

**MATERIAL SAFETY
DATA SHEET**
Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

24-HOUR EMERGENCY TELEPHONE (606) 324-1133



000040

AMMONIUM HYDROXIDE REAGENT ACS

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THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

 PRODUCT NAME: AMMONIUM HYDROXIDE REAGENT ACS
 CAS NUMBER: 1336-21-6

 HAYS REPUBLIC
 ATTN: FRANK LESENER
 225 N. ROESKE AVE.
 MICHIGAN CITY, IN 46360

 05 86 071 4112557-484
 DATA SHEET NO: 0000642-002
 LATEST REVISION DATE: 04/86-86098
 PRODUCT:
 INVOICE: REQST
 INVOICE DATE: 07/14/86
 TO:

 SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: ALKALI

DOT HAZARD CLASSIFICATION: CORROSIVE MATERIAL (173.240)

 SECTION II-COMPONENTS

INGREDIENT	% (BY WT)	PEL	TLV	NOTE
AMMONIA CAS #: 7664-41-7	30-35	50	25 PPM	

 SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
BOILING POINT	FOR PRODUCT	(82.00 DEG F @ 27.77 DEG C @ 760.00 MMHG
VAPOR PRESSURE	FOR PRODUCT	(570.00 MMHG @ 68.00 DEG F @ 20.00 DEG C
SPECIFIC VAPOR DENSITY	AIR = 1	.6
SPECIFIC GRAVITY		.899 (60.00 DEG F @ 15.55 DEG C
PERCENT VOLATILES		100.00%
EVAPORATION RATE		SLOWER THAN ETHER

 SECTION IV-FIRE AND EXPLOSION INFORMATION

FLASH POINT NOT APPLICABLE

EXPLOSIVE LIMIT NOT APPLICABLE

EXTINGUISHING MEDIA: WATER FOG

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, AMMONIA

 FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL
 FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE AND FULL
 BODY PROTECTIVE CLOTHING WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: NOT APPLICABLE

 SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 50 PPM

THRESHOLD LIMIT VALUE 25 PPM

NOT ESTABLISHED FOR PRODUCT. SEE SECTION II.

EFFECTS OF ACUTE OVEREXPOSURE: FOR PRODUCT

 EYES - CAUSES SEVERE DAMAGE AND EVEN BLINDNESS VERY RAPIDLY.
 SKIN - CAUSES BURNS, POSSIBLE DEEP ULCERATION.
 BREATHING - MIST CAN CAUSE DAMAGE TO NASAL AND RESPIRATORY PASSAGES.
 SWALLOWING - RESULTS IN SEVERE DAMAGE TO MUCOUS MEMBRANES AND DEEP TISSUES, CAN
 RESULT IN DEATH ON PENETRATION TO VITAL AREAS.

FIRST AID:

 IF ON SKIN: IMMEDIATELY FLUSH EXPOSED AREA WITH WATER FOR AT LEAST 15 MINUTES, GET
 MEDICAL ATTENTION. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING
 BEFORE RE-USE.

 IF IN EYES: IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES,
 LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

 IF SWALLOWED: DO NOT INDUCE VOMITING. VOMITING WILL CAUSE FURTHER DAMAGE TO THE
 THROAT. DILUTE BY GIVING WATER. GIVE MILK OF MAGNESIA. KEEP WARM, QUIET.
 GET MEDICAL ATTENTION IMMEDIATELY.

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SECTION V-HEALTH HAZARD DATA (CONTINUED)

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION
SKIN CONTACT

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH: , STRONG MINERAL ACIDS. , COPPER, METALLIC MERCURY

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
-----SMALL SPILL: ALLOW TO EVAPORATE.
VENTILATE AREA.

LARGE SPILL: NONESSENTIAL EMPLOYEES SHOULD BE EVACUATED FROM THE EXPOSURE AREA. PERSONS INVOLVED IN THE CONTROL AND REPAIR OF THE LEAK SHOULD BE PROVIDED WITH ALL NECESSARY PROTECTIVE EQUIPMENT AND BE PROPERLY TRAINED FOR EMERGENCY SITUATIONS INVOLVING THIS MATERIAL.

WASTE DISPOSAL METHOD:

SMALL SPILL: FLUSH DOWN DRAIN WITH LARGE AMOUNTS OF WATER IN ACCORDANCE WITH APPLICABLE REGULATIONS.

LARGE SPILL: ADD SLOWLY TO A LARGE CONTAINER OF COLD WATER WITH AGITATION. WHEN ALL HAS REACTED, NEUTRALIZE WITH 3M-HYDROCHLORIC ACID OR 6M-AMMONIUM HYDROXIDE AS REQUIRED AND FLUSH DOWN DRAIN WITH EXCESS WATER IN ACCORDANCE WITH APPLICABLE REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS: , NEOPRENE

EYE PROTECTION: CHEMICAL SPLASH GOGGLES AND FACE SHIELD (8" MIN.) IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.