr><td>NK</td><td>25-&lt;50</td></tr></table>	Class	Share in %	NK	25-<50
Class	Share in %			
NK	25-<50			
· <b>Water hazard class:</b> Water hazard class 1 (Self-assessment): slightly hazardous for water.				
· <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.				

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**
- **Date of preparation / last revision** 09/03/2025 / -

(Contd. on page 6)  
US

(Contd. of page 5)

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit

\* Data compared to the previous version altered.

US

## 1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx ; xx = K1 magenta
- **Relevant identified uses of the substance or mixture and uses advised against**
- Currently no such applications are identified.
- **Application of the substance / the mixture** METALLIC MARKER INK
- **Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

- Lifelines, LLC  
PO Box 5220  
Westport, CT 06881  
T-475-900-7335

**Emergency telephone number:**

- T - 475-900-7335

## 2 Hazard(s) identification

· **Classification of the substance or mixture**

The product is not classified, according to the Globally Harmonized System (GHS).

· **Label elements**

- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none

· **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 1  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	1
REACTIVITY	0

Health = 0  
Fire = 1  
Reactivity = 0

· **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

Mixture of the following substances, containing non-hazardous substances and colouring agents.

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7429-90-5	Aluminiumpulver (stabilisiert)	2.7%
2682-20-4	2-methyl-2H-isothiazol-3-one	0.0015-<0.03%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

· **Description of first aid measures**

· **General information:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

(Contd. of page 1)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:**  
None of the ingredients is listed.
  - **PAC-2:**  
None of the ingredients is listed.
  - **PAC-3:**  
None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 57-55-6 Propylene glycol (25-<50%)

WEEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)  
US

(Contd. of page 2)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If only a short-term loading of the glove material by splashes is expected, tricot gloves with higher wearability for the better acceptance of the users are recommended.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Fluid

**Color:**

According to product specification

**Odor:**

Product specific

**Odor threshold:**

Not determined.

**Important information on protection of health and environment, and on safety.**

-

**pH-value at 20 °C (68 °F):**

7.2-8.4

**Change in condition**

**Melting point/Melting range:**

Undetermined.

**Boiling point/Boiling range:**

100 °C (212 °F)

**Flash point:**

>113 °C (>235.4 °F)

**Flammability:**

Not applicable.

**Auto igniting:**

371 °C (699.8 °F)

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**Explosion limits:**

**Lower:**

2.6 Vol %

**Upper:**

12.6 Vol %

**Vapor pressure at 20 °C (68 °F):**

23 hPa (17.251 mm Hg)

**Density at 20 °C (68 °F):**

1.1 g/cm³ (9.2 lbs/gal)

**Relative density**

Not determined.

**Vapor density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with**

**Water:**

Fully miscible.

**Partition coefficient (n-octanol/water):**

Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):**

8.7 mPas

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

Not determined

**Water:**

Not determined

**Solids content:**

Not determined

**Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

(Contd. of page 3)

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.
- **NTP (National Toxicology Program)**

None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable

(Contd. on page 5)

US

(Contd. of page 4)

· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>Class</b>	not applicable
· <b>Packing group</b>	not applicable
· <b>DOT, ADR, IMDG, IATA</b>	not applicable
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not applicable

## 15 Regulatory information

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

- **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **DSL/NDSL (Canada)** All ingredients are listed

- **Cancerogenity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value)**

None of the ingredients is listed.

- **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **GHS label elements** none

- **Hazard pictograms** none

- **Signal word** none

- **Hazard statements** none

- **National regulations:**

- **Technical instructions (air):**

Class	Share in %
NK	25-<50

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**

- **Date of preparation / last revision** 09/03/2025 / -

(Contd. on page 6)  
US

(Contd. of page 5)

**Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*  
*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*  
*ICAO: International Civil Aviation Organisation*  
*ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)*  
*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*  
*IMDG: International Maritime Code for Dangerous Goods*  
*DOT: US Department of Transportation*  
*IATA: International Air Transport Association*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*NFPA: National Fire Protection Association (USA)*  
*HMIS: Hazardous Materials Identification System (USA)*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*NIOSH: National Institute for Occupational Safety & Health*  
*OSHA: Occupational Safety & Health*  
*TLV: Threshold Limit Value*  
*PEL: Permissible Exposure Limit*  
*REL: Recommended Exposure Limit*

**\* Data compared to the previous version altered.**

US

## 1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx ; xx = A silver, B11 gold, C blue, D green, E2 violet, F2 red, G bronze, H black, I copper, J lime green, K1 magenta
- **Relevant identified uses of the substance or mixture and uses advised against**  
Currently no such applications are identified.
- **Application of the substance / the mixture** METALLIC MARKER INK
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Lifelines, LLC  
PO Box 5220  
Westport, CT 06881  
T-475-900-7335
- **Emergency telephone number:**  
T - 475-900-7335

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).

- **GHS label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 1  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	1
REACTIVITY	0

Health = 0  
Fire = 1  
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**  
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7429-90-5	Aluminiumpulver (stabilisiert)	3-<5%
2682-20-4	2-methyl-2H-isothiazol-3-one	0.0015-<0.03%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

(Contd. of page 1)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:**  
None of the ingredients is listed.
  - **PAC-2:**  
None of the ingredients is listed.
  - **PAC-3:**  
None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 57-55-6 Propylene glycol (25-<50%)

WEEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)  
US

(Contd. of page 2)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If only a short-term loading of the glove material by splashes is expected, tricot gloves with higher wearability for the better acceptance of the users are recommended.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Fluid

**Color:**

According to product specification

**Odor:**

Product specific

**Odor threshold:**

Not determined.

**Important information on protection of health and environment, and on safety.**

-

**pH-value at 20 °C (68 °F):**

7.2-8.4

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C (212 °F)

**Flash point:**

>113 °C (>235.4 °F)

**Flammability:**

Not applicable.

**Auto igniting:**

371 °C (699.8 °F)

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**Explosion limits:**

**Lower:** 2.6 Vol %

**Upper:** 12.6 Vol %

**Vapor pressure at 20 °C (68 °F):**

23 hPa (17.251 mm Hg)

**Density at 20 °C (68 °F):**

1.1 g/cm³ (9.2 lbs/gal)

**Relative density**

Not determined.

**Vapor density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with**

**Water:** Fully miscible.

**Partition coefficient (n-octanol/water):**

Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):** 8.7 mPas

**Kinematic:** Not determined.

**Solvent content:**

**Organic solvents:** Not determined

**Water:** Not determined

**Solids content:** Not determined

**Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

(Contd. of page 3)

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.
- **NTP (National Toxicology Program)**

None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable

(Contd. on page 5)

US

(Contd. of page 4)

· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>Class</b>	not applicable
· <b>Packing group</b>	not applicable
· <b>DOT, ADR, IMDG, IATA</b>	not applicable
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not applicable

## 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>				
· <b>Sara</b>				
· <b>Section 355 (extremely hazardous substances):</b>				
None of the ingredient is listed.				
· <b>Section 313 (Specific toxic chemical listings):</b>				
None of the ingredients is listed.				
· <b>TSCA (Toxic Substances Control Act):</b>				
All components have the value ACTIVE.				
· <b>Hazardous Air Pollutants</b>				
None of the ingredients is listed.				
· <b>Proposition 65</b>				
· <b>Chemicals known to cause cancer:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for females:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for males:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause developmental toxicity:</b>				
None of the ingredients is listed.				
· <b>DSL/NDSL (Canada)</b> All ingredients are listed				
· <b>Cancerogenity categories</b>				
· <b>EPA (Environmental Protection Agency)</b>				
None of the ingredients is listed.				
· <b>TLV (Threshold Limit Value)</b>				
None of the ingredients is listed.				
· <b>MAK (German Maximum Workplace Concentration)</b>				
None of the ingredients is listed.				
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>				
None of the ingredients is listed.				
· <b>GHS label elements</b> none				
· <b>Hazard pictograms</b> none				
· <b>Signal word</b> none				
· <b>Hazard statements</b> none				
· <b>National regulations:</b>				
· <b>Technical instructions (air):</b>				
<table border="1"><tr><td><b>Class</b></td><td><b>Share in %</b></td></tr><tr><td>NK</td><td>25-&lt;50</td></tr></table>	<b>Class</b>	<b>Share in %</b>	NK	25-<50
<b>Class</b>	<b>Share in %</b>			
NK	25-<50			
· <b>Water hazard class:</b> Water hazard class 1 (Self-assessment): slightly hazardous for water.				
· <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.				

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**
- **Date of preparation / last revision** 09/03/2025 / -

(Contd. on page 6)  
US

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**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit

\* Data compared to the previous version altered.

US

## 1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx ; xx = A silver, B11 gold, C blue, D green, E2 violet, F2 red, G bronze, H black, I copper, J lime green, K1 magenta
- **Relevant identified uses of the substance or mixture and uses advised against**  
Currently no such applications are identified.
- **Application of the substance / the mixture** METALLIC MARKER INK
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Lifelines, LLC  
PO Box 5220  
Westport, CT 06881  
T-475-900-7335
- **Emergency telephone number:**  
T - 475-900-7335

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).

- **GHS label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 1  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	1
REACTIVITY	0

Health = 0  
Fire = 1  
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**  
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7429-90-5	Aluminiumpulver (stabilisiert)	3-<5%
2682-20-4	2-methyl-2H-isothiazol-3-one	0.0015-<0.03%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

(Contd. of page 1)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections:**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:**  
None of the ingredients is listed.
  - **PAC-2:**  
None of the ingredients is listed.
  - **PAC-3:**  
None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 57-55-6 Propylene glycol (25-<50%)

WEEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)

US

(Contd. of page 2)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If only a short-term loading of the glove material by splashes is expected, tricot gloves with higher wearability for the better acceptance of the users are recommended.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Fluid

**Color:**

According to product specification

**Odor:**

Product specific

**Odor threshold:**

Not determined.

**Important information on protection of health and environment, and on safety.**

-

**pH-value at 20 °C (68 °F):**

7.2-8.4

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C (212 °F)

**Flash point:**

>113 °C (>235.4 °F)

**Flammability:**

Not applicable.

**Auto igniting:**

371 °C (699.8 °F)

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**Explosion limits:**

**Lower:** 2.6 Vol %

**Upper:** 12.6 Vol %

**Vapor pressure at 20 °C (68 °F):**

23 hPa (17.251 mm Hg)

**Density at 20 °C (68 °F):**

1.1 g/cm³ (9.2 lbs/gal)

**Relative density**

Not determined.

**Vapor density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with**

**Water:** Fully miscible.

**Partition coefficient (n-octanol/water):**

Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):** 8.7 mPas

**Kinematic:** Not determined.

**Solvent content:**

**Organic solvents:** Not determined

**Water:** Not determined

**Solids content:** Not determined

**Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

(Contd. of page 3)

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.
- **NTP (National Toxicology Program)**

None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable

(Contd. on page 5)

US

(Contd. of page 4)

· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>Class</b>	not applicable
· <b>Packing group</b>	not applicable
· <b>DOT, ADR, IMDG, IATA</b>	not applicable
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not applicable

## 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>				
· <b>Sara</b>				
· <b>Section 355 (extremely hazardous substances):</b>				
None of the ingredient is listed.				
· <b>Section 313 (Specific toxic chemical listings):</b>				
None of the ingredients is listed.				
· <b>TSCA (Toxic Substances Control Act):</b>				
All components have the value ACTIVE.				
· <b>Hazardous Air Pollutants</b>				
None of the ingredients is listed.				
· <b>Proposition 65</b>				
· <b>Chemicals known to cause cancer:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for females:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for males:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause developmental toxicity:</b>				
None of the ingredients is listed.				
· <b>DSL/NDSL (Canada)</b> All ingredients are listed				
· <b>Cancerogenity categories</b>				
· <b>EPA (Environmental Protection Agency)</b>				
None of the ingredients is listed.				
· <b>TLV (Threshold Limit Value)</b>				
None of the ingredients is listed.				
· <b>MAK (German Maximum Workplace Concentration)</b>				
None of the ingredients is listed.				
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>				
None of the ingredients is listed.				
· <b>GHS label elements</b> none				
· <b>Hazard pictograms</b> none				
· <b>Signal word</b> none				
· <b>Hazard statements</b> none				
· <b>National regulations:</b>				
· <b>Technical instructions (air):</b>				
<table border="1"><tr><th>Class</th><th>Share in %</th></tr><tr><td>NK</td><td>25-&lt;50</td></tr></table>	Class	Share in %	NK	25-<50
Class	Share in %			
NK	25-<50			
· <b>Water hazard class:</b> Water hazard class 1 (Self-assessment): slightly hazardous for water.				
· <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.				

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**
- **Date of preparation / last revision** 09/03/2025 / -

(Contd. on page 6)  
US

(Contd. of page 5)

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit

\* Data compared to the previous version altered.

US

## 1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx ; xx = A silver, B11 gold, C blue, D green, E2 violet, F2 red, G bronze, H black, I copper, J lime green, K1 magenta
- **Relevant identified uses of the substance or mixture and uses advised against**  
Currently no such applications are identified.
- **Application of the substance / the mixture** METALLIC MARKER INK
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Lifelines, LLC  
PO Box 5220  
Westport, CT 06881  
T-475-900-7335
- **Emergency telephone number:**  
T - 475-900-7335

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).

- **GHS label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 1  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	1
REACTIVITY	0

Health = 0  
Fire = 1  
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**  
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7429-90-5	Aluminiumpulver (stabilisiert)	3-<5%
2682-20-4	2-methyl-2H-isothiazol-3-one	0.0015-<0.03%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

(Contd. of page 1)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:**  
None of the ingredients is listed.
  - **PAC-2:**  
None of the ingredients is listed.
  - **PAC-3:**  
None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 57-55-6 Propylene glycol (25-<50%)

WEEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)

US

(Contd. of page 2)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If only a short-term loading of the glove material by splashes is expected, tricot gloves with higher wearability for the better acceptance of the users are recommended.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Fluid

**Color:**

According to product specification

**Odor:**

Product specific

**Odor threshold:**

Not determined.

**Important information on protection of health and environment, and on safety.**

-

**pH-value at 20 °C (68 °F):**

7.2-8.4

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C (212 °F)

**Flash point:**

>113 °C (>235.4 °F)

**Flammability:**

Not applicable.

**Auto igniting:**

371 °C (699.8 °F)

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**Explosion limits:**

**Lower:** 2.6 Vol %

**Upper:** 12.6 Vol %

**Vapor pressure at 20 °C (68 °F):**

23 hPa (17.251 mm Hg)

**Density at 20 °C (68 °F):**

1.1 g/cm³ (9.2 lbs/gal)

**Relative density**

Not determined.

**Vapor density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with**

**Water:** Fully miscible.

**Partition coefficient (n-octanol/water):**

Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):** 8.7 mPas

**Kinematic:** Not determined.

**Solvent content:**

**Organic solvents:** Not determined

**Water:** Not determined

**Solids content:** Not determined

**Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

(Contd. of page 3)

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.
- **NTP (National Toxicology Program)**

None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable

(Contd. on page 5)

US

(Contd. of page 4)

· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not applicable
· <b>Class</b>	not applicable
· <b>Packing group</b>	not applicable
· <b>DOT, ADR, IMDG, IATA</b>	not applicable
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not applicable

## 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>				
· <b>Sara</b>				
· <b>Section 355 (extremely hazardous substances):</b>				
None of the ingredient is listed.				
· <b>Section 313 (Specific toxic chemical listings):</b>				
None of the ingredients is listed.				
· <b>TSCA (Toxic Substances Control Act):</b>				
All components have the value ACTIVE.				
· <b>Hazardous Air Pollutants</b>				
None of the ingredients is listed.				
· <b>Proposition 65</b>				
· <b>Chemicals known to cause cancer:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for females:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause reproductive toxicity for males:</b>				
None of the ingredients is listed.				
· <b>Chemicals known to cause developmental toxicity:</b>				
None of the ingredients is listed.				
· <b>DSL/NDSL (Canada)</b> All ingredients are listed				
· <b>Cancerogenity categories</b>				
· <b>EPA (Environmental Protection Agency)</b>				
None of the ingredients is listed.				
· <b>TLV (Threshold Limit Value)</b>				
None of the ingredients is listed.				
· <b>MAK (German Maximum Workplace Concentration)</b>				
None of the ingredients is listed.				
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>				
None of the ingredients is listed.				
· <b>GHS label elements</b> none				
· <b>Hazard pictograms</b> none				
· <b>Signal word</b> none				
· <b>Hazard statements</b> none				
· <b>National regulations:</b>				
· <b>Technical instructions (air):</b>				
<table border="1"><tr><th>Class</th><th>Share in %</th></tr><tr><td>NK</td><td>25-&lt;50</td></tr></table>	Class	Share in %	NK	25-<50
Class	Share in %			
NK	25-<50			
· <b>Water hazard class:</b> Water hazard class 1 (Self-assessment): slightly hazardous for water.				
· <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.				

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**
- **Date of preparation / last revision** 09/03/2025 / -

(Contd. on page 6)  
US

(Contd. of page 5)

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit

\* Data compared to the previous version altered.

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