Breakdown

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
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SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : Breakdown
Product code : 4621

1.2. Recommended use and restrictions on use

Recommended use : Heavy-duty detergent, Vehicle cleaning/vehicle care product

1.3. Supplier

Synthetic Labs
24 Victory Lane
Dracut, MA, 01826
United States
T 800.255.4050 - F 978.957.5122
www.syntecpro.com

1.4. Emergency telephone number

Emergency number : Infotrac 24 Hour Medical Emergency Number: 1-800-535-5053

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 1A — Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1 — Causes serious eye damage

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : Causes severe skin burns and eye damage
Causes serious eye damage
Precautionary statements (GHS US) : Do not breathe dust/fume/gas/mist/vapors/spray.
Wash hands, forearms and face thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center or doctor.
Specific treatment (see supplemental first aid instruction on this label).
Wash contaminated clothing before reuse.
Store locked up.

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)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Tetrasodium ethylenediaminetetraacetate	CAS-No.: 64-02-8	5 – 10	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Sodium hydroxide	CAS-No.: 1310-73-2	1 – 5	Acute Tox. 1 (Oral), H300 Skin Corr. 1, H314 Eye Dam. 1, H318
Disodium Metasilicate	CAS-No.: 6834-92-0	1 – 5	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1B, H314 STOT SE 3, H335

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.

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.

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

Breakdown
No additional information available

Tetrasodium ethylenediaminetetraacetate (64-02-8)
No additional information available

Sodium hydroxide (1310-73-2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Sodium hydroxide
ACGIH OEL Ceiling	2 mg/m³
Remark (ACGIH)	URT, eye, & skin irr
USA - OSHA - Occupational Exposure Limits	
Local name	Sodium hydroxide
OSHA PEL (TWA) [1]	2 mg/m³

Disodium Metasilicate (6834-92-0)
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

Skin and body protection:
Wear suitable protective clothing

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 : Violet
Odor : Fresh

Odor threshold	:	No data available
pH	:	13.5
pH solution	:	13.5 – 14
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
Density	:	1.05 g/m³
Solubility	:	Soluble in water.
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

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 information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
LD50 oral rat	1780 – 2000 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
ATE US (oral)	1780 mg/kg body weight

Sodium hydroxide (1310-73-2)	
ATE US (oral)	1.111 mg/kg body weight

Disodium Metasilicate (6834-92-0)	
LD50 oral rat	1152 – 1349 mg/kg body weight (Rat, Male / female, Experimental value, 10 % aqueous solution, Oral, 7 day(s))
LD50 dermal rat	> 5000 mg/kg body weight (EPA OPPTS 870.1200: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Aqueous solution, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 2.06 mg/l (EPA OPPTS 870.1300: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Aqueous solution, Inhalation (vapours), 14 day(s))
ATE US (oral)	1152 mg/kg body weight
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns.
pH: 13.5

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
pH	11 (1 %)

Sodium hydroxide (1310-73-2)	
pH	14 (5 %)

Disodium Metasilicate (6834-92-0)	
pH	No data available in the literature

Serious eye damage/irritation : Causes serious eye damage.
pH: 13.5

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
pH	11 (1 %)

Sodium hydroxide (1310-73-2)	
pH	14 (5 %)

Disodium Metasilicate (6834-92-0)	
pH	No data available in the literature

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified

Disodium Metasilicate (6834-92-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
Viscosity, kinematic	Not applicable (solid)

Sodium hydroxide (1310-73-2)	
Viscosity, kinematic	No data available in the literature

Disodium Metasilicate (6834-92-0)	
Viscosity, kinematic	Not applicable (solid)

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.

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
LC50 - Fish [1]	121 mg/l (US EPA, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Soft water)
EC50 - Crustacea [1]	625 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (EU Method C.3, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Weight of evidence, Nominal concentration)

Sodium hydroxide (1310-73-2)	
LC50 - Fish [1]	189 mg/l (48 h, Leuciscus idus, Fresh water, Experimental value)
EC50 - Crustacea [1]	40 mg/l (48 h, Ceriodaphnia sp., Experimental value, Locomotor effect)

Disodium Metasilicate (6834-92-0)	
LC50 - Fish [1]	210 mg/l (ISO 7346-1, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	1700 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	< 0.002 g O_2/g substance
Chemical oxygen demand (COD)	0.54 – 0.58 g O_2/g substance

Sodium hydroxide (1310-73-2)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Disodium Metasilicate (6834-92-0)	
Persistence and degradability	Biodegradability: not applicable.

Disodium Metasilicate (6834-92-0)	
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
BCF - Fish [1]	1.1 – 1.8 (28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-13.17 (QSAR, KOWWIN, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Sodium hydroxide (1310-73-2)	
Bioaccumulative potential	Not bioaccumulative.

Disodium Metasilicate (6834-92-0)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.495 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

Sodium hydroxide (1310-73-2)	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

Disodium Metasilicate (6834-92-0)	
Surface tension	No data available in the literature
Ecology - soil	Low potential for adsorption 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
UN-No. (TDG) : Not applicable
UN-No. (IMDG) : 1760
UN-No. (IATA) : 1760

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Corrosive liquids, n.o.s.
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, N.O.S.
Proper Shipping Name (IATA) : Corrosive liquid, n.o.s.

14.3. Transport hazard class(es)

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

TDG
Transport hazard class(es) (TDG) : Not applicable

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

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

14.4. Packing group

Packing group (DOT) : II
Packing group (TDG) : Not applicable
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT
UN-No.(DOT) : UN1760

DOT Special Provisions (49 CFR 172.102)	:	B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. 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. T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	154
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	202
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	30 L
DOT Vessel Stowage Location	:	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.
DOT Vessel Stowage Other	:	40 - Stow ‘‘clear of living quarters’’

TDG

Emergency Response Guide (ERG) Number	:	154

IMDG

Special provision (IMDG)	:	274
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T11
Tank special provisions (IMDG)	:	TP2, TP27
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	B
Stowage and handling (IMDG)	:	SW2
Properties and observations (IMDG)	:	Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y840
PCA limited quantity max net quantity (IATA)	:	0.5L
PCA packing instructions (IATA)	:	851
PCA max net quantity (IATA)	:	1L
CAO packing instructions (IATA)	:	855
CAO max net quantity (IATA)	:	30L
Special provision (IATA)	:	A3
ERG code (IATA)	:	8L

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

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Tetrasodium ethylenediaminetetraacetate	64-02-8	Present	Active	
Sodium hydroxide	1310-73-2	Present	Active	
Disodium Metasilicate	6834-92-0	Present	Active	

Sodium hydroxide (1310-73-2)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	1000 lb

15.2. International regulations

CANADA

Tetrasodium ethylenediaminetetraacetate (64-02-8)
Listed on the Canadian DSL (Domestic Substances List)

Sodium hydroxide (1310-73-2)
Listed on the Canadian DSL (Domestic Substances List)

Disodium Metasilicate (6834-92-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

Component	State or local regulations
Sodium hydroxide(1310-73-2)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 1/8/2024

Hazard Rating

Health	:	3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	:	0 Minimal Hazard - Materials that will not burn
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.

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.