

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 7/18/2022 Revision date: 7/16/2024 Version: 1.1

1.1. Identification         Product form         Product code         1.2. Recommended use and restrictions	: Mixture : 5353LAN
Product code	
1.2 Pecommonded use and restrictions	
1.2. Recommended use and restrictions	on use
No additional information available	
1.3. Supplier	
KARCHER NORTH AMERICA 6398 N Karcher Way Aurora, 80239 United States T 303-738-2400 nfo@karcherna.com	
<b>1.4. Emergency telephone number</b> Emergency number	: 800-535-5053 For Chemical Emergency Call INFOTRAC 24hr/day 7days/week Within USA and Canada: 800-535-5053 Outside USA and Canada: 1-352-323-3500 (collect calls accepted)
SECTION 2: Hazard(s) identification	

2.1. Classification of the substance or mixture

### **GHS US classification**

Acute toxicity (oral) Category 3	H301	Toxic if swallowed
Acute toxicity (oral) Category 5	H301	I UXIC II SWAIIUWEU
Acute toxicity (dermal) Category 2	H310	Fatal in contact with skin
Acute toxicity (inhalation:dust,mist) Category 3	H331	Toxic if inhaled
Skin corrosion/irritation Category 1A	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Carcinogenicity Category 1A	H350	May cause cancer (Dermal, Inhalation, oral)
Hazardous to the aquatic environment – Chronic Hazard Category 3	8 H412	Harmful to aquatic life with long lasting effects
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) Hazard statements (GHS US)



- : Danger
- : H301+H331 Toxic if swallowed or if inhaled
- H310 Fatal in contact with skin
- H314 Causes severe skin burns and eye damage
- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage

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Precautionary statements (GHS US)	<ul> <li>H350 - May cause cancer (Dermal, Inhalation, oral)</li> <li>H412 - Harmful to aquatic life with long lasting effects</li> <li>P201 - Obtain special instructions before use.</li> </ul>
recouldnary statements (Cho CO)	P202 - Do not handle until all safety precautions have been read and understood.
	P260 - Do not breathe dust, fume, gas, mist, spray, vapors.
	P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.
	P262 - Do not get in eyes, on skin, or on clothing.
	P264 - Wash hands, forearms and face thoroughly after handling.
	P270 - Do not eat, drink or smoke when using this product.
	P271 - Use only outdoors or in a well-ventilated area.
	P272 - Contaminated work clothing must not be allowed out of the workplace.
	P273 - Avoid release to the environment.
	P280 - Wear protective gloves, protective clothing, eye protection, face protection.
	P301+P310 - If swallowed: Immediately call a POISON CENTER, a doctor.
	P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
	P302+P352 - If on skin: Wash with plenty of water.
	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, a doctor.
	P311 - Call a POISON CENTER, a doctor.
	P321 - Specific treatment (see supplemental first aid instruction on this label).
	P322 - Specific treatment (see supplemental first aid instruction on this label)
	P330 - Rinse mouth.
	P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
	P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.
	P363 - Wash contaminated clothing before reuse.
	P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
	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

Other hazards which do not result in classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

No additional information available

## **SECTION 3: Composition/Information on ingredients**

### 3.1. Substances

#### Not applicable

3.2. Mixtures		
Name	Product identifier	%
SULFURIC ACID	CAS-No.: 7664-93-9	20 – 30
HYDROFLUORIC ACID	CAS-No.: 7664-39-3	5 – 10
QUATERNARY AMMONIUM COMPOUNDS, (HYDROGENATED TALLOW ALKYL)BIS(HYDROXYETHYL)METHYL, ETHOXYLATED, CHLORIDES	CAS-No.: 68187-69-9	1 – 5

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Name	Product identifier	%
ALCOHOLS, C8-C10, ETHOXYLATED	CAS-No.: 71060-57-6	1 – 5
BUTHOXYETHANOL	CAS-No.: 111-76-2	1 – 5
COCOAMIDOPROPYL BETAINE	CAS-No.: 61789-40-0	0.13 – 0.195

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. Call a doctor.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Call a physician immediately. Rinse skin with water/shower.
First-aid measures after eye contact	<ul> <li>Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.</li> </ul>
First-aid measures after ingestion	: Rinse mouth. Call a physician immediately. Do not induce vomiting.
4.2. Most important symptoms and effect	cts (acute and delayed)
Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.
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					
Fire hazard Explosion hazard Hazardous decomposition products in case of fire	<ul> <li>Heating increases the fire hazard.</li> <li>No direct explosion hazard.</li> <li>Toxic fumes may be released.</li> </ul>				
5.3. Special protective equipment and precautions for fire-fighters					
Firefighting instructions Protection during firefighting	<ul> <li>Do not enter fire area without proper protective equipment, including respiratory protection.</li> <li>Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.</li> </ul>				

SECTION 6: Accidental release measures					
6.1. Personal precautions, protective equipment and emergency procedures					
General measures	: Do not handle until all safety precautions have been read and understood.				
6.1.1. For non-emergency personnel					
Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not					

breathe dust, fume, gas, mist, spray, vapors.

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### 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. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up				
Methods for cleaning up: In case of spill, use hydrofluoric acid specific spill kit.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	
Additional hazards when processed Precautions for safe handling Hygiene measures	<ul> <li>Not expected to present a significant hazard under anticipated conditions of normal use.</li> <li>Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not get in eyes, on skin, or on clothing. Do not breathe dust, fume, gas, mist, spray, vapors.</li> <li>Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.</li> </ul>
7.2. Conditions for safe storage, including an	ny incompatibilities
Technical measures Storage conditions	: Comply with applicable regulations. : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

SECTION 8: Exposure controls/personal protection					
8.1. Control parameters					
No additional information available					
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	Safety glasses				

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#### Skin and body protection:

Wear suitable protective clothing

#### **Respiratory protection:**

[In case of inadequate ventilation] wear respiratory protection.

#### Personal protective equipment symbol(s):



### **SECTION 9: Physical and chemical properties**

-	9.1.	Informat	ion on	basic	physic	cal and	chemica	properties

Physical state Appearance Color Odor pH

- : Liquid : Liquid.
- : Colorless
- : Characteristic odour
- : 1.5 3.5

#### 9.2. Other information

No additional information available

### **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.

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 in	formation	
11.1. Information on toxicologica	l effects	
Acute toxicity (oral) Acute toxicity (dermal)	: Toxic if swallowed. : Fatal in contact with skin.	

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Acute toxicity (inhalation) :	Inhalation:dust,mist: Toxic if inhaled.	
FLEET ALUMINUM BRIGHTENER		
ATE US (oral)	87.644 mg/kg body weight	
ATE US (dermal)	88.914 mg/kg body weight	
ATE US (dust, mist)	0.885 mg/l/4h	
QUATERNARY AMMONIUM COMPOUNDS, (HYDROGENATED TALLOW ALKYL)BIS(HYDROXYETHYL)METHYL, ETHOXYLATED, CHLORIDES (68187-69-9)		
ATE US (oral)	500 mg/kg body weight	
SULFURIC ACID (7664-93-9)		
LD50 oral rat	2140 mg/kg body weight Animal: rat, 95% CL: 1540 - 2990	
LC50 Inhalation - Rat	0.375 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)	
ATE US (oral)	2140 mg/kg body weight	
HYDROFLUORIC ACID (7664-39-3)	·	
ATE US (oral)	5 mg/kg body weight	
ATE US (dermal)	5 mg/kg body weight	
ATE US (gases)	100 ppmV/4h	
ATE US (vapors)	0.5 mg/l/4h	
ATE US (dust, mist)	0.05 mg/l/4h	
ALCOHOLS, C8-C10, ETHOXYLATED (71060-4	57-6)	
ATE US (oral)	500 mg/kg body weight	
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))	
LD50 oral	1414 mg/kg body weight (OECD 401: Acute Oral Toxicity, Guinea pig, Male / female, Experimental value, Oral, 14 day(s))	
LC50 Inhalation - Rat	> 4.26 mg/l (4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))	
ATE US (oral)	1414 mg/kg body weight	
ATE US (dermal)	1100 mg/kg body weight	
ATE US (gases)	4500 ppmV/4h	
ATE US (vapors)	11 mg/l/4h	
ATE US (dust, mist)	1.5 mg/l/4h	
Skin corrosion/irritation :	Causes severe skin burns. pH: 1.5 – 3.5	
BUTHOXYETHANOL (111-76-2)		
рН	No data available in the literature	
Serious eye damage/irritation :	Causes serious eye damage. pH: 1.5 – 3.5	
BUTHOXYETHANOL (111-76-2)		
рН	No data available in the literature	
Respiratory or skin sensitization :	May cause an allergic skin reaction.	

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer (Dermal, Inhalation, oral).
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	: Not classified
BUTHOXYETHANOL (111-76-2)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	Not classified
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
BUTHOXYETHANOL (111-76-2)	
Viscosity, kinematic	3.642 mm²/s (20 °C)
Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

## **SECTION 12: Ecological information**

12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
SULFURIC ACID (7664-93-9)	
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC (chronic)	0.15 mg/l Test organisms (species): other:Tanytarsus dissimilis
NOEC chronic fish	0.31 mg/l Test organisms (species): Salvelinus fontinalis
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 - Crustacea [1]	1550 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [2]	1840 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
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'

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BUTHOXYETHANOL (111-76-2)		
NOEC chronic fish	> 100 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '21 d'	
12.2. Persistence and degradability		
FLEET ALUMINUM BRIGHTENER		
Persistence and degradability	Rapidly degradable	
QUATERNARY AMMONIUM COMPOUNDS, (H ETHOXYLATED, CHLORIDES (68187-69-9)	YDROGENATED TALLOW ALKYL)BIS(HYDROXYETHYL)METHYL,	
Persistence and degradability	Rapidly degradable	
SULFURIC ACID (7664-93-9)		
Persistence and degradability	Rapidly degradable	
HYDROFLUORIC ACID (7664-39-3)		
Persistence and degradability	Rapidly degradable	
ALCOHOLS, C8-C10, ETHOXYLATED (71060-57-6)		
Persistence and degradability	Rapidly degradable	
COCOAMIDOPROPYL BETAINE (61789-40-0)		
Persistence and degradability	Rapidly degradable	
BUTHOXYETHANOL (111-76-2)		
Persistence and degradability	Readily biodegradable in water.	
12.3. Bioaccumulative potential		
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

 Regional waste regulation
 : Disposal must be done according to official regulations.

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

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SECTION 14: Transport information	
14.1. UN number	
UN-No.(DOT)	: UN2922
14.2. UN proper shipping name	
Proper Shipping Name (DOT)	: Corrosive liquids, toxic, n.o.s.
14.3. Transport hazard class(es)	
<b>DOT</b> Transport hazard class(es) (DOT) Hazard labels (DOT)	: 8 (6.1) : 8, 6.1
14.4. Packing group	
Packing group (DOT)	: 11
14.5. Environmental hazards	
Other information	: No supplementary information available.
14.6. Special precautions for user	
DOT UN-No.(DOT) DOT Special Provisions (49 CFR 172.102) DOT Packaging Exceptions (49 CFR 173.xxx) DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	<ul> <li>UN2922</li> <li>B3 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks and DOT 57 portable tanks are not authorized.</li> <li>IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.</li> <li>T7 - 4 178.274(d)(2) Normal</li></ul>
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) DOT Vessel Stowage Location	<ul> <li>30 L</li> <li>B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.</li> </ul>
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"

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#### 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 present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

SULFURIC ACID	CAS-No. 7664-93-9	20 – 30%
HYDROFLUORIC ACID	CAS-No. 7664-39-3	5 – 10%

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

HYDROFLUORIC ACID (7664-39-3)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 ІЬ
SARA Section 302 Threshold Planning Quantity (TPQ)	100 lb

### **15.2. International regulations**

No additional information available

### 15.3. US State regulations

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**

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Full text of hazard classes and H-statements	
H301	Toxic if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction

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Full text of hazard classes and H-statements		
H318	Causes serious eye damage	
H331	Toxic if inhaled	
H350	May cause cancer	
H412	Harmful to aquatic life with long lasting effects	
NFPA health haza NFPA fire hazard NFPA reactivity	<ul> <li>rd</li> <li>: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.</li> <li>: 1 - Materials that must be preheated before ignition can occur.</li> <li>: 0 - Material that in themselves are normally stable, even under fire conditions.</li> </ul>	
Hazard Rating		
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given	
lammability : 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		
Personal protectio	sonal protection : X - Special handling directions	
Safety Data Sheet	(SDS), USA	

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.