



# SolVantage Flush

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Date of issue: 10/4/2021 Revision date: 2/3/2022 Version: 1.1

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : SolVantage Flush  
Product code : 304044

#### 1.2. Recommended use and restrictions on use

Recommended use : Cleaning solvent  
Restrictions on use : Product for industrial use only

#### 1.3. Supplier

Brulin  
P.O. Box 270  
Indianapolis, IN 46206 - USA  
T 1.800.776.7149 - F 317.925.4596  
[Regulatory@brulin.com](mailto:Regulatory@brulin.com) - [www.brulin.com](http://www.brulin.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1.800.424.9300 or CHEMTREC (International) 1.703.527.3887

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2B	H320	Causes eye irritation
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H302+H332 - Harmful if swallowed or if inhaled  
H315 - Causes skin irritation  
H320 - Causes eye irritation  
H336 - May cause drowsiness or dizziness  
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) :

P261 - Avoid breathing mist, spray, vapors.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only in a well-ventilated area.  
P273 - Avoid release to the environment.

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P280 - Wear protective clothing, eye protection, face protection.  
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell  
P330 - Rinse mouth.  
P302+P352 - IF ON SKIN: Wash with plenty of water  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P312 - Call a doctor, a POISON CENTER if you feel unwell.  
P501\_BHC - Dispose of contents/containers in accordance with federal, state and local regulations  
P405 - Store locked up.  
P403BHC - Store in a well-ventilated place. Keep container tightly closed. Keep out of reach of children.

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%
trans-dichloroethylene	CAS-No.: 156-60-5	75 – 90
Proprietary Fluorinated Compound	CAS-No.: Proprietary	10 – 25

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.  
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.  
First-aid measures after 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.  
First-aid measures after ingestion : Do not induce vomiting. Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May cause drowsiness or dizziness.  
Symptoms/effects after skin contact : Irritation.  
Symptoms/effects after eye contact : Mild eye irritation.

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### 4.3. Immediate medical attention and special treatment, if necessary

If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water fog. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

### 5.2. Specific hazards arising from the chemical

Fire hazard : May release hazardous gases.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid the spillage or runoff entering drains, sewers or watercourses. Notify authorities if product enters sewers or public waters.

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.  
Emergency procedures : Ventilate spillage area. Avoid breathing mist, spray, vapors. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment. Do not allow into drains or water courses.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. This material and its container must be disposed of in a safe way, and as per local legislation.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Use only in a well-ventilated area. Avoid breathing mist, spray, vapors. Avoid contact with skin and eyes. Wear personal protective equipment.  
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.  
Incompatible materials : Refer to Section 10 on Incompatible Materials.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

SolVantage Flush	
No additional information available	
trans-dichloroethylene (156-60-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	200 ppm
Proprietary Fluorinated Compound (Proprietary)	
USA - OSHA - Occupational Exposure Limits	
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm Manufacturer/Distributor information

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

<b>Hand protection:</b>
Protective gloves. Neoprene/viton®
<b>Eye protection:</b>
Goggles
<b>Skin and body protection:</b>
Wear suitable protective clothing
<b>Respiratory protection:</b>
Self contained breathing apparatus, in case of emergency. Wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Appearance : Clear, colorless liquid.  
Color : Colorless  
Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.  
Mixture contains one or more component(s) which have the following odour:  
Pleasant odour Ether-like odour Sweet odour  
Odor threshold : No data available

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pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 114 °F 45.5° C
Flash point	: does not flash
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 292 mm Hg @ 20°C
Relative vapor density at 20 °C	: No data available
Relative density	: 1.265 20° C
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.41 cP
Explosion limits	: 5.7 – 19 vol % trans-dichloroethylene
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

VOC content : 1115 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Heat. Incompatible materials. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Strong oxidizing agents. Powdered metals(aluminum, Magnesium, Zinc, Titanium).

### 10.6. Hazardous decomposition products

Thermal decomposition generates : Toxic gases. Carbon oxides (CO, CO2). Hydrochloric acid. Hydrofluoric Acid.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

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ATE US (oral)	500 mg/kg body weight
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<b>SolVantage Flush</b>	
ATE US (dust, mist)	1.818 mg/l/4h
<b>trans-dichloroethylene (156-60-5)</b>	
LD50 oral rat	7902 – 9939 mg/kg body weight (Equivalent or similar to OECD 420, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	96.943 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
<b>Proprietary Fluorinated Compound (Proprietary)</b>	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 24.8 mg/l 301 ppm
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Mild eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

<b>trans-dichloroethylene (156-60-5)</b>	
LC50 - Fish [1]	135 mg/l (96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	220 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
<b>Proprietary Fluorinated Compound (Proprietary)</b>	
LC50 - Fish [1]	> 76 mg/l 96 hr.
ErC50 algae	> 213 mg/l

### 12.2. Persistence and degradability

<b>trans-dichloroethylene (156-60-5)</b>	
Persistence and degradability	Readily biodegradable in water.

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### Proprietary Fluorinated Compound (Proprietary)

Persistence and degradability	Not readily biodegradable.
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### 12.3. Bioaccumulative potential

#### trans-dichloroethylene (156-60-5)

Partition coefficient n-octanol/water (Log Pow)	2.06 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

#### trans-dichloroethylene (156-60-5)

Surface tension	25 mN/m (20 °C)
Ecology - soil	No (test)data on mobility of the substance available.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with Department of Transport / Transportation of Dangerous Goods / IMDG / IATA

DOT	TDG	IMDG	IATA
<b>14.1. UN number</b>			
Not regulated for transport			
<b>14.2. Proper Shipping Name</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

### 14.6. Special precautions for user

#### DOT

No data available

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### TDG

No data available

### IMDG

No data available

### IATA

No data available

## 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

#### trans-dichloroethylene (156-60-5)

EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.
CERCLA RQ	1000 lb

### 15.2. International regulations

#### CANADA

#### trans-dichloroethylene (156-60-5)

Listed on the Canadian DSL (Domestic Substances List)

#### Proprietary Fluorinated Compound (Proprietary)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

#### Proprietary Fluorinated Compound (Proprietary)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on ELINCS (European List of Notified Chemical Substances)

#### National regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

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Component	State or local regulations
trans-dichloroethylene(156-60-5)	U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

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Revision date : 02/03/2022

Full text of H-phrases	
H302	Harmful if swallowed
H315	Causes skin irritation
H320	Causes eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.