

MATERIAL SAFETY DATA SHEET (MSDS)

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	Acetone, GR	Product Code	AX0120
Manufacturer	EM Science A Division of EM Industries P.O. Box 70 480 Democrat Road Gibbstown, N.J. 08027	Effective Date	5/29/2002
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	DIMETHYL KETONE; 2-PROPANONE		
Material Uses	Analytical reagent.		
Chemical Family	Aliphatic ketone. (Solvent.)		

Section 2. Composition and Information on Ingredients

Component	CAS #	% by 1
ACETONE	67-64-1	100

+ Section 3. Hazards Identification

Physical State and Appearance	Liquid.
Emergency Overview	DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF INHALED OR SWALLOWED. CAUSES EYE AND SKIN IRRITATION. CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Potential Acute Health Effects	Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Skin Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Inhalation Hazardous in case of inhalation. Ingestion Hazardous in case of ingestion.
Potential Chronic Health Effects	Carcinogenic Effects This material is not known to cause cancer in animals or humans. Additional information See Toxicological Information (section 11)
Medical Conditions	Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one
Aggravated by Overexposure:	or many human organs.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. 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. Cover the irritated skin with an emollient. 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 conscious, drink water and induce vomiting immediately as directed by medical personnel. NEVER give an unconscious person anything to ingest.

Section 5. Fire Fighting Measures

Flammability of the Product	Product will burn.
Auto-ignition Temperature	464.9°C (868.8°F)
Flash Points	CLOSED CUP: -18.1 °C (-0.6°F).
Flammable Limits	LOWER: 2.6% UPPER: 12.8%
Products of Combustion	These products are carbon oxides (CO, CO2).

10/17/2002

Fire Hazards in Presence of Various Substances	Extremely flammable in presence of open flames, sparks and static discharge, of shocks, of heat, of oxidizing materials.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of static discharge: Extremely flammable in presence of open flames, sparks and static discharge. Extremely explosive in presence of open flames, sparks and static discharge.
Fire Fighting Media and Instructions	Risks of explosion of the product in presence of mechanical impact: Extremely flammable in presence of shocks. Extremely explosive in presence of shocks. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Protective Clothing (Fire)	Be sure to use an approved/certified respirator or equivalent.
Special Remarks on Fire Hazards	Dangerous fire and explosion risk. Vapor may travel considerable distance to source of ignition and flash back.
Special Remarks on Explosion Hazards	Not available.

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	Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Do not get water inside container. Do not touch spilled material. 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: SX1330 Solvent Treatment Kit

+ Section 7. Handling and Storage

Handling	Keep away from heat, sparks and flame. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Do not get in eyes, on skin, or on clothing.
Storage	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 threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.										
Personal Protection	<table border="0"> <tr> <td style="vertical-align: top;">Eyes</td> <td>Safety glasses.</td> </tr> <tr> <td style="vertical-align: top;">Body</td> <td>Synthetic apron.</td> </tr> <tr> <td style="vertical-align: top;">Respiratory</td> <td>Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.</td> </tr> <tr> <td style="vertical-align: top;">Hands</td> <td>Gloves (impervious).</td> </tr> <tr> <td style="vertical-align: top;">Feet</td> <td>Not applicable.</td> </tr> </table>	Eyes	Safety glasses.	Body	Synthetic apron.	Respiratory	Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.	Hands	Gloves (impervious).	Feet	Not applicable.
Eyes	Safety glasses.										
Body	Synthetic apron.										
Respiratory	Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.										
Hands	Gloves (impervious).										
Feet	Not applicable.										
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust 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	Exposure Limits										
ACETONE	BAUA (Germany, 1997). Spitzenbegrenzung: 4800 mg/m ³ Spitzenbegrenzung: 2000 ppm MAK: 1200 mg/m ³ MAK: 1200 mg/m ³ MAK: 500 ppm DK-Arbejdstylsinet (Denmark, 1996). GV: 600 mg/m ³ GV: 600 mg/m ³ GV: 250 ppm INRS (France, 1996). VME: 1800 mg/m ³ VME: 1800 mg/m ³ VME: 750 ppm National Authority for Occupational Safety/Health (Ireland, 1999). STEL: 3560 mg/m ³ STEL: 1500 ppm OEL: 1780 mg/m ³ OEL: 750 ppm Arbeidsinspectie (Netherlands, 1999).										

TGG 8 uur: 1780 mg/m³
 TGG 8 uur: 1780 mg/m³
 TGG 8 uur: 750 ppm
N-Arbeidstilsynet (Norway, 1996).
 AN: 295 mg/m³
 AN: 295 mg/m³
 AN: 125 ppm
EH40-OES (United Kingdom (UK), 1997).
 STEL: 3620 mg/m³
 STEL: 1500 ppm
 TWA: 1810 mg/m³
 TWA: 750 ppm
ACGIH (United States, 1996).
 STEL: 1782 mg/m³
 STEL: 1782 mg/m³
 STEL: 750 ppm
 TWA: 1188 mg/m³
 TWA: 1188 mg/m³
 TWA: 500 ppm
NIOSH REL (United States, 1994).
 TWA: 590 mg/m³ Period: 10 hour(s).
 TWA: 250 ppm Period: 10 hour(s).
OSHA (United States, 1989).
 STEL: 2400 mg/m³
 TWA: 1800 mg/m³
OSHA Final Rule (United States, 1989).
 STEL: 2400 mg/m³
 STEL: 1000 ppm
 TWA: 1800 mg/m³
 TWA: 750 ppm
AUVA (Austria, 1995).
 Spitzenbegrenzung: 3560 mg/m³ 3 times per shift, Period: 60 minute(s).
 Spitzenbegrenzung: 1500 ppm 3 times per shift, Period: 60 minute(s).
 MAK: 1780 mg/m³
 MAK: 750 ppm
Belgium Minister of Labour (Belgium, 1998).
 VCD: 2415 mg/m³
 VCD: 1000 ppm
 VL: 1806 mg/m³
 VL: 750 ppm
Tyterveyslaitos (Finland, 1998).
 STEL: 1500 mg/m³
 STEL: 630 ppm
 TWA: 1200 mg/m³
 TWA: 500 ppm
AFS (Sweden, 1996).
 KTV: 1200 mg/m³
 KTV: 500 ppm
 NGV: 600 mg/m³
 NGV: 250 ppm

Section 9. Physical and Chemical Properties

Odor	Pungent.
Color	Colorless.
Physical State and Appearance	Liquid.
Molecular Weight	58.09 g/mole
Molecular Formula	C ₃ -H ₆ -O
pH	Not available.
Boiling/Condensation Point	56.17°C (133.1 °F)
Melting/Freezing Point	-94.2°C (-137.6°F)
Critical Temperature	234.9°C (454.8°F)
Specific Gravity	0.791 (Water = 1)
Vapor Pressure	Not available.
Vapor Density	2 (Air = 1)
Odor Threshold	100 ppm
Evaporation Rate	6.06 compared to(n-BUTYL ACETATE=1)
LogKow	Not available.
Dispersion Properties	See solubility in water.
Solubility	Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
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Conditions of Instability	Not available.
Incompatibility with Various Substances	Extremely reactive or incompatible with oxidizing agents, acids.
Rem/Incompatibility Hazardous Decomposition Products	Not available. COx carbon oxides (CO, CO ₂)
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

RTECS Number:	Acetone	AL3150000
Toxicity	Acute oral toxicity (LD50): 5340 mg/kg [Rabbit].	
Chronic Effects on Humans	Not available.	
Acute Effects on Humans	Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of inhalation. Hazardous in case of ingestion.	
Synergetic Products (Toxicologically)	Not available.	
Irritancy	Draize Test (Rabbit): Eyes: 20mg/24h. Reaction: Moderate. Skin 500 mg/24h Mild	
Sensitization	Not available.	
Carcinogenic Effects	This material is not known to cause cancer in animals or humans.	
Toxicity to Reproductive System	Tests on laboratory animals for reproductive effects are cited in Registry of Toxic Effects on Chemical Substances (RTECS).	
Teratogenic Effects	Not available.	
Mutagenic Effects	Tests on laboratory animals for mutagenic effects are cited in Registry of Toxic Effects of Chemical Substances (RTECS).	

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	U002 D001
Treatment	Specified Technology - Incineration to a level below TCA (Total Constituent Analyses) levels. Contact your local permitted waste disposal site (TSD) for permissible treatment sites. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

Section 14. Transport Information

DOT Classification	Proper Shipping Name: ACETONE Hazard Class: 3 UN number: UN1090 Packing Group: II RQ: 5000 lbs. (2268 kg)
TDG Classification	Not available.
IMO/IMDG Classification	Proper Shipping Name: ACETONE Hazard Class: 3 UN number: UN1090 Packing Group: II RQ: 5000
ICAO/IATA Classification	Not available.

Section 15. Regulatory Information

U.S. Federal Regulations	TSCA 4(a) final test rules: ACETONE TSCA 8(b) inventory: ACETONE TSCA 12(b) one time export: ACETONE 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: ACETONE SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ACETONE: Fire Hazard, 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.
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	Clean Water Act (CWA) 311: No products were found. 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 B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-2B: Material causing other toxic effects (TOXIC). CEPA DSL: ACETONE 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	Acetone 200-662-2
DSCL (EEC)	R11- Highly flammable. R36- Irritating to eyes.
International Lists	Australia (NICNAS): ACETONE Japan (MITI): ACETONE Korea (TCCL): ACETONE Philippines (RA6969): ACETONE China: No products were found.
State Regulations	Pennsylvania RTK: ACETONE: (environmental hazard, generic environmental hazard) Massachusetts RTK: ACETONE New Jersey: ACETONE California prop. 65: No products were found.

Section 16. Other Information

National Fire Protection Association (U.S.A.)	Health	3	Fire Hazard
		1	0
			Reactivity Specific Hazard

Changed Since Last Revision +

Notice to Reader

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