



BREAKTHROUGH! LIQUID ADDITIVE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 11/9/2020 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product code : 1985HOT

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

KARCHER NORTH AMERICA
6398 N Karcher Way
Aurora, 80019
United States
T 303-738-2400
info@karcherna.com

1.4. Emergency telephone number

Emergency number : 800-535-5053
For Chemical Emergency Call INFOTRAC 24hr/day 7days/week
Within USA and Canada: 1-800-535-5053
Outside USA and Canada: 011-1-352-323-3500
(collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 4	H227	Combustible liquid
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 1C	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Carcinogenicity Category 1A	H350	May cause cancer
Specific target organ toxicity (single exposure) Category 3	H335	May cause respiratory irritation
Hazardous to the aquatic environment - Acute Hazard Category 3	H402	Harmful to aquatic life

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H302+H332 - Harmful if swallowed or if inhaled

Precautionary statements (GHS US) :

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

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smoking.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P308+P313 - If exposed or concerned: Get medical advice/attention.

P310 - Immediately call a poison center or doctor

P363 - Wash contaminated clothing before reuse.

P370+P378 - In case of fire: Use media other than water to extinguish.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
BUTHOXYETHANOL	CAS-No.: 111-76-2	30 – 50
ALCOHOLS, C6-C12, ETHOXYLATED	CAS-No.: 68439-45-2	20 – 30
ALKYL (C10-C16) BENZENESULFONIC ACID	CAS-No.: 68584-22-5	24.57 – 27.3
SULFURIC ACID	CAS-No.: 7664-93-9	0.273 – 0.819

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

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First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

ALCOHOLS, C6-C12, ETHOXYLATED (68439-45-2)

No additional information available

ALKYL (C10-C16) BENZENESULFONIC ACID (68584-22-5)

No additional information available

SULFURIC ACID (7664-93-9)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	0.2 mg/m ³ (Thoracic fraction)
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BUTHOXYETHANOL (111-76-2)

USA - ACGIH - Occupational Exposure Limits

Local name	2-Butoxyethanol (EGBE)
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2019

USA - OSHA - Occupational Exposure Limits

Local name	2-Butoxyethanol
OSHA PEL (TWA) [1]	240 mg/m ³
OSHA PEL (TWA) [2]	50 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

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Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Orange
Odor	: Characteristic odour
Odor threshold	: No data available
pH	: 1
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

Refractive index	: 1.4559
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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified. Harmful if inhaled.

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ATE US (dust, mist)	4.421 mg/l/4h
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ALCOHOLS, C6-C12, ETHOXYLATED (68439-45-2)

LD50 oral rat	> 1000 mg/kg (Rat, Oral)
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LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
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ALKYL (C10-C16) BENZENESULFONIC ACID (68584-22-5)

LD50 dermal rabbit	> 5000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
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LC50 inhalation rat (mg/l)	> 1.9 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
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SULFURIC ACID (7664-93-9)

LD50 oral rat	2140 mg/kg body weight (Rat, Experimental value, Oral)
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ATE US (oral)	2140 mg/kg body weight
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BUTHOXYETHANOL (111-76-2)

LD50 oral rat	1746 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
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LC50 inhalation rat (mg/l)	> 4.26 mg/l (4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
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ATE US (oral)	1414 mg/kg body weight
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ATE US (dermal)	1100 mg/kg body weight
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ATE US (gases)	4500 ppmV/4h
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ATE US (vapors)	11 mg/l/4h
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ATE US (dust, mist)	1.5 mg/l/4h
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Skin corrosion/irritation : Causes severe skin burns.
pH: 1

Serious eye damage/irritation : Causes serious eye damage.
pH: 1

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

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SULFURIC ACID (7664-93-9)	
National Toxicity Program (NTP) Status	Known Human Carcinogens
BUTHOXYETHANOL (111-76-2)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
BUTHOXYETHANOL (111-76-2)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
ALKYL (C10-C16) BENZENESULFONIC ACID (68584-22-5)	
NOAEL (oral, rat, 90 days)	500 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
BUTHOXYETHANOL (111-76-2)	
NOAEL (dermal, rat/rabbit, 90 days)	> 150 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

SULFURIC ACID (7664-93-9)	
LC50 - Fish [1]	42 mg/l (96 h, <i>Gambusia affinis</i>)
EC50 - Daphnia [1]	29 mg/l (24 h, <i>Daphnia magna</i>)

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BUTHOXYETHANOL (111-76-2)	
LC50 - Fish [1]	1474 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
EC50 - Daphnia [1]	1550 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	1840 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
NOEC (chronic)	100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	> 100 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '21 d'

12.2. Persistence and degradability

ALCOHOLS, C6-C12, ETHOXYLATED (68439-45-2)	
Persistence and degradability	Readily biodegradable in water.
SULFURIC ACID (7664-93-9)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
BUTHOXYETHANOL (111-76-2)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

ALCOHOLS, C6-C12, ETHOXYLATED (68439-45-2)	
Partition coefficient n-octanol/water (Log Pow)	3.01 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.
SULFURIC ACID (7664-93-9)	
Partition coefficient n-octanol/water (Log Pow)	-2.2 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.

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BUTHOXYETHANOL (111-76-2)	
Partition coefficient n-octanol/water (Log Pow)	0.81 (Experimental value, BASF test, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

BUTHOXYETHANOL (111-76-2)	
Surface tension	65.03 mN/m (20 °C, 2 g/l)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.451 – 0.882 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

14.1. UN number

DOT NA No : UN1760

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Corrosive liquids, n.o.s. (SUFONIC ACID DDBSA), 8, II

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 8
Hazard labels (DOT) : 8



14.4. Packing group

Packing group (DOT) : II

14.5. Environmental hazards

Other information : No supplementary information available.

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14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1760

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

SULFURIC ACID (7664-93-9)

CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb

15.2. International regulations

SULFURIC ACID (7664-93-9)

Listed as carcinogen on NTP (National Toxicology Program)

15.3. US State regulations



WARNING:

This product can expose you to ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases

H227	Combustible liquid
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation
H350	May cause cancer
H402	Harmful to aquatic life

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

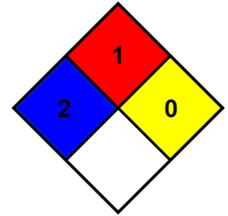
NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

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NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : B - Safety glasses, Gloves

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.