

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

SECTION 1: Identification

- 1.1 Product identifier
Trade name Iron Falloff
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses Iron remover
Professional use
Industrial use
HS code 3402.42.90
- 1.3 Details of the supplier of the safety data sheet
Wisconsin Chemical Wholesale
385 W Arndt St
Fond Du lac, WI 54935
United States

e-mail: wisconsinchemicalwholesale@gmail.com
Website: www.wisconsinchemical.com
e-mail (competent person) wisconsinchemicalwholesale@gmail.com
- 1.4 Emergency telephone number
Emergency information service USA 1.800.535.5053, INTL 1.352.323.3500
24 hr emergency information


SECTION 2: Hazard(s) identification

- 2.1 Classification of the substance or mixture
Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
A.4S	skin sensitization	1	Skin Sens. 1	H317

For full text of abbreviations: see SECTION 16.

- 2.2 Label elements
Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word warning
- Pictograms
GHS07 
- Hazard statements
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

- Precautionary statements

P261 P272 P280	Avoid breathing dust/fume/gas/mist/vapors/spray.
P302+P352	Contaminated work clothing must not be allowed out of the workplace.
P305+P351+P338	Wear protective gloves/protective clothing/eye protection/face protection.
P321	If on skin: Wash with plenty of water.
P333+P313	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	Specific treatment (see on this label).
P363	If skin irritation or rash occurs: Get medical advice/attention.
P501	If eye irritation persists: Get medical advice/attention. Wash contaminated clothing before reuse. Dispose of contents/container in accordance with local/regional/national/international regulations.

- Hazardous ingredients for labelling (2-hydroxyethyl)ammonium mercaptoacetate

2.3 Other hazards

Hazards not otherwise classified

- May be harmful if swallowed (GHS category 5: acutely toxic - oral).
- Toxic to aquatic life with long lasting effects (GHS category 2: aquatic toxicity - acute and/or chronic).
- Causes mild skin irritation (GHS category 3: irritant to skin).

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Notes
(2-hydroxyethyl)ammonium mercaptoacetate	CAS No 126-97-6	5 - < 12	Acute Tox. 4 / H302 Skin Sens. 1B / H317	
disodium 4,5-dihydroxybenzene-1,3-disulphonate	CAS No 149-45-1	1 - < 5	Eye Irrit. 2 / H319	
2-(2-butoxyethoxy)ethanol	CAS No 112-34-5	1 - < 5	Eye Irrit. 2 / H319	
Alcohols, C11-15- secondary, ethoxylated	84133-50-6 CAS No	1 - < 3	Skin Irrit. 2 / H315 Eye Dam. 1 / H318	
benzaldehyde	100-52-7	0.1 - < 1	Acute Tox. 4 / H302 Acute Tox. 3 / H331 Flam. Liq. 4 / H227	

For full text of abbreviations: see SECTION 16.

This table, if present, includes all GHS classified ingredients present above their cut-off limits, even if the finished product is not classified as hazardous by GHS.

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO₂)

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation
Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Control of the effects

Protect against external exposure, such as frost

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	diethylene glycol monobutyl ether	112-34-5	TLV®	10						iv	AC-GIH® 2019

Notation

Ceiling-C

iv

STEL

TWA

ceiling value is a limit value above which exposure should not occur inhalable fraction and vapor

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	DNEL	1.4 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	DNEL	2.1 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	68 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	83 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	68 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	101 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
	100-52-7	DNEL	9.8 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
benzaldehyde	100-52-7	DNEL	9.8 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
benzaldehyde	100-52-7	DNEL	1.1 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	PNEC	38 µg/l	aquatic organisms	freshwater	short-term (single instance)
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	PNEC	3.8 µg/l	aquatic organisms	marine water	short-term (single instance)
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	PNEC	3.2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	200 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	4 mg/kg	benthic organisms	sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	56 mg/kg	(top) predators	water	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	3.9 mg/l	aquatic organisms	water	intermittent release
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.4 mg/kg	pelagic organisms	sediment	short-term (single instance)
	112-34-5	PNEC	200 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point PNEC	Threshold level	Organism	Environmental compartment	Exposure time
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	1.1 mg/l	aquatic organisms	freshwater	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.11 mg/l	aquatic organisms	marine water	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	4.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.44 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.32 mg/kg	terrestrial organisms	soil	short-term (single instance)
	100-52-7	PNEC	0.002 mg/l	aquatic organisms	freshwater	short-term (single instance)
benzaldehyde	100-52-7	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
benzaldehyde	100-52-7	PNEC	7.6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
benzaldehyde	100-52-7	PNEC	0.022 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
benzaldehyde	100-52-7	PNEC	0.002 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
benzaldehyde	100-52-7	PNEC	0.003 mg/kg	terrestrial organisms	soil	

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	colorless to pale pink
Particle	not relevant (liquid)
Odor	fruity

Other safety parameters

pH (value)	6–8 (25 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	100 °C
Flash point	114 °C at 101 kPa
Evaporation rate	Not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	32 hPa at 25 °C
Density	1 g/ml
Vapor density	this information is not available

Solubility(ies)

- Water solubility	miscible in any proportion
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Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	210 °C (auto-ignition temperature (liquids and gases))
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

9.2 Other information

Temperature class (USA, acc. to NEC 500)	T3 (maximum permissible surface temperature on the equipment: 200°C)
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IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Mixture with acids will generate poisonous hydrogen sulphide gas.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Acids, Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful if swallowed.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-	oral	318 mg/kg
benzaldehyde	6 100-	oral	1,430 mg/kg
benzaldehyde	52-7	inhalation: vapor	5 mg/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	LC50	>100 mg/l	fish	96 h
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	EC50	>100 mg/l	aquatic invertebrates	48 h
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	ErC50	65 mg/l	algae	72 h
disodium 4,5-dihydroxybenzene-1,3-disulphonate	149-45-1	EC50	>100 mg/l	aquatic invertebrates	48 h
disodium 4,5-dihydroxybenzene-1,3-disulphonate	149-45-1	ErC50	0.49 mg/l	algae	72 h
2-(2-butoxyethoxy)ethanol	112-34-5	LC50	1,300 mg/l	fish	96 h
2-(2-butoxyethoxy)ethanol	112-34-5	EC50	>100 mg/l	aquatic invertebrates	48 h
2-(2-butoxyethoxy)ethanol	112-34-5	ErC50	>100 mg/l	algae	96 h
Alcohols, C11-15- secondary, ethoxylated	84133-50-6	LC50	39 mg/l	fathead minnow	96 h
Alcohols, C11-15- secondary, ethoxylated benzaldehyde	84133-50-6	LC50	45 mg/l	daphnia magna	48 h
	100-52-7	LC50	12 mg/l	fish	96 h

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	EC50	>1,000 mg/l	microorganisms	3 h
benzaldehyde	100-52-7	EC50	50 mg/l	aquatic invertebrates	24 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0.1\%$.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number

DOT

UN 3082

Not regulated under DOT until packaged in single containers larger than 119 gallons each (liquid) or 882 lbs each (solid).

IMDG-Code

UN 3082

ICAO-TI

UN 3082

14.2 UN proper shipping name

DOT

Environmentally hazardous substance, liquid, n.o.s.

IRON FALLOFF

Version number: GHS 1.0


Date of compilation: 2023-10-09

IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
ICAO-TI	Environmentally hazardous substance, liquid, n.o.s.
Technical name (hazardous ingredients)	disodium 4,5-dihydroxybenzene-1,3-disulphonate, benzaldehyde
14.3 Transport hazard class(es)	
DOT	9
IMDG-Code	9
ICAO-TI	9
14.4 Packing group	
DOT	III III III
IMDG-Code	hazardous to the aquatic environment
ICAO-TI	disodium 4,5-dihydroxybenzene-1,3-disulphonate, benzaldehyde
14.5 Environmental hazards	
Environmentally hazardous substance (aquatic environment)	
Special precautions for user	
14.6 There is no additional information.	
14.7 Transport in bulk according to IMO instruments	
The cargo is not intended to be carried in bulk.	

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Not regulated under DOT until packaged in single containers larger than 119 gallons each - liquid, or 882 lbs each - solid.

Particulars in the shipper's declaration	UN3082, Environmentally hazardous substance, liquid, n.o.s., (contains: disodium 4,5-dihydroxybenzene-1,3-disulphonate, benzaldehyde), 9, III
Reportable quantity (RQ)	28,216,704 lbs (12,810,384 kg) (isobutyl acetate) (isopentyl acetate)
Danger label(s)	9, fish and tree
	
Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	8, 146, 173, 335, IB3, T4, TP1, TP29
ERG No	171

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

International Maritime Dangerous Goods Code (IMDG)

Marine pollutant yes (hazardous to the aquatic environment) (disodium 4,5-dihydroxybenzene-1,3-disulphonate)

Danger label(s) 9, fish and tree



Special provisions (SP) 274, 335, 969

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

EmS F-A, S-F

Stowage category A

International Civil Aviation Organization (ICAO-IATA/DGR)

Environmental hazards yes (hazardous to the aquatic environment)

Danger label(s) 9, fish and tree



Special provisions (SP) A97, A158, A197

Excepted quantities (EQ) E1

Limited quantities (LQ) 30 kg

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
water	7732-18-5	solvent	
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	metal cleaner	
2-(2-butoxyethoxy)ethanol		co-solvent	CA TACs
Alcohols, C11-15- secondary, ethoxylated	84133-50-6	surfactant	
benzaldehyde	100-52-7	fragrance	

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

Name of substance	CAS No	Functionality	Authoritative Lists
isobutyl acetate	110-19-	fragrance	
isopentyl acetate	0 123-	fragrance	
Benzyl acetate	92-2	fragrance	

140-11-

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
2-(2-butoxyethoxy)ethanol		1022			1.0 %

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
2-(2-butoxyethoxy)ethanol			
benzaldehyde	100-52-7		F2

Legend

F2 Flammable - Second Degree

- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
GLYCOL ETHERS		E

Legend

E Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
benzaldehyde	100-52-	F
benzaldehyde	7 100-	F
benzaldehyde	52-7	F

Legend

F Flammability (NFPA®)

100-52-

7

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

VOC content

- Regulated Volatile Organic Compounds (VOC-EPA) 0.27

- Regulated Volatile Organic Compounds (VOC-Cal ARB) %

0.27

Industry or sector specific available guidance(s)

%

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

Category	Rating	Description
Chronic	/	none
Health	2	temporary or minor injury may occur
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

Chronic: chronic hazard
 Flammability: flammability hazards
 Health: health hazard
 Personal protection: personal protective equipment (PPE) for normal use
 Physical hazard: reactivity

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
VN	NCI	not all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)

IRON FALLOFF

Version number: GHS 1.0

Date of compilation: 2023-10-09

Legend

AIIC	Australian Inventory of Industrial Chemicals
CTCR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Alignment to regulation: Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").
 Restructuring: section 9, section 14

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH® 2019	From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth
ErC50	(EbC50) or growth rate (ErC50) relative to the control

IRON FALLOFF

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ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
HS	Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation)
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval Lower hazard substance
LHS	National Fire Protection Association (United States)
NFPA®	No-Longer Polymer
NLP	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
NPCA-HMIS® III	Occupational Safety and Health Administration (United States)
OSHA	Persistent, Bioaccumulative and Toxic
PBT	Predicted No-Effect Concentration
PNEC	Parts per million
ppm	Corrosive to skin
Skin Corr.	Irritant to skin
Skin Irrit.	Skin sensitization
Skin Sens.	Short-term exposure limit
STEL	Threshold Limit Values
TLV®	Time-weighted average
TWA	Volatile Organic Compounds
VOC	Very Persistent and very Bioaccumulative
vPvB	

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H227	Combustible liquid.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.