



SAFETY DATA SHEET

Issue Date 02-01-2018

Revision Date 02-01-2018

Version 4

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name: OPTIMIZER™

Other means of identification

Common Name: 1650
UN/ID No UN1950
Synonyms None
Product Categories Aerosol, Solvent Based Cleaner

Recommended use of the chemical and restrictions on use

Sale and Use Restrictions Not applicable
Recommended Use Restricted to professional users.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Supplier Address
MOC PRODUCTS CO., INC.
12306 Montague Street
Pacoima, CA 91331

Emergency telephone number

Company Phone Number MOC PRODUCTS CO., INC. (818) 794-3500
Emergency Telephone CHEMTREC 1-800-424-9300

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other information**

- Toxic to aquatic life with long lasting effects
- Toxic to aquatic life

0.261 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %	Trade Secret
Solvent Naphtha	64742-94-5	20-30	*
Dodecylbenzene Sulfonic Acids	27176-87-0	10-20	*
Propane/Isobutane/N-Butane	68476-86-8	10-20	*
2-Butoxyethanol	111-76-2	10-20	*
Petroleum Oil	64742-62-7	1-10	*
Morpholine	110-91-8	1-10	*
Naphthalene	91-20-3	1-5	*

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

4. FIRST AID MEASURES

First aid measures**General advice**

IF exposed: Immediately call a POISON CONTROL CENTER or doctor/physician. Show this safety data sheet to the doctor in attendance.

Skin contact

Wash off immediately with soap and plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before reuse. Thoroughly clean shoes before reuse.

Inhalation

Move to fresh air. Administer oxygen if breathing is difficult. Artificial respiration and/or oxygen may be necessary. If breathing has stopped, get medical attention immediately.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician.

Ingestion

Do not induce vomiting. Call a physician or Poison Control Center immediately. Rinse mouth.

Notes to Physician

Treat symptomatically.

Most important symptoms and effects, both acute and delayed**Symptoms**

Headache, Dizziness, Drowsiness, Nausea, Vomiting, Cough; Difficulty in breathing, Skin irritation, Causes skin burns, Eye irritation, Causes eye burns.

Indication of any immediate medical attention and special treatment needed**Self-protection of the first aider**

Avoid breathing vapors or mists. Avoid contact with skin.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Water spray or fog; Dry chemical, Carbon dioxide (CO₂).

Small Fire	Dry chemical or CO2.
Large Fire	Water spray or fog.
Explosive properties:	Pressurized container: May burst if heated. Risk of explosion if heated under confinement. May form explosive peroxides.

Specific hazards arising from the chemical

Extremely flammable aerosol. Pressurized container: May burst if heated. Flash back possible over considerable distance. Keep away from open flames, hot surfaces and sources of ignition. Vapors may cause flash fire or explosion. Will be easily ignited by heat, sparks or flames. Sealed containers may rupture when heated. Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Vapors may travel to areas away from work site before igniting/flashing back to vapor source.

Hazardous combustion products Carbon monoxide, Carbon dioxide (CO2), Aldehydes, Ketones, Organic acids, Smoke, Toxic gases and fumes; Nitrogen oxides (NOx).

Specific methods:

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge Yes. May be ignited by heat, sparks or flames.

Special firefighting procedures:

Extremely flammable aerosol. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Do not use a solid water stream as it may scatter and spread fire. Water mist may be used to cool closed containers. Use water spray to keep fire-exposed containers cool.

Component	ACGIH - test
2-Butoxyethanol	200
111-76-2 (10-20)	
Naphthalene	2.5
91-20-3 (1-5)	

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Remove all sources of ignition. Ventilate closed spaces before entry. Pay attention to flashback. Use spark-proof tools and explosion-proof equipment. Use personal protective equipment. See Section 8 for information on appropriate personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.

For emergency responders Use personal protection recommended in Section 8. SPILL MAY CAUSE FIRE OR LIBERATE DANGEROUS GAS. Remove all sources of ignition. Pay attention to flashback. Ventilate the area.

Environmental precautions

Environmental precautions: Environmental hazard: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Water runoff can cause environmental damage. Avoid subsoil penetration.

Methods and material for containment and cleaning up

Methods for Containment Remove all sources of ignition. Ventilate the area. Prevent further leakage or spillage if safe to do so. Use non-sparking tools. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

Methods for clean-up: Pressurized container: Do not pierce or burn, even after use. Clean-up methods - small spillage: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to state, local, federal regulations. Large spills present a vapor explosion and liquid fire hazard; evacuate area and ensure response by personnel trained and equipped to respond

to flammable material incident or off-site emergency responders or fire department.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling: Pressurized container: Do not pierce or burn, even after use. Protect from physical damage. Protect from direct sunlight. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Keep away from any incompatible materials (See Section 10). Store in a cool, well ventilated area. Do not stick pin or any other sharp object into opening on top of can.

Conditions for safe storage, including any incompatibilities

Technical measures/precautions: Mechanical ventilation required if used indoors on a continuous basis. Eye wash and safety shower should be easily accessible.

Materials to avoid: Strong acids, Oxidizing agents, Alkalis.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA Exposure Limits:	NIOSH IDLH
Solvent Naphtha 64742-94-5	-	Not established	-
Dodecylbenzene Sulfonic Acids 27176-87-0	-	Not established	-
Propane/Isobutane/N-Butane 68476-86-8	-	Not established	-
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ TWA: 25 ppm TWA: 120 mg/m ³	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
Petroleum Oil 64742-62-7	-	Not established	-
Morpholine 110-91-8	S* TWA: 20 ppm	TWA: 20 ppm TWA: 70 mg/m ³	IDLH: 1400 ppm TWA: 20 ppm TWA: 70 mg/m ³ STEL: 30 ppm STEL: 105 mg/m ³
Naphthalene 91-20-3	S* TWA: 10 ppm	TWA: 10 ppm TWA: 50 mg/m ³	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m ³ STEL: 15 ppm STEL: 75 mg/m ³

Appropriate engineering controls

Engineering measures: Ensure adequate ventilation. Eye wash and safety shower should be easily accessible.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear normal work clothing. Chemical resistant apron, Solvent-resistant gloves: (consult with the specific manufacturer to confirm performance).

Respiratory protection Ensure adequate ventilation. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Use personal protective equipment as required. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Wash face, hands and any exposed skin thoroughly after handling. Take off contaminated clothing and wash it before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Aerosol Foam	Odor	Moth ball, Solvent Odor
Appearance	Clear	Odor threshold	No information available
Color	Amber Brown		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	9.16	
Melting point/freezing point	No information available	
Boiling point / boiling range	No information available . / .	
Flash point	-104 °C / -156 °F	(Propellant)
Evaporation rate	Faster than n-Butyl Acetate	Faster than n-Butyl Acetate
Flammability (solid, gas)	No information available	
Flammability Limits in Air		(Based on liquid components)
Upper flammability limit	No Data Available	
Lower flammability limit	No Data Available	
Vapor pressure	206-275	Vapor Pressure @20°C (kPa)
Vapor density	Heavier than air	Heavier than air
Specific Gravity	0.92	Of liquid
Water solubility	Partially soluble	
Solubility in other solvents	No Data Available	
Partition coefficient	No Data Available	
Autoignition temperature	No Data Available	
Decomposition temperature	No Data Available	
Kinematic viscosity	No information available	
Dynamic viscosity	No Data Available	
Explosive properties	No Data Available	
Oxidizing properties	No Data Available	

Other information

Softening point	No Data Available
Molecular weight	No Data Available
VOC Content (%)	
VOC Content (%)	54.99
Density	0.92 g/cc
Bulk density	No Data Available

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Stable under normal conditions. Keep away from direct sunlight.

Chemical stability

Stability Keep away from direct sunlight. Keep away from open flames, hot surfaces and sources of ignition. Do not store at temperatures above 120°F (50°C).

Possibility of Hazardous Reactions None under normal processing
Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid

Temperatures above 120 °C. Heat, flames and sparks. Keep away from direct sunlight.

Incompatible materials

Materials to avoid: Strong acids, Oxidizing agents, Alkalis.

Hazardous Decomposition Products

Hazardous Decomposition Products Carbon monoxide, Carbon dioxide (CO₂), Aldehydes, Ketones, Organic acids, Nitrogen oxides (NO_x).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Causes severe skin burns and eye damage May be fatal if swallowed and enters airways. Suspected of causing cancer.
Inhalation	Avoid breathing vapors or mists.
Eye contact	Causes severe eye damage. Causes severe eye irritation.
Skin Contact	Causes severe skin burns. Avoid contact with skin and clothing.
Ingestion	May be fatal if swallowed and enters airways. Aspiration may cause pulmonary edema and pneumonitis.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Solvent Naphtha 64742-94-5	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Dodecylbenzene Sulfonic Acids 27176-87-0	= 1260 mg/kg (Rat) = 437 mg/kg (Rat) = 530 mg/kg (Rat)	= 530 mg/kg (Rat)	-
Propane/Isobutane/N-Butane 68476-86-8	-	-	-
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h
Petroleum Oil 64742-62-7	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 2.18 mg/L (Rat) 4 h
Morpholine 110-91-8	= 1050 mg/kg (Rat)	310 - 810 mg/kg (Rabbit)	= 8000 ppm (Rat) 8 h
Naphthalene 91-20-3	= 1110 mg/kg (Rat) = 490 mg/kg (Rat)	= 1120 mg/kg (Rabbit) > 20 g/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h

Information on toxicological effects

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	Skin Sensitization: Not expected. Respiratory Sensitization: Not classified.
Mutagenic effects:	None known based on information supplied.
Carcinogenicity	This product contains one or more substances which are classified by IARC as probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol 111-76-2		Group 3		
Morpholine 110-91-8		Group 3		
Naphthalene 91-20-3	A3	Group 2A Group 2B	Reasonably Anticipated	

Reproductive toxicity	2-Butoxyethanol (CAS#111-76-2): Experiments have shown reproductive toxicity effects on laboratory animals.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.
Chronic toxicity	Prolonged exposure may cause chronic effects. Experiments have shown reproductive toxicity effects on laboratory animals. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Potential cancer hazard.
Subchronic toxicity	No information available.
Target Organ Effects	Liver, Kidney, Blood, Central nervous system, Testes.
Neurological effects	Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Aspiration hazard	May be fatal if swallowed and enters airways.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0.261 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	2028 mg/kg
ATEmix (dermal)	5855 mg/kg
ATEmix (inhalation-dust/mist)	8 mg/l
ATEmix (inhalation-vapor)	21 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Acute Aquatic Toxicity: Toxic to aquatic life. Chronic Aquatic Toxicity: Toxic to aquatic life with long lasting effects.

19.99 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Solvent Naphtha 64742-94-5		19: 96 h Pimephales promelas mg/L LC50 static 2.34: 96 h Oncorhynchus mykiss mg/L LC50 1740: 96 h Lepomis macrochirus mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 41: 96 h Pimephales promelas mg/L LC50		0.95: 48 h Daphnia magna mg/L EC50
Dodecylbenzene Sulfonic Acids 27176-87-0	29: 96 h Pseudokirchneriella subcapitata mg/L EC50	3: 96 h Oncorhynchus mykiss mg/L LC50 static 10.8: 96 h Oncorhynchus mykiss mg/L LC50 static 3.5 - 10: 96 h Brachydanio rerio mg/L LC50 static		2.9: 48 h Daphnia magna mg/L EC50 5.88: 48 h Daphnia magna mg/L EC50
2-Butoxyethanol 111-76-2		1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50		1000: 48 h Daphnia magna mg/L EC50
Petroleum Oil 64742-62-7		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50
Morpholine 110-91-8	28: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	350: 96 h Lepomis macrochirus mg/L LC50 static 375 - 460: 96 h Oncorhynchus mykiss mg/L LC50 1000: 96 h Brachydanio rerio mg/L LC50 static		
Naphthalene 91-20-3	0.4: 72 h Skeletonema costatum mg/L EC50	5.74 - 6.44: 96 h Pimephales promelas mg/L LC50 flow-through 1.6: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.91 - 2.82: 96 h Oncorhynchus mykiss mg/L LC50 static 1.99: 96 h Pimephales promelas mg/L LC50 static 31.0265: 96 h Lepomis macrochirus mg/L LC50 static		2.16: 48 h Daphnia magna mg/L LC50 1.96: 48 h Daphnia magna mg/L EC50 Flow through 1.09 - 3.4: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability

This product contains components which may be persistent in the environment.

Bioaccumulation

Bioaccumulative potential.

Mobility

No information available.

Chemical Name	Partition coefficient
Solvent Naphtha 64742-94-5	2.9-6.1
2-Butoxyethanol 111-76-2	0.83
Morpholine 110-91-8	-2.55

Naphthalene 91-20-3	3.40
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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Dispose of in accordance with federal, state and local regulations.

Contaminated packaging

Pressurized container: Do not pierce or burn, even after use. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Limited quantity (LQ)

< 1 Liter

DOT

UN/ID No UN1950
Proper Shipping Name: Aerosol, Flammable
Hazard Class 2.1
Packing Group: N/A
Emergency Response Guide Number 126

IATA

UN/ID No UN1950
Proper Shipping Name: Aerosol, Flammable
Hazard Class 2.1
Packing Group: N/A

IMDG

UN/ID No UN1950
Proper Shipping Name: Aerosols
Hazard Class 2
Packing Group: N/A

15. REGULATORY INFORMATION

International Inventories

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS Number	Weight %	SARA 313 - Threshold Values %
2-Butoxyethanol 111-76-2	111-76-2	10-20	1.0 % de minimis concentration
Naphthalene 91-20-3	91-20-3	1-5	0.1 % de minimis concentration 0.1 % Supplier notification limit

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	Yes
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Dodecylbenzene Sulfonic Acids 27176-87-0	1000 lbs			X
Naphthalene 91-20-3	100 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Dodecylbenzene Sulfonic Acids 27176-87-0	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Naphthalene 91-20-3	100 lb 1 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ RQ 1 lb final RQ RQ 0.454 kg final RQ

State Regulations (RTK)

California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm:

Chemical Name	CAS Number	California Proposition 65
Naphthalene	91-20-3	Carcinogen
Ethylene glycol	107-21-1	Developmental
2-Methoxyethanol	109-86-4	Developmental

		Male Reproductive
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U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA Rating

Health hazards 2

Flammability -

Instability 0

Physical and Chemical Properties NFPA Level 2 aerosol

HMIS Rating

Health hazards 2*

Flammability 4

Physical hazards 1

Personal protection B

Chronic Hazard Star Legend

* = Chronic Health Hazard

Prepared by

Environmental Health and Safety Department

Issue Date

02-01-2018

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Revision Note

This data sheet contains changes from the previous version in section(s): 10, 15.

Disclaimer

The information provided in this Material Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet