



VELSIFLEX® 320

Product No: Plasticizer - 005

Safety Data Sheet

Version: 9.0 / EN

Revision date: Mar. 31, 2026

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier**
VELSIFLEX® 320
Proprietary blend of Benzoate esters
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
- 1.2.1 Relevant identified uses**
Industrial applications: Plasticizing agent.
- 1.2.2 Uses advised against**
No specific uses advised against have been identified.
- 1.3 Details of the supplier of the safety data sheet**
Velsicol Chemical LLC
10400 W. Higgins Road, Suite 303
Rosemont, Illinois 60018 USA
Phone: 1 877-847-8351
Email: customerservice@velsicol.com
- 1.4 Emergency telephone number**
Outside the continental U.S.A. call CHEMTREC 1-800-424-9300 (24 hours)
In the continental U.S.A. call CHEMTREC 1-800-424-9300 (24 hours)

SECTION 2: Hazard(s) identification

- 2.1 Hazard classification and Hazard statement(s)**
Inhalation and skin contact are expected to be the primary routes of occupational exposure to VELSIFLEX® 320. This material is not expected to cause significant adverse human health effects when used in accordance with good industrial hygiene and safety practices are followed. Repeated or prolonged exposure is not known to aggravate any existing medical condition.
- OSHA Specified Hazards: None known.
Hazard(s) not otherwise classified (HNOC): None known.
- 2.2 Precautionary statements**
Avoid release to the environment
Dispose of contents/container in accordance with local/regional/ national/international regulations
- 2.3 Signal Word**
No signal Word
- 2.4 Pictograms**
No Pictogram
- 2.5 Other hazards**
None known

SECTION 3: Composition/information on ingredients:

- 3.1 Substances**
Not applicable
- 3.2 Mixtures**



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Chemical Name	Common name and synonyms	CAS number	% by Weight
Diethylene glycol dibenzoate	oxydiethylene dibenzoate, DEGDB	120-55-8	Proprietary
Dipropylene glycol dibenzoate	oxydipropyl dibenzoate, DPGDB	27138-31-4	Proprietary

SECTION 4: First-aid measures

4.1 Description of first aid measures

4.1.1 General information:

Inhalation and skin contact are expected to be the primary routes of occupational exposure to VELSIFLEX[®] 320. This material is not expected to cause significant adverse human health effects when used in accordance with good industrial hygiene and safety practices are followed.

Chronic health effects: None known.

Carcinogenic status: Not listed or regulated by IARC, NTP, OSHA, or ACGIH.

Reproductive effects: None Expected.

See Section 11 for toxicological information.

4.1.2 Following inhalation:

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Seek medical attention if symptoms occur.

4.1.3 Following skin contact:

Flush the area with plenty of water. Remove material from clothing. Wash clothing before reuse.

4.1.4 Following eye contact:

Flush with plenty of water. Seek medical attention if irritation persists.

4.1.5 Following ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

4.1.6 Self-protection of the first aider:

Wear protective gloves/protective clothing/eye protection/face protection if possible. Do not get in eyes, on skin, or on clothing. Contaminated work clothing should not be allowed out of the workplace. Get medical attention immediately.

4.1.7 Notes for the doctor: Not available.

4.2 Most important symptoms and effects, both acute and delayed

High airborne concentrations of vapors resulting from heating, misting or spraying may cause irritation of the respiratory tract and mucous membranes.

4.3 Indication of any immediate medical attention and special treatments needed

None known

SECTION 5: Fire-fighting measures

5.1 Extinguishing media



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Flammability Properties: Non-flammable liquid. Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

Suitable extinguishing media: dry chemicals, CO₂, water spray or foam.

Unsuitable extinguishing media: Do not use water jet

5.2 Special hazards arising from the substance or mixture

Products of combustion are carbon oxides (CO, CO₂).

5.3 Advice for fire fighters

Firefighters and others who may be exposed to products of combustion should wear full firefighting turn out gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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;
Removal of ignition sources, provision of sufficient ventilation;
Evacuate the danger area or to consult an expert.

6.1.2. For emergency personnel

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;
Ventilate the area involved.

6.2 Environmental precautions

Do not allow to enter sewers / surface or ground water.
In case of spillage to water course or public sewers inform responsible authorities.

6.3 Methods and materials for containment and clearing up

Small Spill - Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill - Stop the leak if possible. Remove all ignition sources. Ventilate the area involved. Absorb with an inert material and put the spilled material in an appropriate waste disposal container.

6.4 References to other sections

See sections 8 and 13 for further advice.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures: Do not handle until all safety precautions have been read and understood; Wear suitable protective clothing, gloves and eye/face protection.

Measures to prevent aerosol and dust generation: Provide ventilation if necessary to minimize exposure. Do not breathe dust/fumes/gas/mist/vapours/spray.

Measures to protect the environment: Avoid release to the environment.

Advice on general occupational hygiene: Handle in accordance with good industrial hygiene and safety



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practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin, and clothing. Keep away from sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Store in well ventilated area away from sources of ignition; Keep container tightly closed.
Storage Temperatures: 38 °F to 150 °F; and shelf life: 2 years.

7.3 Specific end uses(s)

Plasticizer products will soften plastic materials and as a result they should not be transported in piping systems constructed from these materials.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

No national limits have been set for Occupational Exposure Limit values.

8.2 Exposure controls

Ventilation must be adequate to maintain the ambient workplace atmosphere.

8.2.1 Appropriate engineering controls:

Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation.

8.2.2 Personal protective equipment:

Do not eat, drink, or smoke whilst working. Keep away from foodstuffs, beverages and feed.
Remove all contaminated clothing. Wash hands before breaks and at the end of work.

Respiratory protection

Respiratory protection is not needed with proper ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use respirator in accordance with manufacturer's use limitations.

Hand Protection

It is a good industrial hygiene practice to minimize skin contact.

Eye and face protection

Safety glasses should be worn when handling this substance.

Skin protection

It is a good industrial hygiene practice to minimize skin contact.

8.3 Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Clear liquid, free of particulates
Odour:	Mild ester-like
Odour threshold:	Not available
pH:	Not available
Melting/Freezing point:	May start to solidify at < 16°C (60.8°F)
Boiling point:	238°C @ 5 mm Hg
Flashpoint:	192°C (COC)
Evaporation rate:	Not available



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Flammability:	Not flammable
Vapor pressure:	<1 mm Hg @ 20°C
Vapour density:	11.2 (Air=1)
Specific Gravity:	1.14 - 1.15, 25°C/25°C
Refractive index:	1.535 at 25°C
Solubility in water:	slightly soluble
Solubility in other solvents:	No data available
Surface tension:	43.0 @ 25°C
Partition coefficient:	3-4
Volatile by weight	Not available
Auto ignition temperature:	Not < 400°C (752°F) at 760 mm Hg (DPGDB)
Decomposition temperature:	Not available
Viscosity	90 cps @ 25°C
Explosive properties	Not considered to be explosive
Oxidising properties	Not considered to be oxidising
Dissociation Constant:	Not available
Molecular Weight	Not available

9.2 Other information

Some of the number specified are typical values and do not represent a specification.

SECTION 10: Stability and reactivity

10.1 Reactivity

Not a reactive substance and no reactive hazards are expected.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

No hazardous reactions expected under normal conditions of use. Can decompose at elevated temperatures.

10.4 Conditions to avoid

Excessive heat and ignition sources.

10.5 Incompatible materials

Slightly reactive to reactive with oxidizing agents, acids, and alkalis.

10.6 Hazardous decomposition products

Carbon dioxide, carbon monoxide and hydrocarbons.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Velsicol Chemical LLC has not conducted toxicity tests on VELSIFLEX[®] 320. However, toxicity data are available on the components of this material.

Acute toxicity

This material is not classified as acute toxic for all exposure route listed above.

DPGDB: The acute median lethal oral doses (LD50) to male and female rats were calculated to be: 5072 mg/kg bodyweight (males), 3295 mg/kg bodyweight (females), and 3914 mg/kg bodyweight (both sexes).

DEGDB: The acute median lethal oral doses (LD50) to male and female rats were calculated to be: 4843 mg/kg bodyweight (males), 3535 mg/kg bodyweight (females), and 4190 mg/kg bodyweight (both sexes).



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DEGDB and DPGDB :

No deaths were seen in rats exposed to a 200 mg/L atmosphere in air for four hours.

The acute lethal dermal dose to rats was demonstrated to be greater than 2000 mg/kg body weight.

Skin corrosion/irritation

DPGDB and DEGDB are not irritating to the skin and is not considered to be a primary skin irritant.

Serious eye damage/irritation

DPGDB and DEGDB are not irritants to the eye.

Respiratory/skin sensitisation

DPGDB and DEGDB did not produce evidence of skin sensitization (delayed contact hypersensitivity) in any of the animals tested.

Germ cell mutagenicity

DPGDB showed no evidence of mutagenic activity in this bacterial system.

DEGDB did not demonstrate mutagenic potential in this in vitro gene mutation assay.

Carcinogenicity

Not classified (No data available).

Reproductive toxicity

A dietary concentration of dipropylene glycol dibenzoate (DPGDB) at 10000 ppm should be considered as the No-Observed-Effect-Level (NOEL) for P (F0) and F1 parent animals. The No-Observed-Adverse-Effect-Level (NOAEL) for survival and growth of the offspring is considered to be 10000 ppm.

A dietary concentration of diethylene glycol dibenzoate (DEGDB) at 10000 ppm should be considered as the No Observed Adverse Effect Level (NOAEL) for P (F0) and F1 parent animals. The NOAEL for the developing offspring is considered to be 3300 ppm. The No Observed Effect Level (NOEL) for reproductive parameters is considered to be 10000 ppm.

STOT-single exposure

Not classified (No data available).

STOT-repeated exposure

The NOAEL was 1000 mg/kg bw/day for both DPGDB and DEGDB.

Aspiration hazard

Not classified (No data available).

SECTION 12: Ecological information

12.1. Toxicity

Velsicol Chemical LLC has not conducted toxicity tests on VELSIFLEX[®] 320. However, toxicity data are available for similar material.

No observed effect level: 1000 ppm, earthworm. EC50: > 10 mg/l, Bacteria (*Pseudomonas putida*)

DPGDB: The EL50 (Area under the curve 72 h) was 1.1 mg/L and the EL50 (Growth rate 0-72 h) was 4.9 mg/L while the EL50 (Area under the curve 96 h) was 0.95 mg/L and the EL50 (Growth rate 0-96 h) was 3.6 mg/L.

12.2 Persistence and degradability

DPGDB and DEGDB are readily biodegradable and therefore is not Persistence.



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- 12.3 Bioaccumulative potential**
QSAR data suggests that DPGDB and DEGDB are not bio-accumulative.
- 12.4 Mobility in soil**
No specific information available
- 12.5 Results of PBT and vPvB assessment**
DPGDB and DEGDB are not PBT or vPvB based upon experimental data.
- 12.6 Other adverse effects**
No information available.

SECTION 13: Disposal considerations

Recycle to process, if possible. Consult your local or regional authorities for disposal options.

SECTION 14: Transport information

This substance is not under control of ADR, IMDG, IATA and DOT. HS Code: 2916.31.90

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
All chemical substances in this material are included on or exempted from listing on the following inventories: Australia (AICS), Canada (DSL), China (IECSC), Europe (ELNECS), Philippines (PICCS), & United States (TSCA)
- 15.2 Chemical Safety Assessment**
- | | | | |
|--------------------|-----------------|---------------------------|------------------------|
| HMIS Rating | | | |
| Health: 1 | Flammability: 1 | Reactivity (Stability): 0 | Personal Protection: X |
| NFPA Rating | | | |
| Health: 1 | Flammability: 1 | Reactivity (Stability): 0 | Specific Hazard: X |
- Key: 0=Insignificant; 1=Slight; 2=Moderate; 3=High; 4=Extreme. An asterisk appearing after the HMIS Health numerical rating denotes a chronic hazard.

SECTION 16: Other information

- 16.1 Indication of changes**
This is the first SDS under OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))
30 October 2013
Change VELSIFLEX[™] to VELSIFLEX[®], Updated Section 2.1, 7.2, 13 March 2015
Update address on Section 1, 6 June 2016
Update section 2 on Signal Word: No signal word, 16 January 2017
Update section 2 to remove Aquatic Chronic, category 3 classifications. May 16, 2018
Update Section 16. 13 January 2021
Updated Section 9, 16 March 2022
Update in in Section 1: change phone number and delete fax number, 26 September, 2024
Updated Section16, March 31, 2026
- 16.2 Key literature references and sources for data**



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Hazard Communication Standard (HCS)(29 CFR 1910.1200(g)) and Appendix B, C, D
Information on Chemicals, ECHA website: <http://echa.europa.eu/information-on-chemicals>
Ariel WebInsight, 3E Company.com
Product Data Sheet and SDS information from manufacturer.

16.3 Classification for mixtures and used evaluation method according to Hazard Communication Standard (HCS)(29 CFR 1910.1200(g)),

16.4 Training advice: accordance with Hazard Communication Standard (HCS)(29 CFR 1910.1200(g))

16.5 Department issuing data sheet

Contact Information

Technical or Product Support Information, contact:
Sherman Friedman
Velsicol Chemical LLC
10400 W. Higgins Road
Rosemont, IL 60018 U.S.A.
Phone: 847-635-3486
Email: sfriedman@velsicol.com

16.6 Further information: Notice to Reader

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.