


**GHS
SAFETY DATA SHEET**

I. PRODUCT IDENTIFICATION			
MANUFACTURER/SUPPLIER Exide Technologies 13000 Deerfield Parkway, Bldg. 200 Milton, GA 30004	CHEMICAL/TRADE NAME 22% Sodium Sulfate Solution (as used on label)		
	PRODUCT ID N/A		
FOR FURTHER INFORMATION Primary Contact: Exide SDS Support (770) 421-3485 Secondary Contact: Joe Bolea (423) 989-6377 Fred Ganster (610) 921-4052	CHEMICAL FAMILY/ CLASSIFICATION Disodium sulfate, Sulfuric acid disodium salt Salt Water		
	FOR EMERGENCY CHEMTREC (800) 424-9300 (703) 527-3887 – Collect 24-hour Emergency Response Contact Ask for Environmental Coordinator		
II. HAZARD IDENTIFICATION			
 <p>Signal Word: Warning</p>			
Category:	GHS Codes	Description	
Health: Skin Irrit. 2 Eye Irrit 2	H315 H319 P260 P264 P280	causes skin irritation causes serious eye irritation Do not breathe dust/fume/gas/mist/vapors/spray Wash affected part thoroughly after handling Wear protective gloves	
Handling:	P402 P404	Store in a dry place Store in a closed container	
WARNING: NONE			
Reactivity: slightly reactive with oxidizing agents, metals. Hygroscopic (moisture sensitive). Sodium sulfate reacts violently with magnesium. Also incompatible with aluminum, potassium mercury, lead, calcium, silver, barium, ammonium ions, and strontium. Sulfates give precipitates with salts of lead, barium, strontium, and calcium. Silver and mercury form slightly soluble salts. Alcohol precipitates most sulfates out of solution. (Sodium sulfate anhydrous)			
III. COMPOSITION/INFORMATION ON INGREDIENTS			
Ingredient	CAS Number	% by Wt.	
Sodium Sulfate	7757-82-6	22	
Water	7732-18-5	balance	
IV. FIRST AID MEASURES			
Take proper precautions to ensure you own health and safety before attempting to rescue a victim and provide first aid.			
Inhalation	Remove from exposure. Get medical attention if cough or other symptoms appear.		
Skin Contact:	Wash thoroughly with soap and water. Get medical attention if irritation develops or persists.		
Eye Contact:	Flush with copious quantities of water for at least 15 minutes. Get immediate medical attention.		
Ingestion:	If victim is conscious and alert, give 2 – 4 cupfuls of milk or water and induce vomiting by one teaspoon of Ipecac syrup or placing the finger at the back of the throat. Get immediate medical attention.		
V. FIRE FIGHTING MEASURES			
Flash Point:	Not Applicable		
Flammable Limits:	Not Applicable		
Extinguishing media:	CO ₂ ; foam; dry chemical, water spray. Use extinguishing media most appropriate for the surrounding fire.		
Fire Fighting Procedures:	Use full body fire fighting clothing and full-face piece positive pressure, self-contained breathing apparatus.		

Hazardous Combustion Products:
Extremely high temperatures may produce sulfur dioxide gas.

VI. ACCIDENTAL RELEASE MEASURES

Absorb spills with absorbent (vermiculite, sand, fuller's earth), and placed into suitable dry containers for later disposal. Avoid generating dusty conditions. Never use compressed air as a means of cleaning.

VII. HANDLING AND STORAGE

Handling:

Use with adequate ventilation. Minimize dust generation and accumulation. Avoid breathing airborne dust. Avoid contact with the eyes, skin, and clothing. Avoid ingestion and inhalation. Keep in closed containers.

Storage:

Store in a cool, dry, well-ventilated area away from incompatible materials.

VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Limits (mg/m³)

Ingredient:	US OSHA	US ACGIH	US NIOSH	Quebec PEV	Ontario OEL	EU OEL
Sodium Sulfate	N/A	N/A	N/A	N/A	N/A	N/A
Water	N/A	N/A	N/A	N/A	N/A	N/A

NOTE:

N/A = not applicable

Engineering Controls (Ventilation):

Ventilation, as described in the Industrial Ventilation Manual produced by the American Conference of Governmental Industrial Hygienists, should be provided in areas where acute and chronic exposures are possible.

Hygiene Practices:

Wash hands thoroughly before eating, drinking or smoking.

Respiratory Protection (NIOSH/MSHA approved):

Not required for normal use. Firefighting – self-contained breathing apparatus with full facepiece operated in pressure-demand mode.

Skin Protection:

Gloves should be worn when handling the product.

Eye Protection:

Do not wear contact lenses when working with chemicals, safety glasses or goggles should be worn when using this product.

Other Protection:

Coveralls or other full body clothing shall be worn during product use and properly laundered after use. Other safety equipment should be worn as appropriate for the industrial environment. Personal clothing and shoes should be protected from contamination with this product.

IX. PHYSICAL AND CHEMICAL PROPERTIES - ELECTROLYTE

Boiling Point@760 mm Hg	Not Applicable	Specific Gravity @ 70°F (H ₂ O=1)	1.20 – 1.3
Melting Point	Not Applicable	Vapor Pressure (mm Hg)	Not Applicable
Solubility in Water	Soluble	pH	Less than 1
Evaporation Rate (Butyl acetate=1)	Not Applicable	Vapor Density (AIR=1)	Not Applicable
Appearance and Odor Threshold	Clear to slight green tint, no apparent odor	Viscosity	Not applicable
Octanol Water Partition Coefficient (K _{ow})	Not Available	% Volatiles by Weight	Not Applicable

X. STABILITY & REACTIVITY DATA

Stability: Stable Unstable

Conditions to Avoid: Cold temperatures cause precipitation of salt crystals.

Incompatibilities: (materials to avoid)

Avoid contact with magnesium and strong acids. No further concern for mechanical impact.

Hazardous Decomposition Products:

Oxides of sulfur, sodium oxide.

Hazardous Polymerization: Will Not Occur

XI. TOXICOLOGICAL DATA

Routes of Entry:

Sodium sulfate is harmful by inhalation, ingestion, skin contact, and eye contact.

Acute Toxicity:

Inhalation LD₅₀: NA
Oral LD₅₀: mouse: 26977 mg/kg

Inhalation:

May cause respiratory tract irritation.

Ingestion:

May cause irritation of the digestive tract with diarrhea

Skin Contact:

May cause irritation after contact. Does not permeate skin and is not a dermal sensitizer.

Eye Contact:

May cause irritation and conjunctivitis

Synergistic Products:

No known synergistic products

Additional Information:

Effects of Overexposure - Acute:

Sodium sulfate may cause respiratory, digestive tract, skin, and eye irritation.

Effects of Overexposure - Chronic:

May cause adverse reproductive effects (fetotoxicity) based on animal studies. Placental absorption of sulfate ion has been characterized. Sulfate ion levels at term are somewhat higher in fetal than in maternal blood.

Carcinogenicity: Sodium sulfate is not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, or OSHA.

XII. ECOLOGICAL INFORMATION

Environmental Fate: Sodium sulfate may persist indefinitely in the environment, but is not likely to show bioaccumulation or food chain contamination effects. If diluted with water, this chemical released directly or indirectly into the environment is not expected to have a significant impact. Log P_{ow} = 3

Environmental Toxicity: Aquatic Toxicity

Fathead minnow	LC ₅₀	13,500-14,500 mg/L
<i>Daphnia magna</i> :	96-hr LC ₅₀	4547 mg/L
	48-hr EC ₅₀	1564 mg/L

XIII. DISPOSAL INFORMATION

US

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

XIV. TRANSPORT INFORMATION

GROUND – US-DOT/CAN-TDG/EU-ADR/APEC-ADR:

Not regulated as a hazardous material

AIRCRAFT – ICAO- IATA:

Not regulated as a hazardous material

VESSEL – IMO-IMDG:

Not regulated as a hazardous material

ADDITIONAL INFORMATION:

Transport may require packaging and paperwork, including the Nature and Quantity of goods, per applicable origin/destination/customs points as-shipped.

XV. REGULATORY INFORMATION

United States:

CERCLA (Superfund) and EPCRA:

Sodium sulfate is not a CERCLA hazardous substance. Spills of sodium sulfate are not reportable under CERCLA.

TSCA: Sodium sulfate (Sulfuric acid disodium salt) is listed in the TSCA Inventory as a Chemical in Commerce, however, it is exempt from reporting under the Inventory Update Rule (40 CFR 710(b)).

SARA Title III: Sodium sulfate is not a listed "extremely hazardous substance" (Section 304) or "toxic chemical" (Section 313).

RCRA: Unused sodium sulfate solution is not a hazardous waste if disposal is required.

US State Notifications & Warnings:	Identification	Notifications/Warning
MA	Right to Know	TSCA8(b) inventory: sodium sulfate anhydrous; water
PA	Right to Know	None
California	California Proposition 65	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.
Country/Organization	Identification	Notifications/Warning
Canada	All chemical substances in this product are listed on the CEPA DSL/NDSL or are exempt from list requirements.	This product is not classified as hazardous by Canadian regulation. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. Refer to the Controlled Products Regulation for product labeling requirements
EU	European Inventory of Existing Commercial Chemical Substances (EINECS):	All ingredients remaining in the finished product as distributed into commerce are exempt from, or included on, the European Inventory of Existing Commercial Chemical Substances.

XVI. OTHER INFORMATION

DATE ISSUED: September 11, 2013

OTHER INFORMATION: Distribution into Quebec to follow Canadian Controlled Product Regulations (CPR) 24(1) and 24(2). Distribution into the EU to follow applicable Directives to the Use, Import/Export of the product as-sold.

SOURCES OF INFORMATION: International Agency for Research on Cancer (1987), IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Overall Evaluations of Carcinogenicity: An updating of IARC Monographs Volumes 1-42, Supplement 7, Lyon, France. Ontario Ministry of Labor Regulation 654/86. Regulations Respecting Exposure to Chemical or Biological Agents.

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