

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	Extran 300	Product Code	EX0996
Manufacturer	EMD Chemicals Inc. P.O. Box 70 480 Democrat Road Gibbstown, NJ 08027 Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.	Effective Date	4/28/2003
For More Information Call	856-423-6300 Technical Service Monday-Friday: 8:00 AM - 5:00 PM	In Case of Emergency Call	800-424-9300 CHEMTREC (USA) 613-996-6666 CANUTEC (Canada) 24 Hours/Day: 7 Days/Week
Synonym	None.		
Material Uses	Laboratory Reagent		
Chemical Family	Caustic Solution		

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
Sodium Hydroxide	1310-73-2	1-5
2-Aminoethanol	141-43-5	10-20
EDTA di-Sodium Dihydrate	6381-92-6	5-10
Brij 35	9002-92-0	1-5
Emulsifier K-30	68188-18-1	1-5
Marlipal 0 13/90	69011-36-5	1-5
Water	7732-18-5	>50

Section 3. Hazards Identification

Physical State and Appearance	Liquid. (Viscous liquid.)
Emergency Overview	DANGER !POISON ! MAY BE FATAL IF ABSORBED THROUGH SKIN. HARMFUL IF SWALLOWED. CAUSES EYE AND SKIN BURNS. CAUSES RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF INHALED.
Routes of Entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential Acute Health Effects	<p>Eyes Hazardous in case of eye contact (corrosive). Causes eye burns.</p> <p>Skin Extremely hazardous in case of skin contact (permeator). May be fatal if absorbed. Hazardous in case of skin contact (corrosive). Skin contact produces burns.</p> <p>Inhalation Hazardous in case of inhalation (lung irritant).</p> <p>Ingestion Hazardous in case of ingestion.</p>
Potential Chronic Health Effects	<p>Carcinogenic Effects This material is not known to cause cancer in animals or humans.</p> <p>Additional information See Toxicological Information (section 11)</p>
Medical Conditions	Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation.
Aggravated by	Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
Overexposure:	

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Section 5. Fire Fighting Measures

Flammability of the Product	Non-flammable.
Auto-ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not applicable.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of static discharge: No.
Fire Fighting Media and Instructions	Risks of explosion of the product in presence of mechanical impact: No. Not applicable.
Protective Clothing (Fire)	Wear MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.
Special Remarks on Fire Hazards	When heated to decomposition it emits toxic fumes.
Special Remarks on Explosion Hazards	Combustible liquid and vapor. (2-Aminoethanol)

Section 6. Accidental Release Measures

Small Spill and Leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.
Spill Kit Information	The following EM SCIENCE SpillSolv (TM) absorbent is recommended for this product: SX1320 Caustic Treatment Kit

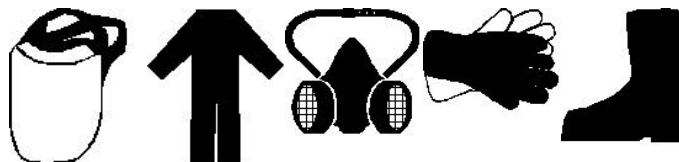
Section 7. Handling and Storage

Handling	Do not ingest. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.
Personal Protection	<p>Eyes Face shield.</p> <p>Body Full suit.</p> <p>Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.</p> <p>Hands Gloves.</p> <p>Feet Boots.</p>

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
---	---

Product Name

Sodium Hydroxide

Exposure Limits

ACGIH (United States).
CEIL: 2 mg/m³

OSHA (United States).
CEIL: 2 mg/m³

AUVA (Austria, 1995).
Spitzenbegrenzung: 4 mg/m³ 8 times per shift, 5 minute(s).
TWA: 2 mg/m³ 8 hour(s).

Belgium Minister of Labour (Belgium, 1998).
CEIL: 2 mg/m³
VL: 2 mg/m³ 8 hour(s).

BAUA (Germany, 1997).
Spitzenbegrenzung: 2 mg/m³
TWA: 2 mg/m³ 8 hour(s).

DK-Arbejdstylnet (Denmark, 1996).
Loftværdi: 2 mg/m³
GV: 2 mg/m³ 8 hour(s).

Tyterveyslaitos (Finland, 1998).

2-Aminoethanol

TWA: 2 mg/m³ 8 hour(s).
INRS (France, 1996).
VME: 2 mg/m³ 8 hour(s).
National Authority for Occupational Safety/Health (Ireland, 1999).
STEL: 2 mg/m³ 15 minute(s).
Arbeidsinspectie (Netherlands, 1999).
MAC-C: 2 mg/m³
TGG 8 uur: 2 mg/m³ 8 hour(s).
N-Arbeidstilsynet (Norway, 1996).
AN: 2 mg/m³ 8 hour(s).
AFS (Sweden, 1996).
KTV: 2 mg/m³ 15 minute(s).
EH40 -OES (United Kingdom (UK), 1997).
STEL: 2 mg/m³ 15 minute(s).
NIOSH REL (United States, 1994).
CEIL: 2 mg/m³
OSHA Final Rule (United States, 1989).
CEIL: 2 mg/m³
AUVA (Austria, 1995).
Spitzenbegrenzung: 40 mg/m³ 2 times per shift, 30 minute(s).
Spitzenbegrenzung: 15 ppm 2 times per shift, 30 minute(s).
TWA: 8 mg/m³ 8 hour(s).
TWA: 3 ppm 8 hour(s).
Belgium Minister of Labour (Belgium, 1998).
VCD: 15 mg/m³ 15 minute(s).
VCD: 6 ppm 15 minute(s).
VL: 7.6 mg/m³ 8 hour(s).
VL: 3 ppm 8 hour(s).
BAUA (Germany, 1997). Skin
Spitzenbegrenzung: 5.1 mg/m³
Spitzenbegrenzung: 2 ppm
TWA: 5.1 mg/m³ 8 hour(s).
TWA: 2 ppm 8 hour(s).
DK-Arbejdstilsynet (Denmark, 1996). Skin
GV: 2.5 mg/m³ 8 hour(s).
GV: 1 ppm 8 hour(s).
Tyterveyslaitos (Finland, 1998).
STEL: 15 mg/m³ 15 minute(s).
STEL: 6 ppm 15 minute(s).
TWA: 7.6 mg/m³ 8 hour(s).
TWA: 3 ppm 8 hour(s).
INRS (France, 1996).
VME: 8 mg/m³ 8 hour(s).
VME: 3 ppm 8 hour(s).
National Authority for Occupational Safety/Health (Ireland, 1999).
STEL: 15 mg/m³ 15 minute(s).
STEL: 6 ppm 15 minute(s).
OEL: 8 mg/m³ 8 hour(s).
OEL: 3 ppm 8 hour(s).
Arbeidsinspectie (Netherlands, 1999). Skin
TGG 15 min: 7.6 mg/m³ 15 minute(s).
TGG 15 min: 3 ppm 15 minute(s).
TGG 8 uur: 2.5 mg/m³ 8 hour(s).
TGG 8 uur: 1 ppm 8 hour(s).
N-Arbeidstilsynet (Norway, 1996).
AN: 8 mg/m³ 8 hour(s).
AN: 3 ppm 8 hour(s).
AFS (Sweden, 1996). Skin
KTV: 15 mg/m³ 15 minute(s).
KTV: 6 ppm 15 minute(s).
NGV: 8 mg/m³ 8 hour(s).
NGV: 3 ppm 8 hour(s).
EH40-OES (United Kingdom (UK), 1997).
STEL: 15 mg/m³ 15 minute(s).
STEL: 6 ppm 15 minute(s).
TWA: 7.6 mg/m³ 8 hour(s).
TWA: 3 ppm 8 hour(s).
ACGIH (United States, 1994).
STEL: 15 mg/m³ 15 minute(s).
STEL: 6 ppm 15 minute(s).
TWA: 7.5 mg/m³ 8 hour(s).
TWA: 3 ppm 8 hour(s).
NIOSH REL (United States, 1994).
STEL: 15 mg/m³ 15 minute(s).
STEL: 6 ppm 15 minute(s).
TWA: 8 mg/m³ 10 hour(s).
TWA: 3 ppm 10 hour(s).
OSHA Final Rule (United States, 1989).
STEL: 15 mg/m³ 15 minute(s).
STEL: 6 ppm 15 minute(s).

	TWA: 8 mg/m ³ 8 hour(s).
	TWA: 3 ppm 8 hour(s).
EDTA di-Sodium Dihydrate	Not available.
Brij 35	Not available.
Emulsifier K-30	Not available.
Marlipal 0 13/90	Not available.
Water	Not available.

Section 9. Physical and Chemical Properties

Odor	Odorless.
Color	Off-white.
Physical State and Appearance	Liquid. (Viscous liquid.)
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH	Not available.
Boiling/Condensation Point	The lowest known value is 99.9°C (211.8 °F) (Water). Weighted average: 116.08°C (240.9°F)
Melting/Freezing Point	May start to solidify at 38.06 to 42.06°C (100.5 to 107.7°F) based on data for: Brij 35. Weighted average: 3.99°C (39.2 °F)
Specific Gravity	1.063 (Water = 1)
Vapor Pressure	The highest known value is 0.06 kPa (0.5 mmHg) (@ 20°C) (2-Aminoethanol).
Vapor Density	The highest known value is 2.11 (Air = 1) (2-Aminoethanol).
Odor Threshold	The lowest known value is 2 ppm (2-Aminoethanol)
Evaporation Rate	0.36 (Water) compared to (n-BUTYL ACETATE=1)
LogKow	Not available.
Solubility	Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Absorbs CO ₂ from air. (2-Aminoethanol)
Incompatibility with Various Substances	Highly reactive with oxidizing agents, acids. Slightly reactive to reactive with reducing agents, organic materials, metals.
Rem/Incompatibility	Avoid generating dust or vapors. Extreme heat (EDTA di-Sodium Dihydrate)
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

RTECS Number:	Sodium Hydroxide	WB4900000
	2-Aminoethanol	KJ5775000
	EDTA di-Sodium Dihydrate	Not available.
	Marlipal MG	JR5970000, JR5990000, MD0875000, JR5960000
	Emulsifier K -30	Not available.
	Marlipal 013/90	Not available.
	Water	ZC0110000
Toxicity	Acute oral toxicity (LD ₅₀): 700 mg/kg [Mouse]. (2-Aminoethanol). Acute dermal toxicity (LD ₅₀): 1 mg/kg [Rabbit]. (2-Aminoethanol).	
Chronic Effects on Humans	Not available.	
Acute Effects on Humans	Hazardous in case of eye contact (corrosive). Causes eye burns. Extremely hazardous in case of skin contact (permeator). May be fatal if absorbed. Hazardous in case of skin contact (corrosive). Skin contact produces burns. Hazardous in case of inhalation (lung irritant). Hazardous in case of ingestion.	
Synergetic Products (Toxicologically)	Not available.	
Irritancy	Draize Test: Not available.	
Sensitization	Not available.	
Carcinogenic Effects	This material is not known to cause cancer in animals or humans.	
Toxicity to Reproductive System	Not available.	
Teratogenic Effects	Not available.	
Mutagenic Effects	Not available.	

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

EPA Waste Number	D002
Treatment	Specified Technology - Contact your local permitted waste disposal site (TSD) for permissible treatment sites. ALWAYS CONTACT PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

+ Section 14. Transport Information

DOT Classification	Proper Shipping Name: CORROSIVE LIQUIDS, N.O.S. (MONOETHANOLAMINE, SODIUM HYDROXIDE) Hazard Class: 8 UN number: UN1760 Packing Group: III RQ: Not applicable.
TDG Classification	Not available.
IMO/IMDG Classification	Proper Shipping Name: CORROSIVE LIQUIDS, N.O.S. (MONOETHANOLAMINE, SODIUM HYDROXIDE) Hazard Class: 8 UN number: UN1760 Packing Group: III RQ: Not applicable.
ICAO/IATA Classification	Not available.



Section 15. Regulatory Information

U.S. Federal Regulations	TSCA 8(b) inventory: Sodium Hydroxide; 2-Aminoethanol; EDTA di-Sodium Dihydrate; BriJ 35; Emulsifier K-30; Marlipal 0 13/90; Water SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: Sodium Hydroxide; 2-Aminoethanol; BriJ 35 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Hydroxide: Immediate (Acute) Health Hazard; 2-Aminoethanol: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard; BriJ 35: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard SARA 313 toxic chemical notification and release reporting: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: Sodium Hydroxide Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: No products were found. Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). Class D-2A: Material causing other toxic effects (VERY TOXIC). Class D-2B: Material causing other toxic effects (TOXIC). CLASS E: Corrosive liquid. CEPA DSL: Sodium Hydroxide; 2-Aminoethanol; BriJ 35; Marlipal 0 13/90; Water This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.
WHMIS (Canada)	
International Regulations	
EINECS	Sodium Hydroxide 215-185-5 2-Aminoethanol 205-483-3 EDTA di-Sodium Dihydrate 205-358-3 BriJ 35 Not available. Emulsifier K-30 Not available. Marlipal 0 13/90 Not available. Water 231-791-2
DSCL (EEC)	R27- Very toxic in contact with skin. R22- Harmful if swallowed. R34- Causes burns.
International Lists	Australia (NICNAS): Sodium Hydroxide; 2-Aminoethanol; BriJ 35; Marlipal 0 13/90; Water Germany water class: BriJ 35; Marlipal 0 13/90 Japan (MITI): Sodium Hydroxide; 2-Aminoethanol; Water Korea (TCCL): Sodium Hydroxide; 2-Aminoethanol; BriJ 35; Marlipal 0 13/90; Water Philippines (RA6969): Sodium Hydroxide; 2-Aminoethanol; BriJ 35; Marlipal 0 13/90; Water China: No products were found.
State Regulations	Pennsylvania RTK: Sodium Hydroxide: (environmental hazard, generic environmental hazard); 2-Aminoethanol: (generic environmental hazard) Massachusetts RTK: Sodium Hydroxide; 2-Aminoethanol New Jersey: Extran 300 California prop. 65: No products were found.

Section 16. Other Information

Fire Hazard

**National Fire
Protection
Association
(U.S.A.)**

Health **2** **0** **0** **Reactivity**
Specific Hazard

Changed Since Last Revision +

Notice to Reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

Continued on Next Page
