

1. Identification of the substance/preparation and of the company/undertaking

Product Name DEFY

UN/ID No. NA1760

Synonyms

Recommended use of the chemical and restrictions on use

Recommended Use Heavy Duty Cleaner & Degreaser

Uses advised against Not applicable

Manufacturer Address

Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

Emergency telephone number

1-800-424-9300

2. Hazards identification

Classification

OSHA Regulatory Status

Skin Corrosion/Irritation Category 1 Sub-category B

Serious Eye Damage/Irritation Category 1

Label Elements

Signal word: **Danger**

Hazard Statements

Causes severe skin burns and eye damage.

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician. Specific treatment (see Section 4 on the SDS).

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep comfortable for breathing.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

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

Hazards not otherwise classified (HNOC)

Other Information

Harmful if swallowed. May cause irritation / burns if inhaled.



3. Composition/information on ingredients

Chemical Name	CAS Number	% by Weight
Potassium hydroxide	1310-58-3	<5
Dipropylene Glycol Methyl Ether	34590-94-8	<10
TSRN4130		<10
TSRN8300		<5
TSRN9305		<5

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

4. First aid measures

Eye contact

Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention.

Skin Contact

Flush with water for 15 minutes. If irritation persists after rinsing, get medical attention. Remove contaminated clothing and wash before reuse.

Inhalation

Remove victim to fresh air. If breathing difficulty occurs or persists, get medical attention.

Ingestion

Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing or unconscious person.

Self-protection of the first aider

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes irritation (possibly severe), burns to the eyes. May cause permanent eye damage. Causes irritation (possibly severe), burns to the skin. Causes irritation (possibly severe), burns, nausea, vomiting to the gastrointestinal tract. Causes irritation (possibly severe), burns, pulmonary edema to the respiratory tract.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

None known.

Hazardous combustion products

None known

Explosion Data

Sensitivity to mechanical impact None

Sensitivity to static discharge None

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Evacuate nonessential personnel. Ventilate area. Wear appropriate personal protection equipment.

Environmental precautions

See Section 12 for additional ecological information.

Methods for containment

Completely contain spilled material with dikes or sand bags, etc.

Methods for cleaning up

Recover as much material as possible into containers for disposal or reuse. Remaining material may be diluted with water and neutralized. Flush spill area with water. Neutralization products, both solid and liquid, must be recovered for disposal.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Do not ingest.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed and properly labeled. Containers that have been emptied will retain product residue and should be handled as if they were full. Store in a cool, dry, well-ventilated place away from incompatible materials. Wash hands before eating, drinking, using tobacco, applying make-up or using the toilet. Do not store, use, and/or consume foods, beverages, tobacco in areas where this product is stored.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong reducing agents.

8. Exposure controls/personal protection

Control parameters

Exposure Guideline

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m3	(vacated) Ceiling: 2 mg/m3	Ceiling: 2 mg/m3

Appropriate engineering controls

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

Avoid contact with eyes. Wear protective splash proof safety goggles. Additional full face protection is recommended if splashing is a possibility.

Skin and body protection

If contact is anticipated, wear protective clothing appropriate to use conditions.

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.

General Hygiene Considerations

Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Color	Clear, red
Odor	Citrus
Odor threshold	
pH	11.4-12.0
Melting point/freezing point	No information available
Boiling point / boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability upper limit in air	No information available
Flammability lower limit in air	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific Gravity	1.060-1.080
Water solubility	Soluble in water

Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available

10. Stability and reactivity

Reactivity

No information 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 oxidizing agents. Strong acids. Strong reducing agents

Hazardous Decomposition Products

Decomposition products can include and are not limited to: Carbon Monoxide. Carbon Dioxide. Aldehydes. Ketones. Organic acids.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Causes irritation (possibly severe), burns, pulmonary edema to the respiratory tract.
Eye contact	Causes irritation (possibly severe), burns to the eyes. May cause permanent eye damage.
Skin Contact	Causes irritation (possibly severe), burns to the skin.
Ingestion	Causes irritation (possibly severe), burns, nausea, vomiting to the gastrointestinal tract.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium hydroxide 1310-58-3	284 mg/kg (Rat)		
Dipropylene Glycol Methyl Ether 34590-94-8	LD50, Rat, > 5,000 mg/kg	LD50, Rabbit, 9,510 mg/kg	LC50, Rat, 7 Hour, vapour, 3.35 mg/l No deaths occurred at this concentration.
TSRN4130	LD 50 (Rat): 1,000 - 2,000 mg/kg		
TSRN8300	2444 mg/kg	>4640 mg/m3	
TSRN9305	LD50 Rat 500 - 2000 mg/kg	LD50 Rabbit > 2000 mg/kg	

Information on toxicological effects

Symptoms No information available

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

Sensitization	No information available
Germ cell mutagenicity	No information available
Carcinogenicity	Not applicable

Chemical Name	ACGIH	IARC	NTP	OSHA

Reproductive toxicity	Not applicable
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Aspiration hazard	No information available

Numerical measures of toxicity - Product Information

12. Ecological information

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Potassium hydroxide 1310-58-3		LC50 (Gambusia affinis): 80 mg/L 96h static	EC50 (Daphnia magna): 60 mg/L/48 hr (static bioassay at 20.3-20.7 C)
Dipropylene Glycol Methyl Ether 34590-94-8	ErC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Biomass, > 969 mg/l,	LC50, Poecilia reticulata (guppy), static test, 96 Hour, > 1,000 mg/l	LC50, Daphnia magna (Water flea), static test, 48 Hour, 1,919 mg/l
TSRN9305	EC50 Algae 50 - 100 mg/l, 72 hours	LC50 Fish 6 mg/l, 96 hours	EC50 Daphnia 6.9 mg/l, 48 hours

Persistence and degradability No information available

Bioaccumulation No information available

Chemical Name	Partition coefficient
Potassium hydroxide 1310-58-3	0.83

Other adverse effects No information available

13. Disposal considerations

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Rinse empty container and offer for recycling.

Chemical Name	California Hazardous Waste Status

14. Transport information

DOT This product can ship as a LTD QTY if packaged in <1.3 gallon containers (Non Hazardous)

UN/ID No. NA1760

Proper shipping name Compounds, Cleaning Liquid

Hazardous ingredients (potassium hydroxide)

Hazard class 8

Packing group III

15. Regulatory information

US Federal Regulations

SARA 311/312 Hazards

Skin Corrosion/Irritation
Serious Eye Damage/Irritation

CWA (Clean Water Act)

Chemical Name	Reportable Quantities	Toxic Pollutants	Priority Pollutants	Hazardous Substances

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Potassium hydroxide 1310-58-3	1000 lb	1000 lb	

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NEPA Health hazards 2 Flammability 1 Instability 0 **Physical and Chemical Properties**
HMIS Health hazards 2 Flammability 1 Physical hazards 0 **Personal protection** X
Prepared By lmt
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Revision Note 2021-05-10 added pH and specific gravity information. 2020 12 14 formula revision

Disclaimer

The information provided in this Material Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet