



VELSIFLEX® 290

Safety Data Sheet

Product No: Plasticizer – 008

Version: 5.0 / EN
Revision: Sep. 26, 2024

SECTION 1: Identification

1.1 Product identifier

Trade Name: VELSIFLEX® 290

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

1.2.1 Relevant identified uses

Industrial applications: Plasticizer.

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: 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® 290. 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
Propylene glycol dibenzoate	1,2-Propanediol, 1,2-dibenzoate, PGDB	19224-26-1	Proprietary
Dipropylene glycol dibenzoate	Propanol, oxybis-, 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[®] 290. 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.

None expected reproductive effects.

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.

4.1.7 Notes for the doctor

Not available.

4.2 Most important symptoms and effects, both acute and delayed

None known

4.3 Indication of any immediate medical attention and special treatments needed

None known

Treat symptomatically

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

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

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



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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; 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; Removal of ignition sources, provision of sufficient ventilation;

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 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



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Store in well ventilated area away from sources of ignition; Keep container tightly closed. Keep away from heat, sparks and open flames.

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 of this product.

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.

Hand Protection

Chemical resistant coveralls, gloves and boot covers. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

Eye and face protection

Safety glasses should be worn when handling this substance.

Skin protection

Aprons or coveralls are recommended. These should be changed after use or if contaminated.

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, colorless to light yellow
Odour:	mild ester-like
Odour threshold:	no data available
Bulk Density:	no data available
pH:	no data available
Melting/Freezing point:	< -3°C
Pour Point	-17 °C
Boiling point:	233°C @ 5mm Hg
Flashpoint:	199°C (COC)
Evaporation rate:	no data available



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Flammability:	no data available
Vapor pressure:	no data available
Vapour density:	no data available
Specific Gravity:	1.14-1.15, 25°C/ 25°C
Refractive index:	1.535 at 25°C
Solubility in water:	negligible
Solubility in other solvents:	no data available
Surface tension:	no data available
Partition coefficient:	no data available
n-octanol/water	
Volatile by weight	no data available
Auto ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity	70-100 mPa.s at 25°C
Explosive properties	no data available
Oxidising properties	no data available
Dissociation Constant:	no data available
Molecular Weight (cal.)	290

9.2 Other information

Not available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not a reactive substance and no reactive hazards are expected.

10.2 Chemical stability

This substance is stable under normal condition

10.3 Possibility of hazardous reactions

No hazardous reactions expected under normal conditions of use.

10.4 Conditions to avoid

Excessive heat and ignition sources.

10.5 Incompatible materials

Avoid strong acids, bases, and oxidizing agents. Avoid contact with phenols.

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[®] 290. However, toxicity data are available on the components of this material online.

Specified benzoate esters:

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).



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PGDB: Oral LD-50: (Rat, Female.): 2,661 mg/kg , Oral LD-50: (Rat, Male.): 4,571 mg/kg

Skin corrosion/irritation

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

Serious eye damage/irritation

DPGDB and PGDB are not irritants to the eye.

Respiratory/skin sensitisation

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

Germ cell mutagenicity

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

PGDB 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.

STOT-single exposure

Not classified (No data available).

STOT-repeated exposure

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

Aspiration hazard

No data available

SECTION 12: Ecological information

12.1. Toxicity

Velsicol Chemical LLC has not conducted toxicity tests on VELSIFLEX® 290. However, toxicity data are available on the components of this material.

No data available for this product, but there are information for the components.

Specified benzoate esters:

Acute toxicity

DPGDB:

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

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.

PDGB:

No data available.

12.2 Persistence and degradability



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Components are readily biodegradable (CO2 Evolution Test) and therefore are not persistence.

12.3 Bio-accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Components are not PBT or vPvB based upon experimental data.

12.6 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

The substances are not regulated as a dangerous good under 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 components in this material are included on or exempted from listing on the following inventories: Australia (AICS), Canada (DSL), China (IECSC), Europe (ELNECS), Japan(ENCS), Mexico(INSQ), Korea (KECI), New Zealand (NZIoC), 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

First SDS under OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))
September 26, 2017

Update section 2 to remove Aquatic Chronic, category 3 classification: May 16, 2018

Update section 3, 11 and 12 for components, August 27, 2019

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

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>
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

SDS or Regulatory information, contact: Dawei Li Velsicol Chemical LLC 1199 Warford Street Memphis, TN 38108 Phone: 901-323-6226, ext. 124 Email: dli@velsicol.com	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
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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.