

TO: Mike Sweet

TGG: JGL: MMS: RF
XF: _____

FROM: T. G. Grumbles

DATE: July 27, 1988

Interoffice

Communication

SUBJ: NOVEL 10-44 ETHOXYLATE TOXICITY TESTING

VISTA

The testing toxicity results for Novel 10-44 Ethoxylate are listed below. The results are unremarkable except for the skin irritation. The irritation index is significantly higher than other similar Vista ethoxylates. However, we have little experience with test results on homolog alcohols, and on peaked, or novel produced, ethoxylates.

Primary skin irritation score: 5.7 out of 8

Primary Eye irritation index: 43.2 (unwashed eyes) out of 110
19.0 (washed eyes) out of 110

Acute dermal toxicity - rabbits: LD50 greater than 2020 mg/kg

Acute oral toxicity - rats: LD50 greater than 5050 mg/kg


T. G. Grumbles

dlj

cc: O. C. Kerfoot w/copy of study
A. M. Nielsen w/copy of study

VVV 000014378

~~IGG:~~ ~~JCL:~~ ~~MDG:~~ RF
XF: _____

July 27, 1988

VISTA

Gerald Vaughn, PhD
2417 W. Gallaher Ferry Drive
Knoxville, TN 37932

Dear Dr. Vaughn:

Below is proposed health hazard, or warning language, I would propose using for our alumina whiskers literature. I've enclosed an MSDS so you can see our format. The placement of the warnings on the MSDS are indicated by the headings below.

MSDS CONTENT

Section 2 - Hazardous Ingredients - Hazard Data

Inhalation hazard. Exposure may result in serious lung injury and progressive lung disease. See Section 5.

Section 5 - Nature of Hazard - Inhalation

This product is similar to other fibrous materials known to cause serious lung injury and progressive lung disease such as fibrosis and lung tumors in experimental animals.

Section 5 - Exposure Limits

This material would currently be classed as a respirable nuisance dust.

OSHA PEL and ACGIH TLV: 5 mg/m³ 8-hour TWA
Vista recommends reducing exposures as low as feasible.

Section 5 - Toxicity Data

No data on this specific product is available at this time. Data on similar fibrous materials has indicted the potential for fibrosis and lung tumor formation.

Section 5 - Special Precautions

Avoid inhalation of material when handling

VVV 000014379

Section 7 - Spill or Leak Procedures

Spills should be cleaned up utilizing wet methods or vacuuming with equipment that has HEPA filters on the air exhaust. AVOID DRY SWEEPING.

Section 7 - Waste Disposal Method

It is recommended that the material be placed in sealed containers in wetted form. Containers may be disposed of in accordance with local, state, and federal regulations.

Section 8 - Special Protection Information Ventilation

Local exhaust ventilation should be used to control personnel exposures. Small samples should be handled under a hood.

Protective Equipment

Respirators- NIOSH approved high efficiency air-purifying dust respirators should be used when the potential for exposure exists.

Eye- Chemical goggles

Gloves- Gloves should be worn to prevent prolonged contact

Other Clothing and

Equipment- During handling fiber, impervious clothing should be worn to prevent contamination of worker shoes or street clothing that may leave the work place.

TECHNICAL NOTE: A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 microns in diameter or larger.

Label Content

The basic label for whiskers would be as follows:

VVV 000014380

CAUTION: AVOID BREATHING DUST

Handling of this product may result in exposure to fibrous dust. Excessive or prolonged exposure may cause physical irritation and obstruction of the respiratory tract. This product is similar to other fibrous materials known to cause serious lung injury and progressive lung disease such as fibrosis and lung

Dr. Gerald Vaughn
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tumors in experimental animals. Use with local exhaust ventilation. NIOSH approved high-efficiency air purifying dust respirators should be used to control personnel exposures.

Although some of these items are not in your area of expertise, I would appreciate your comments on them based on your laboratory experience and knowledge of similar product handling.

With regards to our small particle literature, I would propose to have language regarding the significant potential for "respirability" and potential for fibrotic effects based on similar materials. Before I write specific language, I need your opinion on how the particle size affects the potential for fibrogenic effects. This has specific bearing on the other issues such as regulatory classification.

Sincerely,

A handwritten signature in black ink, reading "Thomas G. Grumbles", followed by a horizontal line.

Thomas G. Grumbles, C.I.H.
Environmental Quality Manager

dlj

cc: W. L. McLain
Greg Hoenes
J. Fenton-Ponca City
R. Poe-Ponca City
B. Carradine-Ponca City

VVV 000014381

VISTA

Vista Chemical Company
P.O. Box 19029
Houston, TX 77224

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME		Vista Chemical Company
ADDRESS		P.O. Box 727, Westlake, LA 70669
TRADE NAME		VISTA CATAPAL XO & XW (EXPERIMENTAL)
SYNONYMS		Calcined Aluminum Hydroxide Oxide, Al ₂ O ₃
CAS NUMBER		1344-28-1
REGULAR TELEPHONE NO.	(318)494-5403	EMERGENCY TELEPHONE NO. (318)494-5142

2. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
Aluminum Oxide	100	Nuisance Dust Inhalation Hazard

3. PHYSICAL DATA

BOILING POINT (°F)	Not applicable	SPECIFIC GRAVITY($H_2O = 1$)	Not applicable
VAPOR PRESSURE (mm Hg.)	Not applicable	MELTING POINT	Not applicable
SOLUBILITY IN WATER	Nil	VAPOR DENSITY	Not applicable
APPEARANCE AND ODOR	White powder, odorless.		

4. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	Not applicable		AUTOIGNITION TEMPERATURE	Not applicable	
FLAMMABLE LIMITS IN AIR. % BY VOL.		LOWER	Not applicable	UPPER	Not applicable
EXTINGUISHING MEDIA	Non-flammable material.				
SPECIAL FIRE FIGHTING PROCEDURES	Non-flammable material. VVV 00001438				
UNUSUAL FIRE AND EXPLOSION HAZARD	Not applicable. This is an inert material and will not produce a dust explosion.				

5. HEALTH HAZARD INFORMATION

FIRST AID

EYES: Flush with large amounts of water for at least 15 minutes. If irritation occurs, seek medical aid.

SKIN: Flush with water.

INHALATION: If exposed to excessive amounts, remove to fresh air.

INGESTION: Seek medical advice.

NATURE OF HAZARD

EYES: May cause physical irritation if exposed to large amounts of dust.

SKIN: No hazard under normal circumstance.

INHALATION: May cause physical irritation to upper respiratory tract. This material is classed a nuisance dust and as such does not produce significant organic disease or toxic effect with reasonable exposures. Due to the small particle size of this alumina, precautions should be taken to avoid inhalation of dust during handling.

INGESTION: No hazard under normal circumstances.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE: Physical irritation.

CHRONIC OVEREXPOSURE: Physical irritation. No known long-term toxic effects.

THRESHOLD LIMIT VALUE (TLV)

1985-86 ACGIH classifies this material as a nuisance dust.
Recommended 8-hour TLV: 10 mg/m³ of total dust; 5 mg/m³ respirable dust.
OSHA PEL: 15 mg/m³ of total dust; 5 mg/m³ respirable dust.

TOXICITY DATA

TESTING DONE ON SIMILAR MATERIAL WITH A LARGER AVERAGE PARTICLE SIZE.

SKIN CONTACT: Rabbit skin LD₅₀: 4 g/Kg
Rabbit skin irritation index: 0.2 (max. score possible is 8.0)

EYE CONTACT: Rabbit eye irritation index: 6 (max. score possible is 110)

INHALATION: Rats survived exposure to a concentration of 83 mg/l for one hour.

INGESTION: Acute oral LD₅₀ in rats: 20 g/kg

VVV 000014383

SPECIAL PRECAUTIONS: AVOID INHALATION

6. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Stable and non-volatile material.

INCOMPATIBILITY Not applicable.

HAZARDOUS DECOMPOSITION PRODUCTS

Not applicable.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Not applicable.

7. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Material should be picked up mechanically and placed in drums, bins, or other appropriate containers.

NEUTRALIZING CHEMICALS

Not applicable.

WASTE DISPOSAL METHOD

May be disposed of in a landfill according to local, state and federal regulations.

8. SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Mechanical ventilation should be used to control dust levels below the PEL and TLV.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):

NIOSH approved air-purifying dust respirator, with high efficiency filters.

EYE:

Chemical goggles.

GLOVES:

Not needed.

OTHER CLOTHING AND EQUIPMENT:

Not needed.

VVV 000014384

9. SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMO HAZARD CLASS AND NUMBER No hazard classification	US DOT HAZARD CLASS No hazard classification
UN NUMBER Not applicable	US DOT IDENTIFICATION NUMBER Not applicable

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS Railroad Hopper Cars Tank Trucks Bags	ELECTROSTATIC ACCUMULATION HAZARD None
	STORAGE/TRANSPORT PRESSURE Ambient
STORAGE TRANSPORT TEMPERATURE Ambient	LOADING/UNLOADING TEMPERATURE Ambient
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE Unknown

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE
Carbon Steel Mild Steel Aluminum	Abrasion in handling systems may occur.

CATAPAL® XW ALUMINA

VISTA CHEMICAL CO.

Sample No: *goes on sample*
Ponca City, OK
FOR INDUSTRIAL USE ONLY!
IF THAT PURPOSE IS KNOWN TO VISTA.

PERIENCE WHICH VISTA BELIEVES RELIABLE AND ARE SUPPLIED FOR
VISTA CHEMICAL CO. MAKES NO CLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM
CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY
OR REPRESENTATION OF ANY KIND, INCLUDING LOCAL OR PATENTED
THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY OTHER PURPOSE.

Shipping label

Respirable nuisance dust.
Due to the small particle
size, cautions should be
taken to avoid inhalation
of dust during handling.

Shipping label

Handling of this product may result
exposure to nuisance dust. Excessive or
prolonged exposure may cause physical
irritation & obstruction of the respiratory
tract & should be avoided. Use with adequate
ventilation or Niosh approved air-purifying
dust respirator.

Emergency Call-VISTA (318) 494-5142.

VVV 000014385