SAFETY DATA SHEET

1. Identification

Product identifier: SURPASS ® (1% diclofenac sodium) Topical Anti-Inflammatory Cream

Other means of identification: None.

Recommended use: Indicated for the control of pain and inflammation associated with osteoarthritis (OA) in animals

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer: Boehringer Ingelheim Vetmedica, Inc.

Address: 2621 North Belt Hwy
            St. Joseph, MO 64506-2002

Transportation emergency: For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

Medical Emergency (24HR): (866)638-2226

Non-Emergency calls: (800) 821-7467

2. Hazard(s) identification

Physical hazards: Flammable solids - Category 1

Health hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Flammable solid.

Precautionary statement


Response: In case of fire: Use alcohol resistant foam, water spray, water fog, dry chemical powder, carbon dioxide (CO2) to extinguish.

Storage: Store away from incompatible materials.

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

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: Not applicable.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane -1,2 -diol</td>
<td>57-55-6</td>
<td>proprietary</td>
</tr>
<tr>
<td>Diclofenac sodium</td>
<td>15307-79-6</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>proprietary</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.
4. First-aid measures

Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact
Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact
Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed
Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed
Persons developing anaphylactic (life-threatening) reactions, such as difficulty in breathing or unconsciousness, must receive immediate medical attention.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media
No restrictions known.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Use water spray to cool unopened containers.

Specific methods
Prevent build-up of vapors or gasses to explosive concentrations.

General fire hazards
Solid wet with flammable liquid and vapor. Vapors may cause a flash fire or ignite explosively.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling
HANDLING SIGNIFICANT QUANTITIES OF PRODUCT: Avoid breathing vapors or mists of this product. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities
Store in original tightly closed container. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>PEL</td>
<td>1900 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>TWA</td>
<td>1900 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>
US. Workplace Environmental Exposure Level (WEEL) Guides

Components | Type | Value | Form
--- | --- | --- | ---
Propane -1,2-diol (CAS 57-55-6) | TWA | 10 mg/m³ | Aerosol.

Biological limit values
No biological exposure limits noted for the ingredient(s).

Exposure guidelines
Where lower governmentally imposed exposure limits exist, such limits should take precedence.

Appropriate engineering controls
Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection
Not generally required when handling containers. If containers are compromised or exposure to the mixture is likely: Wear safety glasses with side shields (or goggles).

Skin protection
- Hand protection
  Not generally required when handling containers. If containers are compromised or exposure to the mixture is likely: Wear suitable gloves.
- Other
  Not generally required when handling containers. If containers are compromised or exposure to the mixture is likely: Wear lab coat, apron or appropriate clothing to prevent skin contact.

Respiratory protection
Not generally required when handling vials or containers. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: NIOSH approved organic vapor respirator.

Thermal hazards
Not anticipated.

General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state
Solid.
Form
Cream.
Color
White to pinkish-white

Odor
Nearly odorless.
Odor threshold
Not available.

pH
6 - 8 (1:4 dispersion in water)

Melting point/freezing point
Not available.
Initial boiling point and boiling range
Not available.

Flash point
125.0 °F (51.7 °C)

Evaporation rate
Not available.

Flammability (solid, gas)
Flammable Solid.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)
Not available.
Flammability limit - upper (%)
Not available.
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.

Vapor pressure
Not available.
Vapor density
Not available.
Relative density
0.98

Solubility(ies)
Solubility (water)
Not available.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.
Other information
- Explosive properties Not explosive.
- Oxidizing properties Not oxidizing.

10. Stability and reactivity
Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability Material is stable under normal conditions.
Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.
Conditions to avoid Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials Strong oxidizing agents.

11. Toxicological information
Information on likely routes of exposure
- Inhalation No adverse effects due to inhalation are expected.
- Skin contact No adverse effects due to skin contact are expected.
- Eye contact Direct contact with eyes may cause temporary irritation.
- Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics
Direct contact with eyes may cause temporary irritation.

Information on toxicological effects
Acute toxicity Not expected to be acutely toxic.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50 Mouse</td>
<td>Mouse</td>
<td>39 g/m3, 4 Hours</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 Rat</td>
<td>Rat</td>
<td>7000 - 11000 mg/kg</td>
</tr>
<tr>
<td>Propane -1,2-diol (CAS 57-55-6)</td>
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<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 Rabbit</td>
<td>Rabbit</td>
<td>20800 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 Rat</td>
<td>Rat</td>
<td>22000 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization
- Respiratory sensitization Not available.
- Skin sensitization This product is not expected to cause skin sensitization.
Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity

IARC has classified ethanol in alcoholic beverages as Group 1 (carcinogenic to humans). Ethanol alone has not been evaluated for carcinogenicity by IARC.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.

NTP Report on Carcinogens
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not available.

12. Ecological information

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

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<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
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</thead>
<tbody>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
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</tr>
<tr>
<td><strong>Aquatic</strong></td>
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<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>LC50</td>
<td>Ceriodaphnia dubia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Pimephales promelas</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>NOEC</td>
<td>Ceriodaphnia dubia</td>
</tr>
</tbody>
</table>

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential
No data available.

Partition coefficient n-octanol / water (log Kow)
- Ethanol (CAS 64-17-5) -0.31
- Propane -1,2 -diol (CAS 57-55-6) -0.92

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations
Dispose in accordance with all applicable regulations.

Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT
- UN number: UN3175
- UN proper shipping name: Solids containing flammable liquid, n.o.s. (Ethanol)
- Transport hazard class(es): 4.1
- Class: 4.1
- Subsidiary risk: -
- Label(s): 4.1
- Packing group: II
Special precautions for user: This material qualifies as a limited quantity and has been reclassified to consumer commodity for US DOT for ground shipments. Read safety instructions, SDS and emergency procedures before handling.

Special provisions: 47, IB6, IP2, T3, TP33
Packaging exceptions: 151
Packaging non bulk: 212
Packaging bulk: 240

IATA
UN number: UN3175
UN proper shipping name: Solids containing flammable liquid, n.o.s. (Ethanol)

Transport hazard class(es):
- Class: 4.1
- Subsidiary risk: -
- Label(s): II

Packing group: II
Environmental hazards: no
ERG Code: 3L

Special precautions for user: This material is shipped as limited quantity in non UN specification packaging when shipping less than 5kg (11lbs). Read safety instructions, SDS and emergency procedures before handling.

IMDG
UN number: UN3175
UN proper shipping name: SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.

Transport hazard class(es):
- Class: 4.1
- Subsidiary risk: -
- Packing group: II
- Environmental hazards: Marine pollutant: No.
- EmS: F-A, S-I

Special precautions for user: This material is shipped as limited quantity in non UN specification packaging when shipping less than 5kg (11lbs). Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not applicable.

15. Regulatory information

US federal regulations:
One or more components are not listed on TSCA. Therefore, it can only be used for TSCA exempt purposes such as R&D or veterinary use. FEDERAL LAW RESTRICTS THIS DRUG TO USE BY OR ON ORDER OF LICENSED VETERINARIANS.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
- Yes
  - Classified hazard categories: Flammable (gases, aerosols, liquids, or solids)

SARA 313 (TRI reporting)
Not regulated.
Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Ethanol (CAS 64-17-5) Low priority

US state regulations

US. Massachusetts RTK - Substance List
Ethanol (CAS 64-17-5)

US. New Jersey Worker and Community Right-to-Know Act
Ethanol (CAS 64-17-5)
Propane -1,2 -diol (CAS 57-55-6)

US. Pennsylvania Worker and Community Right-to-Know Law
Ethanol (CAS 64-17-5)
Propane -1,2 -diol (CAS 57-55-6)

US. Rhode Island RTK
Ethanol (CAS 64-17-5)
Propane -1,2 -diol (CAS 57-55-6)

California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A “Yes” indicates this product complies with the inventory requirements administered by the governing country(s). A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 16-June-2014
Revision date 05-June-2018
Version # 02
HMIS® ratings
Health: 0
Flammability: 3
Physical hazard: 0
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