

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP-OFF AERO DZ
 Material number : 000000000000008301

Manufacturer or supplier's details

Company : Zep Inc.
 Address : 350 Joe Frank Harris Parkway, SE
 Emerson, GA 30137
 Telephone : 404-352-1680

Emergency telephone numbers

For SDS Information	: Compliance Services 1-877-428-9937
For a Medical Emergency	: 877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency	: CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

Recommended use of the chemical and restrictions on use

Recommended use : Specialty Cleaner and Remover

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	Aerosol containing a liquefied gas
Colour	amber, translucent
Odour	solvent-like

GHS Classification

Flammable aerosols : Category 1
 Gases under pressure : Liquefied gas
 Acute toxicity (Oral) : Category 4
 Skin irritation : Category 2
 Eye irritation : Category 2A
 Carcinogenicity : Category 1B
 Specific target organ toxicity - single exposure : Category 1
 Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)
 Specific target organ toxicity - repeated exposure (Oral) : Category 2 (Liver, Blood)
 Specific target organ toxicity - repeated exposure (Inhalation) : Category 2 (Central nervous system)

GHS label elements

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H222 Extremely flammable aerosol.
 H280 Contains gas under pressure; may explode if heated.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H350 May cause cancer.
 H370 Causes damage to organs.
 H373 May cause damage to organs (Liver, Blood) through prolonged or repeated exposure if swallowed.
 H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Precautionary statements

: **Prevention:**
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P211 Do not spray on an open flame or other ignition source.
 P251 Pressurized container: Do not pierce or burn, even after use.
 P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician.
 P332 + P313 If skin irritation occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
Storage:
 P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
 P403 Store in a well-ventilated place.
Disposal:

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

P501 Dispose of contents/container in accordance with local regulation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration [%]
dichloromethane	75-09-2	>= 50 - < 70
butane	106-97-8	>= 10 - < 20
methanol	67-56-1	>= 5 - < 10
propane	74-98-6	>= 1 - < 5
1-aminopropan-2-ol	78-96-6	>= 1 - < 5
ethylbenzene	100-41-4	>= 0.1 - < 1

The exact percentages of disclosed substances are withheld as trade secrets.

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
Get medical attention.
- If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.
Wash off immediately with plenty of water for at least 15 minutes.
Remove contaminated clothing and shoes.
Wash contaminated clothing before reuse.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- If swallowed : Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and : Effects are immediate and delayed.
Symptoms may include irritation, redness, pain, and rash.

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

delayed

Chronic effects are delayed and symptoms may not be observed during an exposure. Effects are dependent on exposure (dose, concentration, contact time). Symptoms may differ depending on organs and systems affected. These effects generally are reflected in reduced function or change, which may include cramping, swelling, respiratory issues, and general pain. Symptoms may include shortness of breath, dry cough, and irritation of the nose, eyes, lips, mouth, and throat. Symptoms of overexposure may include disorientation; dizziness; and confusion. May progress to unconsciousness, paralysis, and convulsions.

Causes skin irritation.
Causes serious eye irritation.
Harmful if swallowed.
Review section 2 of SDS to see all potential hazards.
May cause respiratory irritation.

Notes to physician

: Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Water spray jet
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide
Smoke
Chlorine compounds
Nitrogen oxides (NO_x)
phosgene
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Standard procedure for chemical fires.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Always replace cap after use.
Dispose of rinse water in accordance with local and national regulations.
Do not breathe vapours or spray mist.
- Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
No smoking.
Observe label precautions.
Keep in a dry, cool and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis

SAFETY DATA SHEET



ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

dichloromethane	75-09-2	TWA	50 ppm	ACGIH
		PEL	25 ppm	OSHA CARC
		STEL	125 ppm	OSHA CARC
		PEL	25 ppm 87 mg/m3	CAL PEL
		STEL	125 ppm 435 mg/m3	CAL PEL
butane	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	800 ppm 1,900 mg/m3	OSHA P0
		PEL	800 ppm 1,900 mg/m3	CAL PEL
methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		STEL	250 ppm 325 mg/m3	OSHA P0
		TWA	200 ppm 260 mg/m3	OSHA P0
		C	1,000 ppm	CAL PEL
		PEL	200 ppm 260 mg/m3	CAL PEL
		STEL	250 ppm 325 mg/m3	CAL PEL
propane	74-98-6	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,800 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,800 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,800 mg/m3	OSHA P0
		PEL	1,000 ppm 1,800 mg/m3	CAL PEL
ethylbenzene	100-41-4	TWA	20 ppm	ACGIH
		STEL	125 ppm	ACGIH
		TWA	100 ppm 435 mg/m3	NIOSH REL
		ST	125 ppm 545 mg/m3	NIOSH REL
		TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm 435 mg/m3	OSHA P0
		STEL	125 ppm 545 mg/m3	OSHA P0
		PEL	5 ppm 22 mg/m3	CAL PEL
		STEL	30 ppm 130 mg/m3	CAL PEL

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
DICHLOROMETHANE	75-09-2	Dichloromethane	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/l	ACGIH BEI
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI
ETHYLBENZENE	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15.g/g creatinine	ACGIH BEI
ETHYLBENZENE		Ethylbenzene	In end-exhaled air	Not critical		ACGIH BEI

Engineering measures : effective ventilation in all processing areas

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection

Material

Remarks

: Protective gloves
: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

: Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
Access to clean water to rinse eyes must be available, options include: eye wash stations or showers, or eye wash bottles with pure water.

Skin and body protection

: Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

: When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Aerosol containing a liquefied gas
Colour	: amber, translucent
Odour	: solvent-like
Odour Threshold	: No data available
pH	: Not applicable
Melting point/freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Evaporation rate	: < 1 n-Butyl Acetate = 1.0
Flammability (solid, gas)	: Extremely flammable aerosol.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 1.23 g/cm ³
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: not determined
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: not determined
Thermal decomposition	: No data available
Viscosity	
Viscosity, kinematic	: Not applicable
Heat of combustion	: < 20 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable
Chemical stability	: Stable under normal conditions.
Possibility of hazardous	: Vapours may form explosive mixture with air.

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

reactions	No decomposition if stored and applied as directed.
Conditions to avoid	: Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Nitrogen oxides (NOx) Chlorine

SECTION 11. TOXICOLOGICAL INFORMATION
Potential Health Effects

Aggravated Medical Condition	: None known.
Symptoms of Overexposure	: Effects are immediate and delayed. Symptoms may include irritation, redness, pain, and rash. Chronic effects are delayed and symptoms may not be observed during an exposure. Effects are dependent on exposure (dose, concentration, contact time). Symptoms may differ depending on organs and systems affected. These effects generally are reflected in reduced function or change, which may include cramping, swelling, respiratory issues, and general pain. Symptoms may include shortness of breath, dry cough, and irritation of the nose, eyes, lips, mouth, and throat. Symptoms of overexposure may include disorientation; dizziness; and confusion. May progress to unconsciousness, paralysis, and convulsions.

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans	
ACGIH	ethylbenzene	100-41-4
	Confirmed animal carcinogen with unknown relevance to humans	
	dichloromethane	75-09-2
OSHA	ethylbenzene	100-41-4
	OSHA specifically regulated carcinogen	
	dichloromethane	75-09-2
NTP	Reasonably anticipated to be a human carcinogen	
	dichloromethane	75-09-2

Acute toxicity
Product:

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

Acute oral toxicity : Acute toxicity estimate : 1,024 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 5.17 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : 3,006 mg/kg
Method: Calculation method

Components:**1-aminopropan-2-ol:**

Acute oral toxicity : LD50 Oral Rat: 1,715 mg/kg

Acute dermal toxicity : LD50 Dermal Rabbit: 1,573 mg/kg

Skin corrosion/irritation**Product:**

Remarks: Irritating to skin.

Serious eye damage/eye irritation**Product:**

Remarks: Severe eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

Further information**Product:**

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

Remarks: Not applicable

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential**Product:**

Partition coefficient: n-octanol/water : Remarks: No data available

Components:**butane :**

Partition coefficient: n-octanol/water : Pow: 2.89

ethylbenzene :

Partition coefficient: n-octanol/water : Pow: 3.6

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation

40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of in accordance with local regulations.

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Do not re-use empty containers.
 Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
 UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation: IMDG (Vessel):
 UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
 UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
 UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):
 UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

The product as delivered to the customer conforms to packaging requirements for shipment by road under US Department of Transportation (DOT) regulations. Additional transportation classifications noted above are for reference only, and not a certification or warranty of the suitability of the packaging for shipment under these alternative transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
dichloromethane	75-09-2	1000	1515

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
 Gases under pressure
 Acute toxicity (any route of exposure)

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

Skin corrosion or irritation
 Serious eye damage or eye irritation
 Carcinogenicity
 Specific target organ toxicity (single or repeated exposure)

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

dichloromethane	75-09-2	65.9698 %
methanol	67-56-1	9.6754 %
ethylbenzene	100-41-4	0.1025 %

California Prop. 65

WARNING: This product can expose you to chemicals including dichloromethane, ethylbenzene, which is/are known to the State of California to cause cancer, and methanol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL All components of this product are on the Canadian DSL
TSCA On TSCA Inventory

For information on the country notification status for other regions please contact the manufacturer's regulatory group.

Inventory Acronym and Validity Area Legend:

TSCA (USA), DSL (Canada), NDSL (Canada)

SECTION 16. OTHER INFORMATION

ZEP-OFF AERO DZ

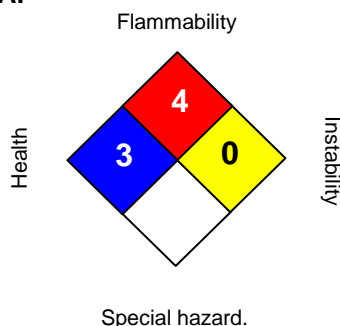
Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

Further information

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	4
PHYSICAL HAZARD	1

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA - GHS Label Information:

Hazard pictograms



Signal word

: **Danger:**

Hazard statements

: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause cancer. Causes damage to organs. May cause damage to organs (Liver, Blood) through prolonged or repeated exposure if swallowed. May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Precautionary statements

: **Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash 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.

Response: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or doctor/ physician. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.

Storage: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place.

Disposal: Dispose of contents/container in accordance with local regulation.

Version:	1.0
Revision Date:	06/21/2018
Print Date:	09/05/2018

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it

ZEP-OFF AERO DZ

Version 1.0

Revision Date 06/21/2018

Print Date 09/05/2018

is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®, Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®, Rexodan®, Mykal™, and a number of private labeled brands.