

Material Safety Data Sheet

BDT Passion Flower Color Brightening Finishing Spray (55% VOC)

1. Product and company identification

Product name	: BDT Passion Flower Color Brightening Finishing Spray (55% VOC)
Manufacturer	: Zotos International, INC 100 Tokeneke Road, Darien, CT 06820 www.zotos.com
Validation date	: 3/10/2013.
<u>In case of emergency</u>	(800) 584-8038 [24 Hours]
<u>Telephone number</u>	(203) 656-7859 [8:30 a.m. - 5:00 p.m.]
<u>Transportation Emergency</u>	Contact: CHEMTREC 1-800-424-9300 [US/Canada 24 Hours]
Product type	: Aerosol.

2. Hazards identification

Emergency overview

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED. Additional information on toxicological endpoints is available from the supplier upon request

Color	: Colorless to light yellow.
Odor	: Characteristic. Fragrance-like.
Hazard statements	: FLAMMABLE AEROSOL. CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
Precautionary measures	: Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Wash thoroughly after handling.

OSHA/HCS status : None.

Potential acute health effects

Inhalation	: May cause respiratory irritation. Avoid breathing vapor.
Ingestion	: NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
Skin	: NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED. Mild irritant
Eyes	: May cause slight transient irritation.

Potential chronic health effects

Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Over-exposure signs/symptoms	: None identified.

Medical conditions aggravated by over-exposure : None.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
Alcohol	64-17-5	49.70
1,1-difluoroethane	75-37-6	26.00
Butane	106-97-8	4.00

Canada

Name	CAS number	%
Alcohol	64-17-5	49.70
1,1-difluoroethane	75-37-6	26.00
Butane	106-97-8	4.00

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
Alcohol	64-17-5	UN1993	49.70	3300 ppm	2	3	0	-
Butane	106-97-8	UN1954	4.00	-	0	4	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
- Skin contact** : Remove contaminated clothing and shoes. Wash with plenty of soap and water.
- Inhalation** : Move affected person to fresh air.
- Ingestion** : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED. Treat symptomatically. Never give anything by mouth to an unconscious person. Call a physician.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : None.

5. Fire-fighting measures

- Flammability of the product** : Flammable liquid. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits.
- Extinguishing media** : Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Unusual fire/explosion hazards** : None known.
- Hazardous thermal decomposition products** : may be released including hydrofluoric and/or carbonyl halides
- Special protective equipment for fire-fighters** : Immediately contact emergency personnel. Flammable material In case of insufficient ventilation, wear suitable respiratory equipment.

6. Accidental release measures

- Personal precautions** : Flammable. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Do not get in eyes. Keep out of reach of children.
- Environmental precautions** : Leaking packages should be placed in open containers outdoors away from any source of ignition
- Methods for cleaning up** : Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Place spilled material in an appropriate container for disposal. After contact with skin, wash immediately with plenty of water.

7. Handling and storage

- Handling** : Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use only in well-ventilated areas. Avoid contact with ignition and heat sources and oxidizers. Do not spray on an open flame or other ignition source. Keep out of reach of children.
- Storage** : Avoid increased storage temperature. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Avoid contact with ignition and heat sources and oxidizers. Store away from oxidizing agents. Store in cool/well-ventilated place.
- Recommendations** : PRESSURIZED CONTAINER Keep cool and protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
Alcohol	<p>ACGIH TLV (United States, 3/2012). STEL: 1000 ppm 15 minute(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 1000 ppm 10 hour(s). TWA: 1900 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s).</p>
1,1-difluoroethane	<p>AIHA WEEL (United States, 10/2011). TWA: 1000 ppm 8 hour(s).</p>
Butane	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 800 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 800 ppm 10 hour(s). TWA: 1900 mg/m³ 10 hour(s).</p> <p>ACGIH TLV (United States, 3/2012). TWA: 1000 ppm 8 hour(s).</p>

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
1,1-difluoroethane	US AIHA 10/2011	1000	-	-	-	-	-	-	-	-	
	US ACGIH 3/2012	-	-	-	1000	-	-	-	-	-	
	AB 4/2009	1000	1880	-	-	-	-	-	-	-	
	BC 9/2011	-	-	-	1000	-	-	-	-	-	
	ON 7/2010	-	-	-	1000	-	-	-	-	-	
Butane	QC 9/2011	1000	1880	-	-	-	-	-	-	-	
	US ACGIH 3/2012	1000	-	-	-	-	-	-	-	-	
	AB 4/2009	1000	-	-	-	-	-	-	-	-	
	BC 9/2011	600	-	-	750	-	-	-	-	-	
	ON 7/2010	800	-	-	-	-	-	-	-	-	
	QC 9/2011	800	1900	-	-	-	-	-	-	-	

8. Exposure controls/personal protection

Mexico

Occupational exposure limits

Ingredient	Exposure limits
Alcohol	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 1000 ppm 8 hour(s). LMPE-PPT: 1900 mg/m ³ 8 hour(s). NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 800 ppm 8 hour(s). LMPE-PPT: 1900 mg/m ³ 8 hour(s).
Butane	

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : When using do not eat, drink or smoke.

Personal protection

Respiratory : Chemical splash goggles. Protective clothing must be worn.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Other protection : Not available.

9. Physical and chemical properties

Physical state : Liquid. [Viscous liquid.]

Flash point : Closed cup: 13°C (55.4°F)

Color : Colorless to light yellow.

Odor : Characteristic. Fragrance-like.

pH : 6 to 9

Boiling/condensation point : 78.333°C (173°F)

Relative density : 0.81 to 0.85

Aerosol product

Type of aerosol : Spray

10. Stability and reactivity

Chemical stability : Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : Store away from direct sunlight. Avoid contact with ignition and heat sources and oxidizers. Store away from oxidizing agents.

Incompatible materials : Separate from oxidizing materials.

Hazardous decomposition products : Products of combustion

10. Stability and reactivity

Possibility of hazardous reactions : Not available.

Hazardous polymerization : Not available.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
Alcohol	LC50 Inhalation Vapor LD50 Oral	124700 mg/m3 7 g/kg	4 hours -
Butane	LC50 Inhalation Vapor	658000 mg/m3	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
Alcohol	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	-	100 microliters	-
	Eyes - Severe irritant	-	500 milligrams	-
	Skin - Mild irritant	-	400 milligrams	-
	Skin - Moderate irritant	-	24 hours 20 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Alcohol	A3	4	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
Alcohol	LC50 Inhalation Vapor LD50 Oral	124700 mg/m3 7 g/kg	4 hours -
Butane	LC50 Inhalation Vapor	658000 mg/m3	4 hours

Conclusion/Summary : Not available.

11. Toxicological information

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
Alcohol	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	-	100 microliters	-
	Eyes - Severe irritant	-	500 milligrams	-
	Skin - Mild irritant	-	400 milligrams	-
	Skin - Moderate irritant	-	24 hours 20 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Alcohol	A3	4	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
Alcohol	LC50 Inhalation Vapor	124700 mg/m3	4 hours
Butane	LD50 Oral	7 g/kg	-
	LC50 Inhalation Vapor	658000 mg/m3	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
Alcohol	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	-	100 microliters	-
	Eyes - Severe irritant	-	500 milligrams	-

11. Toxicological information

	Skin - Mild irritant	-	400 milligrams	-
	Skin - Moderate irritant	-	24 hours 20 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Alcohol	A3	4	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Alcohol	Acute EC50 17.921 mg/L Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 ug/L Marine water	Crustaceans - Artemia franchiscana - Larvae	48 hours
	Acute LC50 42000 ug/L Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae - 3 days	12 weeks

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Alcohol	Acute EC50 17.921 mg/L Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 ug/L Marine water	Crustaceans - Artemia franchiscana - Larvae	48 hours
	Acute LC50 42000 ug/L Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae - 3 days	12 weeks

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

12. Ecological information

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Alcohol	Acute EC50 17.921 mg/L Marine water Acute EC50 2000 ug/L Fresh water Acute LC50 25500 ug/L Marine water	Algae - Ulva pertusa Daphnia - Daphnia magna Crustaceans - Artemia franchiscana - Larvae	96 hours 48 hours 48 hours
	Acute LC50 42000 ug/L Fresh water Chronic NOEC 0.375 ul/L Fresh water	Fish - Oncorhynchus mykiss Fish - Gambusia holbrooki - Larvae - 3 days	4 days 12 weeks

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

13. Disposal considerations



Waste disposal : Dispose of according to all federal, state and local applicable regulations.

Contaminated packaging : Waste must be disposed of according to applicable regulations. This material and its container must be disposed of as hazardous waste. Recycle, if possible. Dispose of empty containers and waste safely.


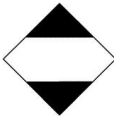

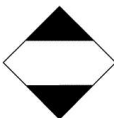

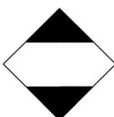



Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols	2.1	-		<p>Limited quantity Yes.</p> <p>Packaging instruction Passenger aircraft Quantity limitation: 75 kg</p> <p>Cargo aircraft Quantity limitation: 150 kg</p> <p>Special provisions 153, N82</p>
TDG Classification	UN1950	AEROSOLS	2.1	-		<p>Explosive Limit and Limited Quantity Index 1</p> <p>Passenger Carrying Road or Rail Index 75</p>

14. Transport information

Mexico Classification	UN1950	AEROSOLS	2.1	-	 	Special provisions 63, 190, 277
ADR/RID Class	UN1950	AEROSOLS	2	-	 	Limited quantity LQ2 Special provisions 190 327 625 Tunnel code (D)
IMDG Class	UN1950	AEROSOLS	2.1	-	 	Emergency schedules (EmS) F-D, S-U
IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-	  	Passenger and Cargo Aircraft Quantity limitation: 75 kg Packaging instructions: 203 Cargo Aircraft Only Quantity limitation: 150 kg Packaging instructions: 203 Limited Quantities - Passenger Aircraft Quantity limitation: 30 kg Packaging instructions: Y203

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Flammable aerosol
Irritating material

U.S. Federal regulations : TSCA : Exempt

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Butane; Alcohol; 1,1-difluoroethane

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Butane: Fire hazard, Sudden release of pressure; Alcohol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; 1,1-difluoroethane: Fire hazard, Sudden release of pressure, Delayed (chronic) health hazard

Clean Water Act (CWA) 311: ammonium benzoate

Clean Air Act (CAA) 112 regulated flammable substances: 1,1-difluoroethane; Butane

15. Regulatory information

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: DIFLUOROETHANE; ETHYL ALCOHOL; BUTANE

New York : None of the components are listed.

New Jersey : The following components are listed: 1,1-DIFLUOROETHANE; ETHANE, 1,1-DIFLUORO-; ETHYL ALCOHOL; ALCOHOL; BUTANE

Pennsylvania : The following components are listed: DENATURED ALCOHOL; BUTANE

California Prop. 65

This product does not contain a chemical known to the State of California to cause cancer.

United States inventory (TSCA 8b) : Not determined.

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class B-5: Flammable aerosol.
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : The following components are listed: Volatile organic compounds; Ethanol; Butane (all isomers)

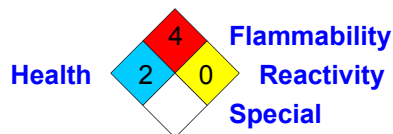
CEPA Toxic substances : The following components are listed: Volatile organic compounds

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	4
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : 3/10/2013.
Date of issue : 3/10/2013.
Date of previous issue : No previous validation.
Version : 0.01
Prepared by : Regulatory Affairs Group

☑ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.