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Revision Date 05-May-2021

Version 2.02

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier****Product name** BATTERY CLEANER**Recommended use of the chemical and restrictions on use****Product code** 80-473**Product Type** Non-flammable aerosol
Synonyms None**Supplier's details****Recommended Use** Battery Cleaner.**Uses advised against** No information available**Manufactured For:**Kimball Midwest
4800 Roberts Rd.
Columbus, OH 43228
800-233-1294**Emergency telephone number****Chemical Emergency Phone Number** CHEMTREC : 1-800-424-9300**Company Emergency Phone Number** 800-233-1294

2. HAZARDS IDENTIFICATION

Classification

Acute Toxicity - Oral	Category 4
Acute Toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Gases under pressure	Compressed Gas

GHS Label elements, including precautionary statements

Emergency Overview

Warning

Hazard Statements

Harmful if swallowed
 Harmful in contact with skin
 Harmful if inhaled
 Causes skin irritation.
 Causes serious eye irritation.
 Contains gas under pressure; may explode if heated



Appearance Clear

Physical state Aerosol

Odor Mild

Precautionary Statements - Prevention

Wash hands thoroughly after handling
 Wear protective gloves, protective clothing, eye protection, face protection.
 Do not eat, drink or smoke when using this product.
 Avoid breathing fumes, gas, mist, vapors, spray.
 Use only outdoors or in a well-ventilated area.

Precautionary Statements - Response

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

Precautionary Statements - Storage

Protect from sunlight. Store in a well-ventilated place

Precautionary Statements - Disposal

Dispose of contents, container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

None

Other information

0.02099322% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %*
PROPANE/ISOBUTANE/N-BUTANE	68476-86-8	10-20
SODIUM BICARBONATE	144-55-8	1-10
TRIETHANOLAMINE	102-71-6	1-10
DIETHANOLAMINE	111-42-2	<0.1
ETHYLENE OXIDE	75-21-8	<0.1
1,4-DIOXANE	123-91-1	<0.1

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

4. FIRST AID MEASURES**First aid measures for different exposure routes**

General advice	Avoid contact with eyes, skin, and clothing. Avoid breathing vapors, mist, or gas.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. After initial flushing, remove any contact lenses and continue flushing. Seek immediate medical attention, advice.
Skin contact	Wash off with soap and plenty of water. Remove and wash contaminated clothing before re-use. Rinse immediately with plenty of water for 15 minutes and seek medical advice if skin irritation persists.
Inhalation	Move to fresh air. If not breathing, give artificial respiration. If breathing has stopped, contact emergency medical services immediately.
Ingestion	Do NOT induce vomiting. Call a physician immediately. Never give anything by mouth to unconscious person. Risk of product entering the lungs on vomiting after ingestion.

Most important symptoms/effects, acute and delayed

Main Symptoms	Harmful if swallowed, in contact with skin, or if inhaled. Causes skin and eye irritation. May cause respiratory irritation.
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Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**Water fog. Dry chemical. Carbon dioxide (CO₂). Cool containers / tanks with water spray.**Unsuitable Extinguishing Media** Do not use a solid water stream as it may scatter and spread fire.**Specific hazards arising from the chemical**

Propellant is flammable. Container may burst in fire. .

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use shielding to protect fire-fighters from bursting containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use with adequate ventilation to keep the exposure levels below the OELS.

Environmental precautions

Environmental precautions Vapors can accumulate in low areas. Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Report spills as required by local and federal regulations.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains.

Methods for cleaning up Use personal protective equipment. Dam up. Cover liquid spill with sand, earth, or other noncombustible absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with eyes. Avoid breathing vapors or mists. Contents under pressure. Do not puncture or incinerate cans. Do not stick pin or any other sharp object into opening on top of can. Avoid skin contact. Use with adequate ventilation. Keep container away from heat, flames, and all other sources of ignition. Keep can away from all sources of electricity such as electric motors and batteries. Do not spray on hot surfaces.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep in properly labeled containers. Keep out of the reach of children. Store locked up.

Incompatible products Strong acids, alkalis, oxidizing agents.

Aerosol Level 1

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
PROPANE/ISOBUTANE/N-BUTANE 68476-86-8	74-98-6: TWA: 1000 ppm 106-97-8: STEL: 1000 ppm 75-28-5: STEL: 1000 ppm	74-98-6:TWA: 1000 ppm TWA: 1800 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1800 mg/m ³ 106-97-8: (vacated) TWA: 800	74-98-6:IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m ³ 106-97-8:TWA: 800 ppm TWA: 1900 mg/m ³

		ppm (vacated) TWA: 1900 mg/m ³	75-28-5:TWA: 800 ppm TWA: 1900 mg/m ³
TRIETHANOLAMINE 102-71-6	TWA: 5 mg/m ³	-	-
2-BUTOXYETHANOL 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
ETHYLENE GLYCOL 107-21-1	STEL: 50 ppm vapor fraction STEL: 10 mg/m ³ inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m ³	-
DIETHANOLAMINE 111-42-2	TWA: 1 mg/m ³ inhalable fraction and vapor Skin - potential significant contribution to overall exposure by the cutaneous route	(vacated) TWA: 3 ppm (vacated) TWA: 15 mg/m ³	TWA: 3 ppm TWA: 15 mg/m ³
1,4-DIOXANE 123-91-1	TWA: 20 ppm Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 100 ppm TWA: 360 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 90 mg/m ³ (vacated) S* S*	IDLH: 500 ppm Ceiling: 1 ppm 30 min Ceiling: 3.6 mg/m ³ 30 min
ETHYLENE OXIDE 75-21-8	TWA: 1 ppm	TWA: 1 ppm STEL: 5 ppm see 29 CFR 1910.1047	IDLH: 800 ppm Ceiling: 5 ppm 10 min/day Ceiling: 9 mg/m ³ 10 min/day TWA: 0.1 ppm less than stated value TWA: 0.18 mg/m ³ less than stated value

ACGIH: (American Conference of Governmental Industrial Hygienists)

OSHA: (Occupational Safety & Health Administration)

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Exposure controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Safety glasses with side-shields.

Skin and body protection

Chemical resistant apron. Protective gloves.

Respiratory protection

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.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties

Physical state
Appearance
Color

Aerosol
Clear
Amber

Odor
Odor Threshold

Mild

<u>Property</u>	<u>Values</u>	<u>Remarks • Methods</u>
pH	8.95	
Melting/freezing point	No information available	
Boiling point/boiling range		
Flash Point	-91 °C / -132 °F	Based on propellant
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
upper flammability limit		
lower flammability limit		
Vapor pressure		
Vapor density		
Specific Gravity	0.972	
Water solubility	Practically insoluble	
Partition coefficient: n-octanol/water		
Autoignition temperature	No information available	
Decomposition temperature		
Viscosity	No information available	
Explosive properties		
<u>Other information</u>		
VOC Content(%)	16.96	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Incompatible Materials

Strong acids, alkalis, oxidizing agents.

Hazardous Decomposition Products

Carbon oxides , Hydrocarbons, Fumes.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Avoid inhaling vapors or mists. Harmful if inhaled. May cause irritation to respiratory system.
Eye contact	Irritating to eyes.
Skin contact	Harmful if in contact with skin.
Ingestion	Harmful and may be fatal if swallowed and enters airways.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
SODIUM BICARBONATE 144-55-8	= 4220 mg/kg (Rat)	-	-
TRIETHANOLAMINE 102-71-6	= 4190 mg/kg (Rat)	> 20000 mg/kg (Rabbit)	-
DIETHANOLAMINE 111-42-2	= 780 mg/kg (Rat)	= 11.9 mL/kg (Rabbit)	-
ETHYLENE OXIDE 75-21-8	= 72 mg/kg (Rat)	-	= 800 ppm (Rat) 4 h
1,4-DIOXANE 123-91-1	= 5170 mg/kg (Rat)	= 7600 mg/kg (Rabbit)	= 46 mg/L (Rat) 2 h

Information on toxicological effects

Symptoms Harmful if swallowed, in contact with skin, or inhaled.. Causes eye and skin irritation. May cause respiratory irritation.

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

Skin corrosion/irritation Causes skin irritation.
Eye damage/irritation Irritating to eyes.
Irritation Causes skin and eye irritation. May cause respiratory irritation.
Sensitization No information available.
Germ cell mutagenicity There are no known mutagenic chemicals in this product.
Carcinogenicity The table below indicates whether each agency has evaluated a listed ingredient as a carcinogen.
 Ethanolamine, Ethylene Oxide, 1,4-Dioxane are all in the product at <0.1 % reportable levels.

Chemical Name	ACGIH	IARC	NTP	OSHA
TRIETHANOLAMINE 102-71-6	-	3	-	-
DIETHANOLAMINE 111-42-2	-	Group 2B	-	-
ETHYLENE OXIDE 75-21-8	A2	Group 1	Known	X
1,4-DIOXANE 123-91-1	A3	Group 2B	Reasonably Anticipated	X

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Group 2B - Possibly Carcinogenic to Humans

Group 1 - Carcinogenic to Humans

NTP: (National Toxicity Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive toxicity This product does not contain a chemical(s) which is a known or suspected reproductive hazard .

Specific target organ systemic toxicity (single exposure) No information available.

Specific target organ systemic toxicity (repeated exposure) No information available.

Chronic toxicity Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Chronic hydrocarbon abuse has been associated with irregular heart rhythms and potential cardiac arrest.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0.02099322% 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) 24732 mg/kg

ATEmix (dermal) 74195 mg/kg

ATEmix (inhalation-dust/mist) 123.9 mg/l
ATEmix (inhalation-vapor) 1282 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
SODIUM BICARBONATE 144-55-8	-	8250 - 9000 mg/L LC50 Lepomis macrochirus 96h static	-	2350 mg/L EC50 Daphnia magna 48h
TRIETHANOLAMINE 102-71-6	169 mg/L EC50 Desmodesmus subspicatus 96h 216 mg/L EC50 Desmodesmus subspicatus 72h	10600 - 13000 mg/L LC50 Pimephales promelas 96h flow-through 450 - 1000 mg/L LC50 Lepomis macrochirus 96h static 1000 mg/L LC50 Pimephales promelas 96h static	-	-
DIETHANOLAMINE 111-42-2	2.1 - 2.3 mg/L EC50 Pseudokirchneriella subcapitata 96h 7.8 mg/L EC50 Desmodesmus subspicatus 72h	1200 - 1580 mg/L LC50 Pimephales promelas 96h static 4460 - 4980 mg/L LC50 Pimephales promelas 96h flow-through 600 - 1000 mg/L LC50 Lepomis macrochirus 96h static	-	55 mg/L EC50 Daphnia magna 48h
ETHYLENE OXIDE 75-21-8	-	73 - 96 mg/L LC50 Pimephales promelas 96h	-	137 - 300 mg/L LC50 Daphnia magna 48h
1,4-DIOXANE 123-91-1	-	10306 - 14742 mg/L LC50 Pimephales promelas 96h static 9850 mg/L LC50 Pimephales promelas 96h 9850 mg/L LC50 Pimephales promelas 96h flow-through 10000 mg/L LC50 Lepomis macrochirus 96h semi-static 10000 mg/L LC50 Lepomis macrochirus 96h static	-	163 mg/L EC50 water flea 48h Static

Persistence and degradability

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Bioaccumulation

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Chemical Name	log Pow
PROPANE/ISOBUTANE/N-BUTANE 68476-86-8	2.8
TRIETHANOLAMINE 102-71-6	-2.53
DIETHANOLAMINE 111-42-2	-2.18
ETHYLENE OXIDE 75-21-8	-0.3
1,4-DIOXANE 123-91-1	-0.42

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste Disposal Methods

This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Dispose of in accordance with federal, state, and local regulations. Dispose of in

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

Contaminated packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Ground LIMITED QUANTITY

IATA UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, LTD. QTY

IMDG UN1950, AEROSOLS, 2.2,LTD. QTY.

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
PROPANE/ISOBUTANE/N-BUTANE	X	X	X	Not listed	X	X	X	X
SODIUM BICARBONATE	X	X	X	X	X	X	X	X
TRIETHANOLAMINE	X	X	X	X	X	X	X	X
DIETHANOLAMINE	X	X	X	X	X	X	X	X
ETHYLENE OXIDE	X	X	X	X	X	X	X	X
1,4-DIOXANE	X	X	X	X	X	X	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

CHINA - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

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

Chemical Name	CAS-No	Weight %*	SARA 313 - Threshold Values %
2-BUTOXYETHANOL - 111-76-2	111-76-2	0.830403	1.0
ETHYLENE GLYCOL - 107-21-1	107-21-1	0.008387909	1.0
DIETHANOLAMINE - 111-42-2	111-42-2	<0.1	1.0
1,4-DIOXANE - 123-91-1	123-91-1	<0.1	0.1
ETHYLENE OXIDE - 75-21-8	75-21-8	<0.1	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Star Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	Yes
Reactive Hazard	No

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).

CERCLA

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

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
DIETHANOLAMINE 111-42-2	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
ETHYLENE OXIDE 75-21-8	10 lb	10 lb	RQ 10 lb final RQ RQ 4.54 kg final RQ
1,4-DIOXANE 123-91-1	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

U.S. State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals: Ethylene Glycol CAS # 107-21-1) is considered a Proposition 65 chemical for developmental only when ingested. The purpose of this product is not for ingestion. NO warning for Ethylene Glycol is required for this product.



Chemical Name	California Prop. 65
ETHYLENE GLYCOL - 107-21-1	Developmental (ingested)/<0.1%
DIETHANOLAMINE - 111-42-2	Cancer / <0.1%
1,4-DIOXANE - 123-91-1	Cancer <0.1%
ETHYLENE OXIDE - 75-21-8	Carcinogen Developmental Female Reproductive Male Reproductive <0.1%

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
DEIONIZED WATER 7732-18-5			X
TRIETHANOLAMINE 102-71-6	X	X	X
2-BUTOXYETHANOL 111-76-2	X	X	X
ETHYLENE GLYCOL 107-21-1	X	X	X
DIETHANOLAMINE 111-42-2	X	X	X
1,4-DIOXANE 123-91-1	X	X	X
ETHYLENE OXIDE	X	X	X

75-21-8			
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EPA Pesticide Registration Number Not applicable

Canada

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

16. OTHER INFORMATION

NFPA	Health Hazard 2	Flammability 2	Instability 0	Physical and chemical hazards -
HMIS	Health Hazard 2	Flammability 2	Physical Hazard 1	Personal protection B

Prepared By Regulatory Affairs
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Revision Note
 (M)SDS sections updated 2 3 11 15

Disclaimer

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.

End of Safety Data Sheet