Safety Data Sheet

acc. to OSHA HCS

Printing date 01/21/2022 Version 3 Reviewed on 01/21/2022

1 Identification

- **Product identifier**

- **Trade name: Compound ZF 113**

- **Article number:** 15160001130

- **Application of the substance / the mixture**
Process auxiliary for surface finishing
Industrial use

- **Details of the supplier of the safety data sheet**

- **Manufacturer/ Supplier:**
Rösler Metal Finishing USA, L.L.C.
1551 Denso Road
Battle Creek, MI 49037
USA
Phone: +1(269)441-3000
Fax: +1(269)441-3001
rosler-us@rosler.com
www.rosler.us

- **Information department:** Department of Product Control

- **Emergency telephone number:**
Emergency Number (24h emergency contact): CHEMTREC Phone: (800)-424-9300

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2 Hazard(s) identification

- **Classification of the substance or mixture**

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure. Route of exposure: Oral.

GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**

GHS05 GHS08

- **Signal word** Danger

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- **Hazard-determining components of labeling:**
fatty acids, C8-10
2,2'-iminodiethanol
2-aminoethanol
Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)
- **Hazard statements**
Causes skin irritation.
Causes serious eye damage.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure. Route of exposure: Oral.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves / eye protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.

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

* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**		
68937-75-7	fatty acids, C8-10 Skin Corr. 1B, H314; Eye Dam. 1, H318	5-10%
68155-07-7	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) Eye Dam. 1, H318; Skin Irrit. 2, H315	5-10%
141-43-5	2-aminoethanol Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; STOT SE 3, H335; Flam. Liq. 4, H227 Specific concentration limit: STOT SE 3; H335: C ≥ 5 %	1-5%
111-42-2	2,2'-iminodiethanol Carc. 2, H351; Repr. 2, H361; STOT RE 2, H373; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315	1-5%
67701-05-7	Fatty acids, C8-18 and C18-unsatd. Eye Dam. 1, H318; Skin Irrit. 2, H315	1-5%

- **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:**
Immediately remove any clothing soiled by the product.
Personal protection for the First Aider.

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Take affected persons out of danger area and lay down.
- **After inhalation:**
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
- **After skin contact:**
If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Protect unharmed eye.
- **After swallowing:**
Rinse out mouth with plenty of water.
Do not induce vomiting; immediately call for medical help.
- **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.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.
- **Environmental precautions:**
Do not allow product to enter sewers/ surface or ground water.
Do not allow product to penetrate the ground/soil.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the collected material according to regulations.
- **Reference to other sections**
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:**		
141-43-5	2-aminoethanol	6 ppm
111-42-2	2,2'-iminodiethanol	3 mg/m³
7664-38-2	orthophosphoric acid	3 mg/m³
67-63-0	propan-2-ol	400 ppm

- **PAC-2:**		
141-43-5	2-aminoethanol	170 ppm

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111-42-2	2,2'-iminodiethanol	28 mg/m³
7664-38-2	orthophosphoric acid	30 mg/m³
67-63-0	propan-2-ol	2000* ppm

- **PAC-3:**

141-43-5	2-aminoethanol	1,000 ppm
111-42-2	2,2'-iminodiethanol	130 mg/m³
7664-38-2	orthophosphoric acid	150 mg/m³
67-63-0	propan-2-ol	12000** ppm

* 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **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:**
  Keep receptacle tightly sealed.
  Store at 41°F to 104°F
  Can be stored for at least 2 years.
- **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 item 7.

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
  The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
  At this time, the other constituents have no known exposure limits.

141-43-5 2-aminoethanol	
PEL	Long-term value: 6 mg/m³, 3 ppm
REL	Short-term value: 15 mg/m³, 6 ppm Long-term value: 8 mg/m³, 3 ppm
TLV	Short-term value: 6 ppm Long-term value: 3 ppm
111-42-2 2,2'-iminodiethanol	
REL	Long-term value: 15 mg/m³, 3 ppm
TLV	Long-term value: 1* mg/m³ Skin; *inhalable fraction and vapor, A3

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

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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Do not eat, drink, smoke or sniff while working.
- **Breathing equipment:**
Not necessary in case of intended use.
Use suitable respiratory protective device if vapors occur or aerosol is formed.
Filter A/P2
- **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**
e.g.
Nitrile rubber, NBR
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.
- **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:**

Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Blue
- Odor:	Characteristic
- pH-value at 20°C (68°F):	9.5 (± 0.3)
- pH-Value; 5g/l at 20°C (68°F):	8.9 (± 0.3)
- Melting point/Melting range:	Undetermined.
- Boiling point/Boiling range:	Undetermined.
- Flash point:	Not applicable.
- Flammability (solid, gaseous):	Not applicable.

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- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  Lower: Not determined.
  Upper: Not determined.

- **Vapor pressure at 20 °C (68 °F):** Not determined.

- **Density at 20°C (68°F):** 1.008 (± 0.010) g/cm³ (8.412 (± 0.083) 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:**
  Kinematic: Not determined.
  Dynamic at 22°C (72°F): 18 - 27 mPa.s

- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No dangerous reactions in case of intended use.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions in case of intended use.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** None in case of intended use and storage.

* 11 Toxicological information

- **Information on toxicological effects**

- **LD/LC50 values that are relevant for classification:**		
141-43-5 2-aminoethanol		
Oral	LD50	1,089 mg/kg (rat)
Dermal	LD50	2,504 mg/kg (rabbit)
Inhalative	LC50	1.3 mg/l (rat)
	LC0	1.3 mg/l (rat)
111-42-2 2,2'-iminodiethanol		
Oral	LD50	1,600 mg/kg (rat)

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Dermal	LD50	13,079 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:**
Determination of Skin Corrosion Potential
Method: OECD 431
Result: Not corrosive

According to GHS regulation:
Irritant to skin and mucous membranes.
- **on the eye:**
This product has to be classified using the calculation set out according to GHS regulation.
Causes serious eye damage.
- **Additional toxicological information:**
Irritant
Corrosive

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**		
111-42-2	2,2'-iminodiethanol	2B
67-63-0	propan-2-ol	3

- **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:**
- **COD-value (solution of 0.5% in water):** 3735 mg/L
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities of product leak into the ground.
Avoid transfer of product into the environment.
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Dispose of in accordance with all applicable federal, state and local regulations.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **Transport hazard class(es)**

- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Void
- **Packing group**
- **DOT, ADR, IMDG, IATA** Void
- **Environmental hazards:** Not applicable.

- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

- **Transport/Additional information:** Not dangerous according to the above specifications.

- **UN "Model Regulation":** Void

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):	
111-42-2	2,2'-iminodiethanol
7664-38-2	orthophosphoric acid
67-63-0	propan-2-ol

TSCA (Toxic Substances Control Act):		
68937-75-7	fatty acids, C8-10	ACTIVE
68155-07-7	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	ACTIVE
141-43-5	2-aminoethanol	ACTIVE
111-42-2	2,2'-iminodiethanol	ACTIVE
67701-05-7	Fatty acids, C8-18 and C18-unsatd.	ACTIVE

Hazardous Air Pollutants	
111-42-2	2,2'-iminodiethanol

- **Proposition 65**

Chemicals known to cause cancer:	
111-42-2	2,2'-iminodiethanol

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- **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.

- **Cancerogenity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value)**

111-42-2	2,2'-iminodiethanol	A3
67-63-0	propan-2-ol	A4

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

None of the ingredients is listed.

- **National regulations:**

- **Information about limitation of use:**
Employment restrictions concerning pregnant and lactating women must be observed.

- **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 or warranty for any specific product features and shall not establish a legally valid contractual relationship. The user is responsible for determing wether the product is suitable for its intendes conditions of use.

- **Relevant phrases**
H227 Combustible liquid.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

- **Department issuing SDS:**
Rösler Oberflächentechnik GmbH
Department of Product Control
- **Contact:** SDS Coordinator

- **Abbreviations and acronyms:**
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

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ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 4: Flammable liquids – Category 4
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Carc. 2: Carcinogenicity – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

- **Sources**
  For the preparation of this SDS information from our suppliers, information on chemicals from the European Chemicals Agency (ECHA) and data from the GESTIS database were used.
- *** Data compared to the previous version altered.**