

INTERNAL MATERIAL SAFETY DATA SHEET 1006

FORM: DEC 48: 1, 1990 DATE UPDATED: JUL 2, 1992

CHEMICAL NAME: HYDROCHLORIC ACID (10, 20, AND 22.5%)

MANUFACTURER NAME/ADDRESS:

PPG INDUSTRIES, INC.

ONE PPG PLACE

PITTSBURGH PA 15117

MANUFACTURER PHONE NO:

304-843-1300

EMERG. PHONE

412-492-1575

PRODUCT SAFETY INFO.

CAS OR TRADE NO. 07647-01-9

C

EPA REPORTABLE QTY:

CHEMICAL FAMILY: ACIDS

FORMULA: HCL

DOT SHIPPING NAME: HYDROCHLORIC ACID

DOT HAZARD CLASS: CORROSIV

SUBSIDIARY RISK:

N/A

UN I.D. NUMBER: -

1789

ALIAS:

HYDROCHLORIC ACID

HYDROCHLORIC ACID

HYDROCHLORIC ACID 10.8%

HYDROCHLORIC ACID 9%

HYDROCHLORIC ACID 12%

RID LINE

WATER SCALE REMOVER

HYDROCHLORIC ACID 20%

* SECTION 1 PHYSICAL DATA/HAZARDOUS INTRD *

BOILING POINT

87.60MM HG

150-230

VAPOR DENSITY

(AIR=1)

N/A

SOLUBILITY

(WEIGHTS IN WATER)

COMPLETE

FREEZING/MELTING POINT

N/A

VOLUME & VOLATILE

100

PH OF SOLUTIONS:

NO DATA FOUND

VAPOR PRESSURE:

(MMHG) 30

EVAPORATION RATE:

(BUTYL ACETATE=1) N/A

SPECIFIC GRAVITY(H2O=1)

SEE MISC. SECT.

BULK DENSITY

N/A

HEAT OF SOLUTION

N/A

APPEARANCE AND ODOR:

SEE MISC. SECTION.

INGREDIENT:

HYDROCHLORIC ACID

3-37

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 * STATION 3 FIRE AND EXPLOSION HAZARD DATA *

FLASH POINT DEG F (METHOD USED) FLAMMABLE LIMITS IN AIR (% BY VOLUME)
 NONE LFL: UEL: N/A

EXTINGUISHING MEDIA:
 USE WATER SPRAY, DRY CHEMICAL OR CO2.

SPECIAL FIRE FIGHTING PROCEDURES:
 SPECIAL FIRE FIGHTING PROCEDURES:
 FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL
 PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL HEAVY CONTAINERS AND
 STRUCTURES EXPOSED TO FIRE.
 UNUSUAL FIRE AND EXPLOSION HAZARD:
 EXTINGUISH ALL NEARBY SOURCES OF IGNITION SINCE FLAMMABLE HYDROGEN GAS
 WILL BE LIBERATED FROM CONTACT WITH SOME METALS.
 AUTOIGNITION TEMPERATURE, DEG. F: NOT APPLICABLE

 * STATION 4.1 HEALTH HAZARD DATA *

PERMISSIBLE EXPOSURE LIMITS:
 ACGIH TLV: 5 PPM CEILING

OSHA-PEL: 5 PPM CEILING

MERS REC: N/A

CARCINOGENICITY STATUS (SOURCE):
 NTP - NO IARC - NO OSHA - NO

TOXICITY DATA: EFFECTS OF OVEREXPOSURE, ETC.
 HEALTH HAZARD INFORMATION:
 PRIMARY ROUTES OF EXPOSURE: SKIN OR EYE CONTACT, INHALATION.
 SIGNS AND SYMPTOMS OF EXPOSURE:
 INHALATION: VAPORS AND MIST ARE EXTREMELY CORROSIVE TO THE NOSE,
 THROAT, AND MUCOUS MEMBRANES. BRONCHITIS, PULMONARY EDEMA, AND
 CHEMICAL PNEUMONITIS MAY OCCUR. IRRITATION, COUGHING, CHEST PAIN,
 AND DIFFICULTY IN BREATHING MAY OCCUR WITH BRIEF EXPOSURE WHILE
 PROLONGED EXPOSURE MAY RESULT IN MORE SEVERE IRRITATION AND TISSUE
 DAMAGE. BREATHING HIGH CONCENTRATIONS MAY RESULT IN DEATH.
 EYE CONTACT: VAPORS, LIQUID, AND MISTS ARE EXTREMELY CORROSIVE TO
 THE EYES. BRIEF CONTACT OF THE VAPORS WILL BE SEVERELY IRRITATING.

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PROLONGED CONTACT WITH LIQUID OR MIST WILL CAUSE SEVERE DAMAGE TO THE EYES WHICH MAY BE PERMANENT BY LOSS OF VISION.

SKIN CONTACT: VAPORS, MISTS, AND LIQUID ARE EXTREMELY CORROSIVE TO THE SKIN. VAPORS WILL SEVERELY IRRITATE THE SKIN AND LIQUID AND MIST WILL SEVERELY BURN THE SKIN. PROLONGED LIQUID CONTACT WILL BURN OR DESTROY SURROUNDING TISSUE AND DEATH MAY ACCOMPANY BURNS WHICH EXTEND OVER LARGE PORTIONS OF THE BODY.

SWALLOWED: VAPORS, MISTS, AND LIQUID ARE EXTREMELY CORROSIVE TO THE MOUTH AND THROAT. SWALLOWING THE LIQUID BURNS THE TISSUES, CAUSING SEVERE ABDOMINAL PAIN, NAUSEA, VOMITING, AND COLLAPSE. SWALLOWING LARGE QUANTITIES CAN CAUSE DEATH.

CHRONIC EFFECTS OF EXPOSURE: MAY RESULT IN AREAS OF DESTRUCTION OF SKIN TISSUE OR PRIMARY IRRITANT DERMATITIS. SIMILARLY, INHALATION OF VAPORS OR MISTS MAY CAUSE VARYING DEGREES OF DAMAGE TO THE AFFECTED TISSUE AND ALSO INCREASING SUSCEPTIBILITY TO RESPIRATORY ILLNESS.

MEDICAL CONDITIONS USUALLY AGGRAVATED BY EXPOSURE: NONE REPORTED.

* TOXICITY DATA

ORAL: RABBIT LD50 = 900 MG/KG

DERMAL: NO DATA FOUND

INHALATION: RAT LC50 = 3,124 PPM/1HR

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

OTHER DATA: NONE

ECOLOGICAL INFORMATION SECTION: NO DATA FOUND.

***** SECTION 4.2 EMERGENCY/FIRST AID PROCEDURE *****

INHALATION:
REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

EYE CONTACT:
IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 30 MINUTES. LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

SKIN CONTACT:
IMMEDIATELY FLUSH SKIN WITH LOTS OF RUNNING WATER FOR 30 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET IMMEDIATE MEDICAL ATTENTION.

INGESTION:
DO NOT INDUCE VOMITING. IF CONSCIOUS, GIVE LOTS OF WATER. GET IMMEDIATE

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NOTES TO PHYSICIAN (INCLUDING ANTIDOTES)
NONE

* SECTION 5: REACTIVITY DATA *

STABILITY:

STABLE
CONDITIONS TO AVOID:
NONE

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR
CONDITIONS TO AVOID:
NONE

INCOMPATIBILITY (MATERIALS TO AVOID):
SEE MISC. SECTION.

HAZARDOUS DECOMPOSITION PRODUCTS:
MAY LIBERATE HYDROGEN CHLORIDE.

* SECTION 6: SPILL OR LEAK PROCEDURES *

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED:
WEAR ACID-RESISTANT SLICKER SUIT AND COMPLETE PROTECTIVE EQUIPMENT
INCLUDING RUBBER GLOVES, RUBBER BOOTS, AND A SELF-CONTAINED BREATHING
APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR RESPIRATOR. IF
THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-PURIFYING CARTRIDGE
RESPIRATORY EQUIPPED FOR ACID GASES MAY BE SATISFACTORY. IN ANY EVENT,
ALWAYS WEAR EYE PROTECTION. FOR SMALL SPILLS OR DRIPS, WIP UP AND
DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, CONTAIN BY
DIKING WITH SOIL OR OTHER NON-COMBUSTIBLE ABSORBENT MATERIAL AND CAREFULLY
NEUTRALIZE WITH SODA ASH OR LIME. IF SODA ASH IS USED, PROVIDE ADEQUATE
VENTILATION TO DISSIPATE THE CARBON DIOXIDE GAS. KEEP NON-NEUTRALIZED
MATERIAL OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOIL.

COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING,
AND HANDLING AND DISPOSAL OF WASTE.

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WASTE DISPOSAL METHOD:
DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING OR SPILLS
OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE
FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL
PROCEDURES.

NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE
SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

* SECTION 7.1 SPECIAL PROTECTION *

RESPIRATORY PROTECTION:
WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE FOR THE VAPOR OR MIST
CONCENTRATION AT THE POINT OF USE. APPROPRIATE RESPIRATORS MAY BE A FULL
FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR
ACID GASES/MISTS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE
DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

* SECTION 7.2 SPECIAL PROTECTION DATA *

VENTILATION(TYPE):
LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAINTAINING EMISSIONS AT
THE POINT OF USE BELOW THE PEL.

EYE PROTECTION: GLOVES:
SEE MISC. SECTION RUBBER

OTHER PROTECTIVE EQUIPMENT:
SEE MISC. SECTION

* SECTION 8.1 SPECIAL PRECAUTIONS *

SPECIAL PRECAUTIONS AND COMMENTS:
STORAGE AND HANDLING PRECAUTIONS:
STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE
MATERIALS. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT
USE PRESSURE TO EMPTY CONTAINER. WASH THOROUGHLY AFTER HANDLING. DO
NOT GET IN EYES, ON SKIN, OR ON CLOTHING.
REPAIR AND MAINTENANCE PRECAUTIONS:
DO NOT CUT, GRIND, WELD, OR DRILL ON OR NEAR THIS CONTAINER.

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CAUTION: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTYED, WILL RETAIN SOME RESIDUE AND VAPORS. ALWAYS USE Y HAZARD WARNINGS AT HANDLING EMPTY CONTAINERS AS IF THEY WERE FULL.

* SECTION 8.2 REFERENCES *

REFERENCES:
NONE

* SECTION 8.4 MISC INFORMATION *

MISC INFORMATION:
PRODUCT IDENTIFICATION:
MOLECULAR WEIGHT: N/A

HAZARD RATING (NFPA 49)
HEALTH: 3
FIRE: 0
REACTIVITY: 0
SPECIAL: NONE

HAZARD RATING SCALE:
0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE

HMS RATING:
HEALTH: 2
FIRE: 0
REACTIVITY: 0

* HAZARDOUS INGREDIENTS:

COMPONENT	CAS NO.	%	EXPOSURE LIMITS, ppm			HAZARD
			OSHA PEL	ACGIH TLV	OTHER LIMIT	
HYDROCHLORIC ACID	7647-01-0	9-37	5 CEILING	5 CEILING	NONE	CORROSIVE
WATER	7732-18-7	BAL.	NONE	NONE	NONE	NONE

* PHYSICAL DATA:
SPECIFIC GRAVITY (WATER=1): A=1.14; B=1.16; C=1.11; D=1.07
APPEARANCE AND ODOR: CLEAR, COLORLESS TO PALE YELLOW WITH PUNGENT, IRRITATING ODOR.

(A=18 DEG BE HYDROCHLORIC ACID; B=20 DEG BE HYDROCHLORIC ACID; C=22 DEG

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* PROTECTIVE DATA:

EYE PROTECTION:

CHEMICAL GOGGLES AND FULL FACESHIELD, UNLESS A FULL FACEPIECE RESPIRATOR IS ALSO WORN. IT IS GENERALLY RECOMMENDED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

PROTECTIVE CLOTHING:

ACID-RESISTANT GLOVES, SUIT WITH RUBBER APRON, RUBBER BOOTS WITH PANTS OUTSIDE, AND RUBBER GLOVES WITH GAUNTLETS. GLOVES WITH RUBBER, SYNTHETIC ELASTOMER, PVC OR OTHER IMPERVIOUS MATERIALS ARE RECOMMENDED.

OTHER PROTECTIVE MEASURES:

AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

* REACTIVITY DATA:

MATERIALS TO AVOID:

ALKALIS, OXIDIZING OR REDUCING MATERIALS, CYANIDES, SULFIDES, OR COMBUSTIBLE MATERIALS. KEEP AWAY FROM FORMALDEHYDE SINCE THERE ARE REPORTS THAT BIS-CHLOROMETHYL ETHER, A POTENTIAL CARCINOGEN, MAY BE FORMED. ALSO KEEP AWAY FROM AMINES, VINYL ACETATE, PROPYLENE OXIDE, BETA-PROPIOLACTONE, AND METAL OXIDES.

* REGULATORY INFORMATION:

SECTION 313: SEE BELOW

PROPOSITION 65: NONE

SECTION 313 & PROP. 65: SEE BELOW

SECTION 313 (WITH CHEMICALS LISTED): THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

CHEMICALS	CAS NO.	% WT
HYDROCHLORIC ACID	7647-01-0	9 - 37

PROPOSITION 65 (WITH CHEMICALS LISTED): NONE

MASSACHUSETTS: UNDER THE MASSACHUSETTS RIGHT-TO-KNOW LAW, HAZARDOUS SUBSTANCE AND EXTRAORDINARILY HAZARDOUS SUBSTANCES COMPONENTS PRESENT IN THIS PRODUCT WHICH REQUIRES REPORTING ARE:

EXTRAORDINARILY HAZARDOUS SUBSTANCES	CAS NO.	CONCENTRATION (>0.0001%)
CHEMICAL		
HYDROCHLORIC ACID	7647-01-0	9 - 37

PENNSYLVANIA: UNDER THE PENNSYLVANIA RIGHT-TO-KNOW LAW, HAZARDOUS SUBSTANCE AND SPECIAL HAZARDOUS SUBSTANCE COMPONENTS PRESENT IN THIS PRODUCT WHICH REQUIRES REPORTING ARE:

HAZARDOUS SUBSTANCES

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INTERNATIONAL MATERIAL SAFETY DATA SHEET 1226
CAS NO. CONCENTRATION (>1%)
HYDROCHLORIC ACID 7547-01-0 9-07

CALIFORNIA SCAQMD: NONE

TSCA: THE INGREDIENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY.

* UPDATED: MARCH 24, 1995 *

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