Set Up Date

May 20, 2003

SAFETY DATA SHEET

[1.PRODUCT AND COMPANY IDENTIFICATION]

PRODUCT NAME : AMBROXAN **SUPPLIER** : Kao Corporation

ADDRESS : 1-3,Bunka 2-chome,Sumida-ku,Tokyo 131-8501 Japan

DIVISION : Global Chemical Business

TELEPHONE NUMBER : 81-3-5630-7700 **FAX NUMBER** : 81-3-5630-7889 E-MAIL ADDRESS : chemical@kao.co.jp : 81-3-5630-7700 **EMERGENCY TELEPHONE NUMBER**

RECOMMENDED USE

AND RESTRICTIONS ON USE

[2.HAZARDS IDENTIFICATION]

GHS CLASSIFICATION

PHYSICAL AND CHEMICAL HAZARDS: Not classified

HEALTH HAZARDS

ACUTE TOXICITY (Oral) : Not classified **ACUTE TOXICITY (Dermal)** : Not classified

ACUTE TOXICITY (Inhalation) : Classification not possible(Vapours)

SKIN CORROSION / IRRITATION : Not classified SERIOUS EYE DAMAGE / EYE : Not classified

IRRITATION

RESPIRATORY SENSITIZATION : Classification not possible

SKIN SENSITIZATION : Not classified

GERM CELL MUTAGENICITY : Classification not possible CARCINOGENICITY Classification not possible REPRODUCTIVE TOXICITY : Classification not possible

SPECIFIC TARGET ORGAN TOXICITY

- SINGLE EXPOSURE : Classification not possible - REPEATED EXPOSURE : Classification not possible ASPIRATION HAZARD : Classification not possible

ENVIRONMENTAL HAZARDS

HAZARDOUS TO THE AQUATIC ENVIRONMENT

- ACUTE HAZARD : Not classified - LONG-TERM HAZARD : Not classified

- HAZARDOUS TO THE OZONE : Classification not possible

LAYER

GHS LABEL ELEMENTS

PICTOGRAMS OR SYMBOLS : Not applicable SIGNAL WORD : Not applicable HAZARD STATEMENTS : Not applicable

PRECAUTIONARY STATEMENTS

PREVENTION : Wash thoroughly after handling.

If needed, use personal protective equipment as required.

IF IN EYES: Rinse cautiously with water for several minutes. Remove RESPONSE

> contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Gently wash with plenty of water and soap. Call a POISON CENTER or doctor if you feel unwell.

STORAGE Store in well-ventilated place.

DISPOSAL

SAFE HANDLING ADVICE

[3.COMPOSITION / INFORMATION ON INGREDIENTS]

SUBSTANCE OR MIXTURE Substance INGREDIENTS AND CONCENTRATION: Ambroxide

RANGE

CAS RN : 6790-58-5

[4.FIRST-AID MEASURES]

IN CASE OF INHALATION : Remove person to fresh air and keep comfortable for breathing.

IN CASE OF SKIN CONTACT : Gently wash with plenty of soap and water.

IN CASE OF EYE CONTACT : Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing.

IN CASE OF INGESTION Call a POISON CENTER or doctor if you feel unwell.

[5.FIRE-FIGHTING MEASURES]

EXTINGUISHING MEDIA : Water spray, powder NOT SUITABLE EXTINGUISHING : No information available

MEDIA

SPECIFIC HAZARDS : No information available

SPECIFIC METHODS Keep away from sources of ignition and use appropriate extinguishing

media. Fight fire from upwind position if possible.

PROTECTION OF FIRE FIGHTERS Use goggles in combination with dust mask, and other protections as

appropriate to situation.

[6.ACCIDENTAL RELEASE MEASURES]

PERSONAL PRECAUTIONS, : Use goggles and protective gloves. PROTECTIVE EQUIPMENT AND Large spills: Remove person to safety.

EMERGENCY PROCEDURE Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS : Do not discharge into the drains, surface waters or ground water directly.

METHODS FOR CLEANING UP Sweep or vacuum spills to drums or containers.

PREVENTION OF SECONDARY

HAZARDS

: Keep away from sources of ignition and prepare extinguishing media.

[7.HANDLING AND STORAGE]

HANDLING

: Facilities storing or utilizing this material should be equipped with an TECHNICAL MEASURES

eyewash facility and a safety shower.

PRECAUTIONS : Keep away from source of ignition.

SAFE HANDLING ADVICE Use an adequate ventilation.

Wash thoroughly after handling.

If needed, use personal protective equipment as required.

STORAGE

SUITABLE STORAGE CONDITIONS : Store container tightly closed in well-ventilated place.

Keep away from source of ignition.

SAFE PACKAGING MATERIALS : No information available

[8.EXPOSURE CONTROLS / PERSONAL PROTECTION]

ENGINEERING MEASURES : Facilities storing or utilizing this material should be equipped with an

eyewash facility and a safety shower.

Use an adequate ventilation.

LIMIT VALUES

: Not established ACGIH (TLV)

OSHA (PEL) : Not established

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION : Use as appropriate to situation.

HAND PROTECTION : Rubber gloves **EYE PROTECTION** : Safety glasses SKIN AND BODY PROTECTION : Full-body suit

HYGIENE MEASURES : No information available

[9.PHYSICAL AND CHEMICAL PROPERTIES]

APPEARANCE

PHYSICAL STATE : Flakes **COLOUR** : White

ODOUR Characteristic odour pН : Not applicable SPECIFIC TEMPERATURES / TEMPERATURE RANGES AT WHICH CHANGES IN PHYSICAL STATE OCCUR

BOILING POINT : No information available

MELTING POINT 77 °C (67 152.6 -170.6 °F)

FLASH POINT ٥C 327.2 °F) 164 (CLEVELAND open cup method)

FLAMMABILITY OR EXPLOSIVE PROPERTIES

FLAMMABILITY OR EXPLOSIVE : UPPER LIMIT : No information available LOWER LIMIT : No information

LIMITS available

VAPOUR PRESSURE : No information available VAPOUR DENSITY : No information available **DENSITY (SPECIFIC GRAVITY)** : No information available

SOLUBILITY

WATER SOLUBILITY : Soluble

SOLVENT SOLUBILITY : Soluble in ethyl alcohol PARTITION COEFFICIENT: n-No information available

OCTANOL / WATER (log Pow)

AUTO-IGNITION TEMPERATURE : No information available **DECOMPOSITION TEMPERATURE** : No information available **ODOUR THRESHOLD** : No information available **EVAPORATION RATE** : No information available FLAMMABILITY (SOLID, GAS) No information available VISCOSITY No information available OTHER DATA No information available

[10.STABILITY AND REACTIVITY]

CONDITIONS TO AVOID

INCOMPATIBLE MATERIALS

CHEMICAL STABILITY : Stable in general. POSSIBILITY OF HAZARDOUS Stable in general.

REACTIONS

: No information available : No information available

HAZARDOUS DECOMPOSITION : Carbon dioxide

PRODUCTS

OTHERS : No information available

[11.TOXICOLOGICAL INFORMATION]

ACUTE TOXICITY

Oral

INFORMATION ON PRODUCT : Rat, LD50 : > 2000 mg/kg

Dermal

INFORMATION ON PRODUCT : No information available

Inhalation

INFORMATION ON PRODUCT : No information available

SKIN CORROSION / IRRITATION

INFORMATION ON PRODUCT : Non-irritating for skin. (OECD404)

SERIOUS EYE DAMAGE / IRRITATION

INFORMATION ON PRODUCT : Non-irritating to the eyes. (OECD405)

RESPIRATORY OR SKIN SENSITIZATION

RESPIRATORY

INFORMATION ON PRODUCT : No information available

SKIN

INFORMATION ON PRODUCT : Non-sensitizer for skin. (OECD406)

MUTAGENICITY (GERM CELL MUTAGENICITY)

INFORMATION ON PRODUCT : Non-mutagenic (OECD471)

CARCINOGENICITY

INFORMATION ON PRODUCT : No information available

IARC : Not listed NTP : Not listed EU : Not listed **OSHA** : Not listed

REPRODUCTIVE TOXICITY

INFORMATION ON PRODUCT : No information available

SPECIFIC TARGET ORGAN TOXICITY

- SINGLE EXPOSURE

INFORMATION ON PRODUCT : No information available

- REPEATED EXPOSURE

INFORMATION ON PRODUCT : No information available

ASPIRATION HAZARD

INFORMATION ON PRODUCT : No information available OTHER INFORMATION : No information available

[12.ECOLOGICAL INFORMATION]

ECOTOXICITY : Fish, 96h, LC50 : > 100 mg/L

PERSISTENCE / DEGRADABILITY : Inherent

MOBILITY IN SOIL : No information available BIOACCUMULATIVE POTENTIAL : No information available OTHER ADVERSE EFFECTS : No information available

[13.DISPOSAL CONSIDERATIONS]

Review "HANDLING AND STORAGE (Section 7)".

Passed to a licensed waste contractor.

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

[14.TRANSPORT INFORMATION]

Follow all regulations in your country or region

INTERNATIONAL REGULATIONS

UN CLASS / UN NUMBER : Not applicable (IMDG, IATA) SPECIAL PRECAUTIONS FOR USER

: Review "ACCIDENTAL RELEASE MEASURES (Section 6)".

Review "HANDLING AND STORAGE (Section 7)". Ensure containers without breakage or leakage.

Ensure containers tightly fixed.

Follow all regulations in your country or region.

Keep away from source of ignition.

[15.REGULATORY INFORMATION]

Follow all regulations in your country or region.

INVENTORIES : ENCS(Japan)

TSCA(USA) Yes

EINECS(EU) 229-861-2

AICS(Australia) Yes
DSL(Canada) Yes
ECL(Korea) KE-12821

PICCS(Philippines) Yes IECSC(China) Yes

KAO Corporation is not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

[16.OTHER INFORMATION]

REFERENCE

: -Safety data sheet for chemical products - Part 1: Content and order of

5-3339

sections(ISO 11014-1)

-International Chemical Safety Cards(ICSC) (Compiler's Guide)(1994)

-The IFRA Standard

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