



Safety Data Sheet

1. Identification

Product Information.	BGDP6
Product Name:	Bioguard Plus 6
Recommended Use.	Fuel additive
Uses advised against.	Professional Use Only
Supplier.	ValvTect Petroleum Products A Division of Modern Recreational Technologies, Inc. 2220 Highway 70 SE., Suite 100 Hickory, NC 28602 800-728-8258
Emergency telephone number.	Chemtrec: +1-800-424-9300 USA Chemtrec: +1 703-527-3887 ex-USA 24 hrs./day, 7 days/week

2. Hazards Identification

GHS Classification in accordance with 29 CFR 1910.1200

Flammable Liquid, category 3
Germ Cell Mutagenicity, category 1B
Carcinogenicity, category 1B
Reproductive Toxicity, category 1B
STOT, repeated exposure, category 2
Acute Toxicity, Oral, category 4
Acute Toxicity, Inhalation, category 3
Skin Irritation, category 2
Serious Eye Damage, category 1
Skin Sensitizer, category 1

GHS Pictograms



Signal Word

Danger

Unknown Acute Toxicity

< 0.1% of the mixture consists of ingredient(s) of unknown acute toxicity

HAZARD STATEMENTS

Flammable liquid and vapor.
Harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Toxic if inhaled.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements - Prevention.

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Do not breathe dust/fume/gas/mist/ vapors/spray.
 Wash face and hands and any exposed skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves, protective clothing, eye protection, face protection

Precautionary Statements - Response.

If swallowed: Call a poison center/doctor if you feel unwell.
 If on skin: Wash with plenty of water.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If exposed or concerned: Get medical advice/attention.
 Immediately call a poison center or doctor.
 Immediately call a poison center/doctor.
 Specific treatment (If applicable, see label for any additional instructions).
 Rinse mouth.
 If skin irritation or rash occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 In case of fire: Use CO₂ dry chemical or foam to extinguish.

Precautionary Statements - Storage.

Store in a well-ventilated place. Keep container tightly closed.
 Store in a well-ventilated place. Keep cool.
 Store locked up.

Precautionary Statements - Disposal.

Dispose of contents in accordance with local, regional, national, international regulations.

3. Composition/Information on Ingredients

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt. %</u>
Solvent naphtha (petroleum), light aromatic	64742-95-6	25-50
4-(2-Nitrobutyl) morpholine	2224-44-4	10-25
2-Ethylhexyl nitrate	27247-96-7	10-25
Heavy aromatic naphtha	64742-94-5	10-25
1,2,4-TRIMETHYLBENZENE	95-63-6	2.5-10
Methylene Dimorpholine	5625-90-1	1.0-2.5
Morpholine	110-91-8	1.0-2.5
4,4"-(2-Ethyl-2-Nitropropane-1,3-diyl)bismorpholine	1854-23-5	1.0-2.5
Naphthalene	91-20-3	1.0-2.5
Phenol, dodecyl-, branched	210555-94-5	0.1-1.0
XYLENE	1330-20-7	0.1-1.0
Benzene, (1-methylethyl)-	98-82-8	0.1-1.0

The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid Measures

Description of first-aid measures.

General advice.

Move victim to a safe isolated area. When symptoms persist or in all cases of doubt seek medical advice. Call a poison control center or doctor for treatment advice.

Inhalation.

Move to fresh air. Apply artificial respiration if victim is not breathing. Call a poison control center or doctor for treatment advice.

Skin contact.

Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Remove and wash contaminated clothing before re-use. Call a poison control center or doctor for treatment advice.

Eye contact.

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a poison control center or doctor for treatment advice.

Ingestion.

Do not induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. If swallowed, call a poison control center or doctor immediately. Gently wipe or rinse the inside of the mouth with water. If a person vomits when lying on his back, place him in the recovery position.

Symptoms.

See Section 2 and Section 11, Toxicological effects for description of potential symptoms.

Notes to physician.

Treat symptomatically.

5. Fire-fighting Measures

Extinguishing media.

Suitable extinguishing media.

Use: Dry powder. Alcohol-resistant foam. Carbon dioxide (CO₂). Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

Extinguishing media which shall not be used for safety reasons.

Water may be unsuitable for extinguishing fires.

Special hazards arising from the substance or mixture.

Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back. Air/vapor mixtures may explode when ignited. Containers may explode when heated.

Advice for firefighters.

Cool containers with flooding quantities of water until well after fire is out.

Evacuate personnel to safe areas.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures.

Personal precautions.

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas. All equipment used when handling the product must be grounded. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear protective gloves/clothing and eye/face protection. Stop all work that requires a naked flame, stop all vehicles, stop all machines and equipment that may cause sparks or flames. Do not breathe vapors or spray mist. Avoid exceeding of the given occupational exposure limits (see section 8). Thoroughly decontaminate all protective equipment after use. Personal protection needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill.

Advice for emergency responders.

Refer to protective measures listed in sections 7 and 8. Use personal protection recommended in Section 8.

Environmental precautions.

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Dike to collect large liquid spills. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological information.

Methods and materials for containment and cleaning up.**Methods for Containment.**

Dike to collect large liquid spills. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. Ground and bond containers when transferring material. Take precautionary measures against static discharges. Use personal protective equipment. Remove all sources of ignition.

Methods for cleaning up.

Prevent further leakage or spillage if safe to do so. Keep away from open flames, hot surfaces and sources of ignition. Keep in suitable and closed containers for disposal. All equipment used when handling the product must be grounded. Keep combustibles (wood, paper, oil, etc) away from spilled material. Ventilate the area. Use personal protective equipment as required. Shut off ignition sources; including electrical equipment and flames. Clean contaminated objects and areas thoroughly while observing environmental regulations. Never return spills in original containers for re-use.

Reference to other sections.

See section 8 for more information.

7. Handling and Storage**Conditions for safe storage, including any incompatibilities.****Advice on safe handling.**

Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Keep away from open flames, hot surfaces and sources of ignition. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Wash hands before breaks and immediately after handling the product. All equipment used when handling the product must be grounded. Take precautionary measures against static discharges. Do not breathe vapors or spray mist. Use according to package label instructions. Ground and bond containers when transferring material.

Hygiene measures.

Handle in accordance with good industrial hygiene and safety practice for diagnostics. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Storage Conditions.

Keep container closed when not in use. Keep in properly labeled containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in accordance with local regulations. Keep from freezing. Keep away from food, drink and animal feedingstuffs. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

8. Exposure Controls/Personal Protection**Ingredients with Occupational Exposure Limits**

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH-TLV STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>
1,2,4-TRIMETHYLBENZENE	10 ppm	N.E.	N.E.	N.E.
Morpholine	20 ppm	N.E.	20 ppm	N.E.
Naphthalene	10 ppm	N.E.	10 ppm	N.E.
XYLENE	20 ppm	N.E.	100 ppm	N.E.
Benzene, (1-methylethyl)-	5 ppm	N.E.	50 ppm	N.E.

TLV = Threshold Limit Value TWA = Time Weighted Average PEL = Permissible Exposure Limit STEL = Short-Term Exposure Limit N.E. = Not Established

Engineering Measures.

Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.

Personal protective equipment.**Eye/Face Protection.**

If splashes are likely to occur, wear: Face-shield. Safety glasses with side-shields. Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to handling and processing of material. Tightly fitting safety goggles.

Skin and body protection.

Use: Long sleeved clothing. Protective shoes or boots. Solvent-resistant gloves. Solvent-resistant apron and boots. Wear impervious gloves and/or clothing if needed to prevent contact with the material. Gloves must be inspected prior to use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove and wash contaminated clothing before re-use.

Respiratory protection.

In case of inadequate ventilation wear respiratory protection. NIOSH/MSHA approved respiratory protection should be worn if exposure is anticipated. If exposure limits are exceeded or irritation is experienced, respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

9. Physical and chemical properties.

Information on basic physical and chemical properties.

Physical state	Liquid
Appearance	No Information
Color	various
Odor	Hydrocarbon-like
Odor Threshold	No Information
pH	No Information
Melting/freezing point., °C (°F)	No Information
Flash Point., °C (°F)	46 (114.80)
Boiling point/boiling range., °C (°F)	100 - 320 (212 - 608)
Evaporation rate	No Information Available
Explosive properties.	No Information
Vapor pressure.	No Information
Vapor density.	No Information
Specific Gravity. (g/cm³)	0.896
Water solubility.	No Information
Partition coefficient.	No Information
Autoignition temperature., °C	No Information
Decomposition Temperature °C.	No Information
Viscosity, kinematic.	No Information

Other information.

Volatile organic compounds (VOC) content.	No Information
Density, lb/gal	7.462

10. Stability and Reactivity

Reactivity.

Stable under normal conditions.

Chemical stability.

Stable under recommended storage conditions. Unstable if heated > 100 deg C / 212 deg F.

Possibility of hazardous reactions.

None known based on information supplied.

Conditions to Avoid.

Heat (temperatures above flash point), sparks, ignition points, flames, static electricity. Keep away from heat and sources of ignition. Do not freeze.

Incompatible Materials.

None known based on information supplied.

Hazardous Decomposition Products.

Thermal decomposition can lead to release of irritating gases and vapours. Possible formation of carbon oxides, nitrogen oxides, and hazardous organic compounds.

11. Toxicological Information**Information on toxicological effects.****Acute toxicity.****Product Information**LD50 Oral
550 mg/kgLD50 Dermal
5000 mg/kgLC50 Inhalation (Dust/Mist)
0.51 mg/l**Component Information.**

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>LD50 Oral</u>	<u>LD50 Dermal</u>	<u>LC50 Inhalation</u>
64742-95-6	Solvent naphtha (petroleum), light aromatic	8400 mg/kg Rat	N.I.	N.I.
27247-96-7	2-Ethylhexyl nitrate	>9600 mg/kg Rat	>4800 mg/kg Rabbit	>14 mg/L Rat (Vapor)
64742-94-5	Heavy aromatic naphtha	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>.6 mg/L Rat (Vapor)
95-63-6	1,2,4-TRIMETHYLBENZENE	3280 mg/kg Rat	>3160 mg/kg Rabbit	18 mg/L Rat (Vapor)
110-91-8	Morpholine	1050	310	>8000 ppm Rat (Gas/Mist)
91-20-3	Naphthalene	1110 mg/kg Rat	2002 mg/kg Rat	N.I.
1330-20-7	XYLENE	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat (Vapor)
98-82-8	Benzene, (1-methylethyl)-	1400 mg/kg Rat	1474 mg/kg Rabbit	>3577 ppm Rat (Gas/Mist)

N.I. = No Information

Skin corrosion/irritation.

SKIN IRRITANT.

Eye damage/irritation.

No Information

Respiratory or skin sensitization.

No Information

Ingestion.

May be harmful if swallowed.

Germ cell mutagenicity.

No Information

Carcinogenicity.

No Information

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>IARC</u>	<u>NTP</u>	<u>OSHA</u>
110-91-8	Morpholine	IARC Group 3	-	-
91-20-3	Naphthalene	Group 2B	NTP Reasonably Anticipated to be Human Carcinogen	-
1330-20-7	XYLENE	IARC Group 3	-	-
98-82-8	Benzene, (1-methylethyl)-	IARC Group 2B	NTP Reasonably Anticipated to be Human Carcinogen	-

Reproductive toxicity.

No Information

Specific target organ systemic toxicity (single exposure).

No Information

Specific target organ systemic toxicity (repeated exposure).

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard.

No Information

Primary Route(s) of Entry

Inhalation

12. Ecological Information**Toxicity.**

24.75% of the mixture consists of ingredient(s) of unknown aquatic toxicity

Ecotoxicity effects.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Solvent naphtha (petroleum), light aromatic 64742-95-6	-	LC50 96 h Oncorhynchus mykiss 9.22 mg/L	EC50 48 h Daphnia magna 6.14 mg/L
2-Ethylhexyl nitrate 27247-96-7	-	LC50 96 h Danio rerio 2 mg/L	-
Heavy aromatic naphtha 64742-94-5	-	LC50 96 h Pimephales promelas 19 mg/L, LC50 96 h Oncorhynchus mykiss 2.34 mg/L, LC50 96 h Lepomis macrochirus 1740 mg/L, LC50 96 h Pimephales promelas 45 mg/L, LC50 96 h Pimephales promelas 41 mg/L	EC50 48 h Daphnia magna 0.95 mg/L
1,2,4-TRIMETHYLBENZENE 95-63-6	-	LC50 96 h Pimephales promelas 7.19 - 8.28 mg/L	EC50 48 h Daphnia magna 6.14 mg/L
Morpholine 110-91-8	EC50 96 h Pseudokirchneriella subcapitata 28 mg/L	LC50 96 h Lepomis macrochirus 350 mg/L, LC50 96 h Oncorhynchus mykiss 375 - 460 mg/L, LC50 96 h Brachydanio rerio >1000 mg/L	-
Naphthalene 91-20-3	-	LC50 96 h Pimephales promelas 5.74 - 6.44 mg/L, LC50 96 h Oncorhynchus mykiss 1.6 mg/L, LC50 96 h Oncorhynchus mykiss 0.91 - 2.82 mg/L, LC50 96 h Pimephales promelas 1.99 mg/L, LC50 96 h Lepomis macrochirus 31.0265 mg/L	LC50 48 h Daphnia magna 2.16 mg/L, EC50 48 h Daphnia magna 1.96 mg/L, EC50 48 h Daphnia magna 1.09 - 3.4 mg/L
XYLENE 1330-20-7	-	LC50 96 h Pimephales promelas 13.4 mg/L, LC50 96 h Oncorhynchus mykiss 2.661 - 4.093 mg/L, LC50 96 h Oncorhynchus mykiss 13.5 - 17.3 mg/L, LC50 96 h Lepomis macrochirus 13.1 - 16.5 mg/L, LC50 96 h Lepomis macrochirus 19 mg/L, LC50 96 h Lepomis macrochirus 7.711 - 9.591 mg/L, LC50 96 h Pimephales promelas 23.53 - 29.97 mg/L, LC50 96 h Cyprinus carpio 780 mg/L, LC50 96 h Cyprinus carpio >780 mg/L, LC50 96 h Poecilia reticulata 30.26 - 40.	EC50 48 h water flea 3.82 mg/L, LC50 48 h Gammarus lacustris 0.6 mg/L
Benzene, (1-methylethyl)- 98-82-8	EC50 72 h Pseudokirchneriella subcapitata 2.6 mg/L	LC50 96 h Pimephales promelas 6.04 - 6.61 mg/L, LC50 96 h Oncorhynchus mykiss 4.8 mg/L, LC50 96 h Oncorhynchus mykiss 2.7 mg/L, LC50 96 h Poecilia reticulata 5.1 mg/L	EC50 48 h Daphnia magna 0.6 mg/L, EC50 48 h Daphnia magna 7.9 - 14.1 mg/L

Persistence and degradability.

No data are available on the product itself.

Bioaccumulative potential.

Discharge into the environment must be avoided.

CAS-No.	Chemical Name	log POW
27247-96-7	2-Ethylhexyl nitrate	5.24
64742-94-5	Heavy aromatic naptha	2.8 - 6.5
95-63-6	1,2,4-TRIMETHYLBENZENE	3.63
110-91-8	Morpholine	-0.84, -2.55
91-20-3	Naphthalene	3.4
1330-20-7	XYLENE	2.77 - 3.15
98-82-8	Benzene, (1-methylethyl)-	3.55

Mobility in soil.

No information

Other adverse effects.

No information

13. Disposal Considerations

Waste Disposal Guidance.

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

Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT

Shipping Name:	Flammable Liquid, n.o.s (petroleum distillates, 1,2,4-trimethylbenzene)
Hazard Class:	3
UN/NA Number:	1993
Packing Group:	III
Additional Information:	EXCEPTION: As per 49 CFR 173.120(b)(2), a flammable liquid with a flashpoint at or above 38°C or 100°F may be reclassified as a combustible liquid for transportation within the U.S. by motor vehicle or rail only. A Combustible Liquid in a non-bulk packaging (less than 450L or 119 gallons) is not subject to any of the HazMat regulations unless it is a hazardous substance, hazardous waste, or a marine pollutant [49 CFR 173.150(f)(1)(

IMDG

Proper Shipping Name:	Flammable liquid, n.o.s. (petroleum distillates, 1,2,4-trimethylbenzene)
Hazard Class:	3
UN Number:	1993
Packing Group:	III

IATA

Proper Shipping Name:	UN1993, Flammable liquid, n.o.s. (petroleum distillates, 1,2,4-trimethylbenzene)
Hazard Class:	3
Packing Group:	III

15. Regulatory Information

International Inventories:

TSCA	Complies
DSL	-
DSL/NDL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECI	-
PICCS	-
AIIC	-
NZIoC	-

TCSI

TSCA	United States Toxic Substances Control Act Section 8(b) Inventory.
DSL	Canadian Domestic Substances List.
DSL/NDL	Canadian Domestic Substances List/Canadian Non-Domestic Substances List
EINECS/ELINCS	European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances.
ENCS	Japan Existing and New Chemical Substances.
IECSC	China Inventory of Existing Chemical Substances.
KECL	Korean Existing and Evaluated Chemical Substances.
PICCS	Philippines Inventory of Chemicals and Chemical Substances.
AIIC	Australian Inventory of Chemical Substances.
NZIoC	New Zealand Inventory of Chemicals.
TCSI	Taiwan Chemical Substance Inventory

U.S. Federal Regulations:**SARA SECTION 313:**

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372: .

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Weight Percent</u>
1,2,4-TRIMETHYLBENZENE	95-63-6	2.5-10
Naphthalene	91-20-3	1.0-2.5
Benzene, (1-methylethyl)-	98-82-8	0.1-1.0

TOXIC SUBSTANCES CONTROL ACT 12(b):

This product does not contain any chemicals that are subject to the reporting requirements of TSCA 12(b).

U.S. EPA PESTICIDE INFORMATION

EPA Pesticide Registration Number: 60061-128

EPA STATEMENT: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA PESTICIDE LABEL: CAUTION: Harmful if swallowed. Harmful if inhaled. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ADDITIONAL INFORMATION

Additional Information - Sxn 15: No Information

CALIFORNIA PROPOSITION 65 CARCINOGENS**WARNING**

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

<u>Chemical Name</u>	<u>CAS-No.</u>
Naphthalene	91-20-3
Benzene, (1-methylethyl)-	98-82-8

Ethyl Benzene
Formaldehyde100-41-4
50-00-0**CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS**

No Proposition 65 Reproductive Toxins exist in this product.

16. Other Information**Revision Date:** 5/17/2023 **Supersedes Date:** New SDS**Reason for revision:** No Information**Datasheet produced by:** Regulatory Department**HMIS Ratings:**

Health:	3	Flammability:	2	Physical Hazard:	1	Personal Protection:	X
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NFPA Ratings:

Health:	3	Flammability:	2	Instability:	1	Physical & Chemical:	---
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Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined, N.I. - No Information

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.