

Safety Data Sheet

29 CFR 1910.1200 App D

PVOH688, PVOH-688 SELVOL™ Polyvinyl alcohol, copolymer

Version number: 5.1

SECTION 1: Identification

1.1 Product identifier

Identification of the substance

vinyl acetate-vinyl alcohol copolymer

Trade name

SELVOL™ Polyvinyl alcohol, copolymer

Grade: 203, 203S, E 203, E 203S, 205, 205S, E 205, E 205S, E 04/88 LA, 418, 425, 430, 443, E 4/88, E 4/88E, E 4/88W, E 05/88 LA, 502, 502S, 504, E 504, 508, E 508, 513, 513S, E 513, E 513S, 518, 523, 523S, E 523, E 523S, 528, 530, 540, 540S, E 08/88, 805, 818, 823, 830, 831, 840, 50-42N, WS-53NF, WS-724

CAS number

25213-24-5

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

Relevant identified uses

Chemical intermediate (including monomers), Auxiliary for leather, Auxiliary for textil, packaging, Surfactant, Adhesives industry, Food industry

1.3 Details of the supplier of the safety data sheet

Sekisui Specialty Chemicals America, LLC
1501 LBJ Freeway, Suite 530
Dallas, TX 75234, United States

Telephone: +1-972-277-2900
Website: www.sekisui-sc.com

1.4 Emergency telephone number

Poison center		
Country	Name	Telephone
-	CHEMTREC International (outside USA)	1-703-527-3887
United States	CHEMTREC USA	(800) 424-9300

As above or nearest toxicological information centre.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

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

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
B.cD	combustible dust	Comb. Dust	cD	OSHA003

2.2 Label elements

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

Signal word warning

Pictograms Not required.

Hazard statements

OSHA003 May form combustible dust concentrations in air.

2.3 Other hazards

Product forms slippery surface when combined with water.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance vinyl acetate-vinyl alcohol copolymer

Identifiers

CAS No 25213-24-5

Molecular formula (C₄H₆O₂.C₂H₄O)_x

Purity 92 – 95 %

Impurities and additives					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Specific Conc. Limits
methanol	CAS No 67-56-1	≤ 0.9	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 3 / H331 STOT SE 1 / H370	  	

Impurities and additives					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Specific Conc. Limits
			Flam. Liq. 2 / H225		
methyl acetate	CAS No 79-20-9	≤ 0.9	Eye Irrit. 2 / H319 STOT SE 3 / H336 Flam. Liq. 2 / H225	 	

Remarks

for full text of H-phrases: see SECTION 16

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Take off immediately all contaminated clothing.
In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

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

Following skin contact

Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.

Following eye contact

Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

water, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous decomposition products: Section 10.

Danger of dust explosion.

Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO₂)

5.3 Advice for firefighters

Keep containers cool with water spray.

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.

Special protective equipment for firefighters

chemical protection suit, self-contained breathing apparatus (SCBA)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Control of dust.

Avoidance of ignition sources.

Do not breathe dust.

Do not breathe vapours.

Avoid contact with skin and eyes.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

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

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.
Collect spillage.

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

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.
Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharge.
Removal of dust deposits.
Only vacuum cleaners containing no ignition sources may be used for combustible dusts.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.

Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Remove contaminated clothing and protective equipment before entering eating areas.
Do not breathe dust.
Do not breathe vapor.
Avoid contact with skin and eyes.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Removal of dust deposits.

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Take precautionary measures against static discharge.

Ground/bond container and receiving equipment.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat, frost

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Keep container tightly closed in a cool place.

Store in a dry place.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Store in a dry place. Store in a closed container.

Store in a well-ventilated place. Keep cool.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The following constituents are the only constituents of the product which have a PEL, a TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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]	Notation	Source
US	Particulates not otherwise regulated	-	PEL (CA)	-	10	-	-	dust	Cal/OSHA PEL
US	Particulates not otherwise regulated	-	PEL (CA)	-	5	-	-	r	Cal/OSHA PEL
US	particulates not otherwise classified	-	REL	-	-	-	-	appx-D	NIOSH REL
US	particulates not otherwise classified (PNOC)	-	PEL	1,766	15	-	-	partml, i, dust	29 CFR 1910.1000
US	particulates not otherwise classified (PNOC)	-	PEL	529.5	5	-	-	partml, r, dust	29 CFR 1910.1000
US	methanol	67-56-1	TLV®	200	-	250	-	H	ACGIH® 2023
US	methyl alcohol	67-56-1	REL	200 (10 h)	260 (10 h)	250	325	-	NIOSH REL
US	methyl alcohol	67-56-1	PEL	200	260	-	-	-	29 CFR 1910.1000
US	methyl alcohol (methanol)	67-56-1	PEL (CA)	200	260	250	325	-	Cal/OSHA PEL
US	methyl acetate	79-20-9	PEL (CA)	200	610	250	760	-	Cal/OSHA PEL
US	methyl acetate	79-20-9	REL	200 (10 h)	610 (10 h)	250	760	-	NIOSH REL
US	methyl acetate	79-20-9	TLV®	200	-	250	-	-	ACGIH® 2024
US	methyl acetate	79-20-9	PEL	200	610	-	-	-	29 CFR 1910.1000

Notation

appx-D	see Appendix D - Substances with No Established RELs
dust	as dust
H	absorbed through the skin
i	inhalable fraction
partml	particles/ml
r	respirable fraction

Notation

STEL	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)
TWA	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)

Biological limit values							
Country	Name of agent	Parameter	Notation	Identifier	Value	Material	Source
US	methanol	methanol	-	BEI®	15 mg/l	urine	ACGIH® 2024

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
IIR: isobutene-isoprene (butyl) rubber	these information are not available	these information are not available
NR: natural rubber, latex	these information are not available	these information are not available

Wear suitable gloves.

Check leak-tightness/impermeability prior to use.

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.

Body protection

Protective clothing for use against solid particulates.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state

solid

Color

whitish

Odor

characteristic

Odor threshold

not determined

Other safety parameters

pH (value)

4.5 – 6.5 (in aqueous solution: 40 g/l, 20 °C)

Melting point/freezing point

230 – 240 °C

Boiling point or initial boiling point and boiling range

not determined

Flash point

not applicable

Evaporation rate

not determined

Flammability (solid, gas)

this material is combustible, but will not ignite readily

Explosive limits

not determined

Explosion limits of dust clouds

not determined

Vapor pressure

not determined

Density

not determined

Bulk density

610 – 670 kg/m³

Relative vapour density

not applicable

Solubility(ies)

Water solubility

soluble in hot water

Partition coefficient

n-octanol/water (log KOW)

not determined

Auto-ignition temperature

not determined

Decomposition temperature

not relevant

Viscosity	not relevant (solid)
Explosive properties	dust explosion hazards
Oxidizing properties	none
Information for relevant hazard classes according to GHS	there is no additional information

9.2 Other information there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Danger of dust explosion.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharge.
Control of dust.

10.5 Incompatible materials

oxidizers, peroxides, perchlorates, nitrate, metals

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.
Carbon monoxide (CO).
Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgment (weight of evidence determination).

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

Acute toxicity

Shall not be classified as acutely toxic (oral).

Shall not be classified as acutely toxic (inhalation).

Exposure route	Endpoint	Value	Species
oral	LD50	>5,000 mg/kg	rat
inhalation: dust/mist	LC50	>20 mg/l/1h	rat

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
methanol	67-56-1	oral	LD50	1,187 – 2,769 mg/kg	rat
methanol	67-56-1	dermal	LD50	17,100 mg/kg	rabbit
methyl acetate	79-20-9	oral	LD50	6,482 mg/kg	rat, male
methyl acetate	79-20-9	dermal	LD0	2,000 mg/kg	rat
methyl acetate	79-20-9	inhalation: vapor	LC0	49.2 mg/l/4h	rabbit
methyl acetate	79-20-9	inhalation: vapor	LC100	98.4 mg/l/4h	rabbit

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Skin sensitization

Shall not be classified as a skin sensitizer.

Respiratory sensitization

Shall not be classified as a respiratory sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

IARC Monographs

not listed

National Toxicology Program (United States)

not listed

OSHA Carcinogens

Not listed.

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.

11.2 Other information

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

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

Endpoint	Exposure time	Value	Species
LC50	96 h	8,300 mg/l	daphnia magna
LC50	96 h	>10,000 mg/l	bluegill (Lepomis macrochirus)
LC50	96 h	>40,000 mg/l	fathead minnow (Pimephales promelas)
LC50	48 h	7,900 mg/l	Ceriodaphnia dubia (water flea)
EC50	48 h	8,300 mg/l	daphnia magna

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Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method
methanol	67-56-1	LC50	96 h	15,400 mg/l	bluegill (<i>Lepomis macrochirus</i>)	EPA-660/3-75-009
methanol	67-56-1	EC50	96 h	12,700 mg/l	bluegill (<i>Lepomis macrochirus</i>)	EPA-660/3-75-009
methanol	67-56-1	EC50	96 h	18,260 mg/l	daphnia magna	OECD Guideline 202
methanol	67-56-1	ErC50	96 h	~22,000 mg/l	algae (<i>pseudokirchneriella subcapitata</i>)	OECD Guideline 201
methyl acetate	79-20-9	LC50	96 h	≥250 – ≤350 mg/l	zebra fish (<i>Danio rerio</i>)	OECD Guideline 203
methyl acetate	79-20-9	EC50	48 h	1,027 mg/l	daphnia magna	OECD Guideline 202
methyl acetate	79-20-9	ErC50	72 h	>120 mg/l	algae (<i>Desmodesmus subspicatus</i>)	OECD Guideline 201

Aquatic toxicity (chronic)

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

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
methyl acetate	79-20-9	EC50	16 h	6,000 mg/l	activated sludge (<i>Pseudomonas putida</i>)	DIN 38412 T.9	ECHA
methyl acetate	79-20-9	NOEC	72 h	120 mg/l	algae (<i>Desmodesmus subspicatus</i>)	OECD Guideline 201	ECHA
methyl acetate	79-20-9	growth (Eb-Cx) 10%	16 h	1,830 mg/l	activated sludge (<i>Pseudomonas putida</i>)	DIN Vorentwurf 38412 Teil 9	ECHA
methyl acetate	79-20-9	growth rate (ErCx) 10%	72 h	>120 mg/l	algae (<i>Desmodesmus subspicatus</i>)	OECD Guideline 201	ECHA

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12.2 Persistence and degradability

Biodegradation

No data available.

Process of degradability				
Degradation rate		Method		
90 % (OECD 302 B)				
Name of substance	CAS No	Process	Degradation rate	Time
methanol	67-56-1	oxygen depletion	95 %	20 d
methyl acetate	79-20-9	oxygen depletion	75 %	19 d

Persistence

No data available.

12.3 Bioaccumulative potential

Name of substance	CAS No	BCF	Log KOW
methanol	67-56-1	<10	-0.77
methyl acetate	79-20-9	-	0.18

12.4 Mobility in soil

No data 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.

12.6 Other adverse effects

Data are not available.

Remarks

None.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

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Waste treatment of containers/packages

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.

SECTION 14: Transport information

14.1 UN number not subject to transport regulations

14.2 UN proper shipping name -

14.3 Transport hazard class(es) -

14.4 Packing group -

14.5 Environmental hazards -

14.6 Special precautions for user -

14.7 Transport in bulk according to IMO instruments -

14.8 Information for each of the UN Model Regulations

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

Not subject to transport regulations.

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) Substance is listed (ACTIVE)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

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

Not listed

Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings				
Name of substance	Name acc. to inventory	CAS No	Remarks	Effective date
methanol	methanol	67-56-1	-	1987-01-01

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	Name acc. to inventory	CAS No	Remarks	Stat- utory code	Final RQ pounds (Kg)
methanol	Methanol; Methyl alcohol	67-56-1	-	3 4	5000 (2270)

Legend

3 "3" indicates that the source is section 112 of the Clean Air Act

4 "4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

Clean Air Act

Not listed

Right to Know Hazardous Substance List

Toxic or Hazardous Substance List (MA-TURA)

Name of substance	Name acc. to inventory	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Thres hold	De Minimis Concentra- tion Threshold
methanol	Methanol	67-56-1	-	-	-	1.0 %

Hazardous Substance List (NJ-RTK)

Name of substance	Name acc. to in- ventory	CAS No	Remarks	Classifica- tions	Lis- ted in	Sub- stanc e num- ber	DOT num- ber
methanol	methyl alcohol (meth- anol) (methanol)	67-56- 1	-	TE F3.	1 2 3 4 6 8 15 17 18 20 21	1222	1230

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Name of substance	Name acc. to inventory	CAS No	Remarks	Classifications	Listed in	Substance number	DOT number
methyl acetate	methyl acetate (acetic acid, methyl ester)	79-20-9	-	F3.	1 2 3 4 15 17	1217	1231

Legend

- 1 Occupational Safety and Health Administration, 29 CFR 1910-Occupational Safety and Health Standards, Subpart Z-Toxic and Hazardous Substances, July 1, 2008.
- 15 "Fire Protection Guide to Hazardous Materials," NFPA 49 (Hazardous Chemicals Data), NFPA 325 (Guide to Fire Hazard Properties of Flammable Liquids, Gases, and Volatile Solids), and NFPA 704 (Standard System for the Identification of the Hazards of Materials for Emergency Response), National Fire Protection Association (NFPA), 2001.
- 17 "2008 Emergency Response Guidebook," Research and Special Programs Administration, U.S. Department of Transportation, 2008.
- 18 List of Toxic Release Inventory Chemicals, Section 313, Emergency Planning and Community Right to Know Act (EPCRA), Toxic Release Inventory (TRI) Program, U.S. Environmental Protection Agency, 40 CFR 372.65, July 1, 2008.
- 2 "2009 TLVs® and BEIs®, Threshold Limit Values and Biological Exposure Indices," American Conference of Governmental Industrial Hygienists (ACGIH), 2009.
- 20 List of Hazardous Substances and Reportable Quantities (RQ), Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), U.S. Environmental Protection Agency, 40 CFR 302, Table 302.4, July 1, 2008.
- 21 Hazardous Wastes from the P and U Lists, Resource Conservation and Recovery Act (RCRA), U.S. Environmental Protection Agency, 40 CFR 261.33, July 1, 2008.
- 3 Office of Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, 49 CFR 172.101-Hazardous Materials Table, October 1, 2008.
- 4 "NIOSH Pocket Guide to Chemical Hazards," National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, No. 2005-149, September 2005.
- 6 "Environmental Hazardous Substance List," New Jersey Department of Environmental Protection, N.J.A.C. 7:1G-2, as printed in the Community Right to Know Survey Instruction Book, 2008.
- 8 Integrated Risk Information System (IRIS) Database for Risk Assessment, Office of Research and Development, National Center for Environmental Assessment, U.S. Environmental Protection Agency (EPA), September 2008.
- F3 Flammable - Third Degree
- TE Teratogenic

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

Name acc. to inventory	CAS No	Classification
METHANOL	67-56-1	E

Legend

- E Environmental hazard

Hazardous Substance List (RI-RTK)

Name of substance	Name acc. to inventory	CAS No	References
methanol	methyl alcohol	67-56-1	T, F
methyl acetate	methyl acetate	79-20-9	T, F

Legend

- F Flammability (NFPA®)
T Toxicity (ACGIH®)

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

Proposition 65 List of chemicals			
Name acc. to inventory	CAS No	Remarks	Type of the toxicity
methanol	67-56-1	-	developmental

Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

Not listed

Industry or sector specific available guidance(s)
NPCA-HMIS® III

Category	Rating	Description
Chronic	/	none
Health	1	irritation or minor reversible injury possible
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	-	-

NFPA® 704

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	1	material that, under emergency conditions, can cause significant irritation
Instability	0	material that is normally stable, even under fire conditions

Category	Degree of hazard	Description
Special hazard	-	-

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

Date of preparation: 2023-03-16

Date of last revision: 2024-04-04.

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2023	From ACGIH®, 2023 TLVs® and BEIs® Book. Copyright 2023. 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
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Acute Tox.	Acute toxicity
BCF	Bioconcentration factor
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
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
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
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

Abbr.	Descriptions of used abbreviations
HHS	Higher hazard substance
IARC	International Agency for Research on Cancer
IARC Mono-graphs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	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
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LHS	Lower hazard substance
log KOW	n-Octanol/water
NFPA®	National Fire Protection Association (United States)
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NOEC	No Observed Effect Concentration
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
ppm	Parts per million
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

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).

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

Code	Text
H225	Highly flammable liquid and vapor.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H370	Causes damage to organs.
OSHA003	May form combustible dust concentrations in air.

Responsible for the safety data sheet

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Disclaimer

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