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F.16 Borg-Warner

cc
E.R. STACY
S.A. DALHEIM
D.E. HOLLATT
post copies 7/6/77

CAREY
ASBESTOS FIBRE

CAREY-CANADIAN MINES, LTD.

RECEIVED
JUL 6 1977

East Broughton Station, P.Q
Canada G0N 1H0
Telephone (418) 426-3050
Cable Address CARMINES
Telex: 05-834554 CAREYMINE EABR

June 29th, 1977

Mr. J. Zehner, Purchasing Manager,
C/O Spring Division,
Borg-Warner Corporation,
700 South 25th Avenue,
Bellwood, Ill. 60104.

Dear Mr. Zehner:

Re: Product List
Your request of 10/VI/1977

As a follow-up to your request we are enclosing following documents:

1 - OSHA Safety and Health Standards, paragraph 1910.1001.

2 - Material Safety Data Sheet.

3 - Copies of TSCA: PL 94-469 Candidate List of Chemical Substances of April 1977.

The documents mentioned under paragraph 3 list "ASBESTOS", "ASBESTOS FIBRE" in the Name Section and once more "ASBESTOS" in the UVCB Section.

"ASBESTOS" is the mineralogical name of inorganic fibres which are divided into several subgroups.

One of them the most important and the most widely used by the industry, is the chrysotile asbestos sub-group.

All our grades belong to the chrysotile asbestos sub-group.

We are pleased to be of service, and should you require any additional information, please contact us.

Yours Very Truly
Carey Canadian Mines Ltd.,

John Sztuke
V.P., Res. & Qua. Control.

CC: Messrs: John Nolan C/O Mead Corp.
M. Prus
A.H. Bagenstose
R.C. Congdon
Co. file
EPA file

100831

Enclosures: 9 sheets.

TABLE Z-3—MINERAL DUSTS

Substance	Mppcf [a]	Mg/M³
Silica:		
Crystalline:		
Quartz (respirable)	250 [f]	10mg/M³ [m]
	%SiO₂+5	%SiO₂+2
Quartz (total dust)		30mg/M³
		%SiO₂+2
Cristobalite: Use ½ the value calculated from the count or mass formulae for quartz.		
Tridymite: Use ½ the value calculated from the formulae for quartz		
Amorphous, including natural diatomaceous earth	20	80mg/M³
		%SiO₂
Silicates (less than 1% crystalline silica):		
Mica	20	
Soapstone	20	
Talc (non-asbestos-form)	20	
Talc (fibrous). Use asbestos limit		
Tremolite (see talc, fibrous)		
Portland cement	50	
Graphite (natural)	15	
Coal dust (respirable fraction less than 5% SiO₂)		2.4mg/M³ or
For more than 5% SiO₂		10mg/M³
		%SiO₂+2
Inert or Nuisance Dust:		
Respirable fraction	15	5mg/M³
Total dust	50	15mg/M³

NOTE: Conversion factors—
mppcf×35.3=million particles per cubic meter
=particles per c.c.

[a] Millions of particles per cubic foot of air, based on impinger samples counted by light-field technics.

[f] The percentage of crystalline silica in the formula is the amount determined from air-borne samples, except in these instances in which other methods have been shown to be applicable.

[j] As determined by the membrane filter method at 430× phase contrast magnification.

[m] Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

[n] Containing < 1% quartz; if > 1% quartz, use quartz limit.

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an AEC instrument.[f] the respirable fraction of coal dust is determined with a MRE the figure corresponding to that of 2.4 Mg/M³ in the table for coal dust is 4.5 Mg/M³.

[39 FR 23502, June 27, 1974. Redesignated and amended at 40 FR 23073, May 23, 1975]

§ 1910.1001 Asbestos.

(a) *Definitions.* For the purpose of this section, (1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.

(b) *Permissible exposure to airborne concentrations of asbestos fibers*—(1) *Standard effective July 7, 1972.* The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed five fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(2) *Standard effective July 1, 1976.* The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(3) *Ceiling concentration.* No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(c) *Methods of compliance*—(1) *Engineering methods.* (i) *Engineering controls.* Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection, shall be used to meet the exposure limits prescribed in paragraph (b) of this section.

(ii) *Local exhaust ventilation.* (a) Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2–1971, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z9.2–1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(iii) *Particular tools.* All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits pre-

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scribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) *Work practices*—(i) *Wet methods.* Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) *Particular products and operations.* No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or ventilated so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) *Spraying, demolition, or removal.* Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d)(2)(iii) of this section and with special clothing in accordance with paragraph (d)(3) of this section.

(d) *Personal protective equipment*—(1) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:

(i) During the time period necessary to install the engineering controls and to institute the work practices required by paragraph (c) of this section;

(ii) In work situations in which the methods prescribed in paragraph (c) of this section are either technically not feasible or feasible to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iii) In emergencies.

(iv) Where both respirators and personnel rotation are allowed by subdivisions (i), (ii), or (iii) of this subparagraph, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by subparagraph (1) of this paragraph, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6244, Mar. 25, 1972), and shall be used in accordance with subdivisions (i), (ii), (iii), and (iv) of this subparagraph.

(i) *Air purifying respirators.* A reusable or single use air purifying respirator, or a respirator described in subdivision (ii) or (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) *Powered air purifying respirators.* A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in subdivision (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) *Type "C" supplied-air respirators, continuous flow or pressure-demand class.* A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) *Establishment of a respirator program.* (a) The employer shall establish a respirator program in accordance with the requirements of the American National Standards Practices for Respiratory Protection, ANSI Z88.2–1969, which is incorporated by reference herein.

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(b) See § 1910.6 concerning the availability of ANSI Z88.2–1969 and the maintenance of an historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(c) No employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to another job or given the opportunity to transfer to a different position whose duties he is able to perform with the same employer, in the same geographical area and with the same seniority, status, and rate of pay he had just prior to such transfer, if such a different position is available.

(3) Special clothing: The employer shall provide, and require the use of, special clothing, such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos fibers, which exceed the ceiling level prescribed in paragraph (b) of this section.

(4) Change rooms: (i) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, the employer shall provide change rooms for employees working regularly at the place.

(ii) Clothes lockers: The employer shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employee's street clothes from his work clothes.

(iii) Laundering: (*a*) Laundering of asbestos contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(*b*) Any employer who gives asbestos-contaminated clothing to another person for laundering shall inform such person of the requirement in (*a*) of this subdivision to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(*c*) Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (g) of this section.

(e) *Method of measurement.* All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at 400–450 × (magnification) (4 millimeter objective) with phase contrast illumination.

(f) *Monitoring*—(1) *Initial determinations.* Within 6 months of the publication of this section, every employer shall cause every place of employment where asbestos fibers are released to be monitored in such a way as to determine whether every employee's exposure to asbestos fibers is below the limits prescribed in paragraph (b) of this section. If the limits are exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (c) of this section.

(2) *Personal monitoring*—(i) Samples shall be collected from within the breathing zone of the employees, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) Sampling frequency and patterns. After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall the sampling be done at intervals greater than 6 months for employees whose exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph (b) of this section.

(3) *Environmental monitoring*—(i) samples shall be collected from areas of a work environment which are representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of employees. Samples shall be collected on a membrane filter of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) *Sampling frequency and patterns.* After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of the

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employees. In no case shall sampling be at intervals greater than 6 months for employees whose exposures to asbestos may reasonably be foreseen to exceed the exposure limits prescribed in paragraph (b) of this section.

(4) *Employee observation of monitoring.* Affected employees, or their representatives, shall be given a reasonable opportunity to observe any monitoring required by this paragraph and shall have access to the records thereof.

(g) *Caution signs and labels.* (1) *Caution signs.* (i) *Posting.* Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in paragraph (b) of this section. Signs shall be posted at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs. Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers.

(ii) *Sign specifications.* The warning signs required by subdivision (i) of this subparagraph shall conform to the requirements of 20" x 14" vertical format signs specified in § 1910.145(d)(4), and to this subdivision. The signs shall display the following legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in this subdivision.

Legend	*Notation*
Asbestos	1" Sans Serif, Gothic or Block.
Dust Hazard	¾" Sans Serif, Gothic or Block.
Avoid Breathing Dust	¼" Gothic.
Wear Assigned Protective Equipment.	¼" Gothic.
Do Not Remain In Area Unless Your Work Requires It.	¼" Gothic.
Breathing Asbestos Dust May Be Hazardous To Your Health.	14 point Gothic.

Spacing between lines shall be at least equal to the height of the upper of any two lines.

(2) *Caution labels*—(i) *Labeling.* Caution labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers, except that no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section will be released.

(ii) *Label specifications.* The caution labels required by subdivision (i) of this subparagraph shall be printed in letters of sufficient size and contrast as to be readily visible and legible. The label shall state:

CAUTION

Contains Asbestos Fibers

Avoid Creating Dust

Breathing Asbestos Dust May Cause Serious Bodily Harm

(h) *Housekeeping*—(1) *Cleaning.* All external surfaces in any place of employment shall be maintained free of accumulations of asbestos fibers if, with their dispersion, there would be an excessive concentration.

(2) *Waste disposal.* Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers.

(i) *Recordkeeping*—(1) *Exposure records.* Every employer shall maintain records of any personal or environmental monitoring required by this section. Records shall be maintained for a period of at least 3 years and shall be made available upon request to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of the National Institute for Occupational Safety and Health, and to authorized representatives of either.

(2) *Employee access.* Every employee and former employee shall have reasonable access to any record required to be maintained by subparagraph (1) of this paragraph, which indicates the employee's own exposure to asbestos fibers.

(3) *Employee notification.* Any employee found to have been exposed at any time to airborne concentrations of asbestos fibers in excess of the limits prescribed in paragraph (b) of this section shall be notified in writing of the exposure as soon as practicable but not later

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than 5 days of the finding. The employee shall also be timely notified of the corrective action being taken.

(j) *Medical examinations*—(1) *General.* The employer shall provide or make available at his cost, medical examinations relative to exposure to asbestos required by this paragraph.

(2) *Preplacement.* The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination, which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second ($FEV_{1.0}$).

(3) *Annual examinations.* On or before January 31, 1973, and at least annually thereafter, every employer shall provide, or make available, comprehensive medical examinations to each of his employees engaged in occupations exposed to airborne concentrations of asbestos fibers. Such annual examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second ($FEV_{1.0}$).

(4) *Termination of employment.* The employer shall provide, or make available, within 30 calendar days before or after the termination of employment of any employee engaged in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second ($FEV_{1.0}$).

(5) *Recent examinations.* No medical examination is required of any employee, if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

(6) *Medical records*—(i) *Maintenance.* Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be retained by employers for at least 20 years.

(ii) *Access.* The contents of the records of the medical examinations required by this paragraph shall be made available, for inspection and copying, to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of NIOSH, to authorized physicians and medical consultants of either of them, and, upon the request of an employee or former employee, to his physician. Any physician who conducts a medical examination required by this paragraph shall furnish to the employer of the examined employee all the information specifically required by this paragraph, and any other medical information related to occupational exposure to asbestos fibers.

§ 1910.1002 Coal tar pitch volatiles; interpretation of term.

As used in § 1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum, wood, and other organic matter.

(Sec. 8(g), 84 Stat. 1600, 29 U.S.C. 657) [39 FR 23502, June 27, 1974. Redesignated and amended at 40 FR 23073, May 28, 1975]

§ 1910.1003 4-Nitrobiphenyl.

(a) *Scope and application.* (1) This section applies to any area in which 4-Nitrobiphenyl, Chemical Abstracts Service Registry Number 92933 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 0.1 percent by weight or volume of 4-Nitrobiphenyl.

(b) *Definitions.* For the purposes of this section: (1) "Absolute filter" is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) "Authorized employee" means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) "Clean change room" means a room where employees put on clean clothing and/or protective equipment in an environment free of 4-Nitrobiphenyl. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room

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MATERIAL SAFETY DATA SHEET

June 20th, 1977
DATE

SECTION I - PRODUCT IDENTIFICATION

CHEMICAL NAME AND SYNONYMS: CHRYSOTILE ASBESTOS

TRADE NAME AND SYNONYMS: Chrysotile Asbestos Fibres

FORMULA: $3MgO.\ 2SiO_2.\ 2H_2O$ MOL. WT.

CHEMICAL FAMILY: Fibrous Hydrated Magnesium Silicate

MANUFACTURER'S NAME: Carey Canadian Mines Ltd.

EMERGENCY TELEPHONE NO.: (418) 426-3050

ADDRESS (Number, Street, City, State, and ZIP Code): P.O. Box 190 East Broughton Station P.Que. Canada. GON 1HO

SECTION II - HEALTH HAZARD DATA

ROUTES OF EXPOSURE:

INHALATION (TLV OR SUGGESTED CONTROL FIGURE): See OSHA: 1910.1001 - -(b)-(2) and (3)

SKIN (CONTACT / ABSORBTION): Not hazardous / Not absorbtive

EYE CONTACT: Not hazardous, to our knowledge

INGESTION: Not hazardous, to our knowledge.

EFFECTS OF OVEREXPOSURE:

ACUTE EXPOSURE: OSHA 1910.1001 - g - (ii): Breathing Asbestos Dust may be

CHRONIC EXPOSURE: hazardous to Health.

EMERGENCY AND FIRST AID PROCEDURES:

According to present medical knowledge there is no immediate reaction even to an overexposure to chrysotile asbestos, however it is known that in some cases prolonged overexposures have caused bodily harm to some individuals.

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)

FLAMMABLE LIMITS IN AIR % BY VOLUME: UPPER | LOWER

AUTOIGNITION TEMPERATURE

EXTINGUISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS

NOT APPLICABLE

SECTION IV - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED (Including recommended neutralizing chemicals) 10083,

See OSHA: 1910.1001, Section (h) - (1)

Vacuum or wet cleaning.

WASTE DISPOSAL METHOD: See OSHA: 1910.1001, section (h) - (2)

(Continued on reverse side)

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TOXIC SUBSTANCES CONTROL ACT (TSCA)

PL 94-469

CANDIDATE LIST OF

CHEMICAL SUBSTANCES

APRIL 1977

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF TOXIC SUBSTANCES (WH-557)
401 M STREET, S.W.
WASHINGTON, D.C. 20460

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Arylamide Yellow 10G [6486-23-3] A152-1170 $C_{16}H_{12}Cl_2N_4O_4$
Arylamide Yellow G [2512-29-0] A152-1297 $C_{32}H_{16}N_4O_4$
Arylan PWS [1331-61-9] A152-1316 $C_{18}H_{21}O_3S.H_3N$
Arylsulfonat BASF [27176-87-0] A152-1426 $C_{18}H_{20}O_3S$
Arvene [637-03-6] A152-1591 C_6H_5AsO
AS-101 [98-50-0] A152-1643 $C_6H_6AsNO_3$
AS 17665 [3570-75-0] A152-1762 $C_8H_6N_4O_4S$
AS 18908 [152-47-6] A152-1877 $C_{11}H_{12}N_4O_2S$
AS 61CL [9003-54-7] A152-1983 $(C_8H_8.C_3H_3N)_x$
A.S.A. [50-78-2] A152-2076 $C_9H_8O_4$
ASA 158-5 [3563-76-6] A152-2185 $C_{21}H_{27}NO.xH_3O_4P$
ASA 225 [500-42-5] A152-2212 $C_9H_8ClN_5$
Asabaine [53-46-3] A152-2320 $C_{21}H_{26}NO_2.Br$
A.S.A. Empirin [50-78-2] A152-2436 $C_9H_8O_4$
Asagran [50-78-2] A152-2543 $C_9H_8O_4$
Asahisol 1527 [9003-20-7] A152-2658 $(C_6H_6O_2)_x$
Asalphen [118-57-0] A152-2777 $C_{15}H_{13}NO_4$
Asaprol [516-18-7] A152-2884 $C_{10}H_8O_4S.^1/_2Ca$
Asaprol trihydrate [5794-11-6] A152-2996 $C_{10}H_8O_4S.^1/_2Ca.^3/_2H_2O$
Asarinin [133-05-1] A152-3087 $C_{20}H_{18}O_6$
(+)-Asarinin [133-03-9] A152-3193 $C_{20}H_{18}O_6$
d-Asarinin [133-03-9] A152-3216 $C_{20}H_{18}O_6$
Asaron [2883-98-9] A152-3334 $C_{12}H_{16}O_3$
Asarone [2883-98-9] A152-3441 $C_{12}H_{16}O_3$
trans-Asarone [2883-98-9] A152-3557 $C_{12}H_{16}O_3$
α-Asarone [2883-98-9] A152-3664 $C_{12}H_{16}O_3$
Asarone picrate [5794-25-2] A152-3786 $C_{12}H_{16}O_3.C_6H_3N_3O_7$
Asarum camphor [2883-98-9] A152-3809 $C_{12}H_{16}O_3$
Asarum oil [*8016-69-1] A152-3918
Asathio Green 5B [1327-74-8] A152-4091
Asazol [553-31-1] A152-4111 $C_{18}H_{22}Cl_2N_4O_2S$
Asazole [553-31-1] A152-4227 $C_{18}H_{22}Cl_2N_4O_2S$
ASB 516 [9003-20-7] A152-4344 $(C_6H_6O_2)_x$
Asbestine [14807-96-6] A152-4454 $H_2O_3Si.^3/_4Mg$
Asbestos [*1332-21-4] A152-4565
Asbestos fiber [*1332-21-4] A152-4672
ASC [121-60-8] A152-4798 $C_8H_8ClNO_3S$
Ascabia [120-51-4] A152-4817 $C_{14}H_{12}O_2$
Ascabiol [120-51-4] A152-4924 $C_{14}H_{12}O_2$
As-Cal [69-46-5] A152-5018 $C_9H_8O_4.^1/_2Ca$
Ascalen [69-46-5] A152-5125 $C_9H_8O_4.^1/_2Ca$
Ascatex Syrup [144-29-6] A152-5238 $C_6H_8O_7.^3/_2C_4H_{10}N_2$
Ascaricid [136-77-6] A152-5359 $C_{12}H_{18}O_2$
Ascaricum [512-85-6] A152-5465 $C_{10}H_{16}O_2$
Ascaridiol [512-85-6] A152-5572 $C_{10}H_{16}O_2$
Ascaridol [512-85-6] A152-5688 $C_{10}H_{16}O_2$
Ascaridole [512-85-6] A152-5716 $C_{10}H_{16}O_2$
Ascarinol [136-77-6] A152-5824 $C_{12}H_{18}O_2$
Ascarisin [512-85-6] A152-5939 $C_{10}H_{16}O_2$
Ascarite [1310-73-2] A152-6024 $HNaO$
Ascaroside A [11002-15-6] A152-6131 $C_{33}H_{58}O_4$
Ascaroside B [11002-16-7] A152-6240 $C_{37}H_{74}O_5$
Ascaroside C [11002-17-8] A152-6363 $C_{43}H_{84}O_8$
Ascarylose [32142-24-8] A152-6477 $C_8H_{12}O_4$
Ascensil [695-34-1] A152-6583 $C_6H_8N_2$
Asceptichrome [129-16-8] A152-6693 $C_{26}H_{16}Br_2HgO_6.2Na$
Asciatine [3563-81-3] A152-6715 $C_{13}H_{17}N_3O.C_4H_7Cl_3O_2$
Ascophen [8003-03-0] A152-6833 $C_{10}H_{13}NO_2.C_9H_8O_4.C_8H_{10}N_4O_2$
Ascorbsjeu [50-81-7] A152-6941 $C_6H_8O_6$
Ascorbic acid [50-81-7] A152-7032 $C_6H_8O_6$
Ascorbic acid, compd. with 2-(diphenylmethoxy)-N,N-dimethylethylamine (1:1) [6532-43-3] A152-7148 $C_{17}H_{21}NO.C_6H_8O_6$
Ascorbic acid, compd. with nicotinamide (2:1) [1987-71-9] A152-7259 $C_6H_8O_6.C_6H_6N_2O$
Ascorbic acid, compd. with pyridoxol (1:1) [3369-95-7] A152-7374 $C_8H_{11}NO_3.C_6H_8O_6$
Ascorbic acid, compd. with quinine (2:1) [146-40-7] A152-7485 $C_{20}H_{24}N_2O_2.2C_6H_8O_6$
Ascorbic acid, compound with 3,4-dihydroxy-α-[(methylamino)methyl]benzyl alcohol - [134-17-8] A152-7597 $C_9H_{13}NO_3.C_6H_8O_6$
Ascorbic acid, 6-deoxy-, L- [528-81-4] A152-7611 $C_6H_8O_5$
L-Ascorbic acid [50-81-7] A152-7721 $C_6H_8O_6$
L-Ascorbic acid, calcium salt (2:1) [5743-27-1] A152-7844 $C_6H_8O_6.^1/_2Ca$
L-Ascorbic acid, calcium salt (2:1), dihydrate [5743-28-2] A152-7953 $C_6H_8O_6.^1/_2Ca.H_2O$
L-Ascorbic acid, compd. with 1-deoxy-1-(methylamino)-D-glucitol (1:1) [17146-87-1] A152-8044 $C_7H_{17}NO_5.C_6H_8O_6$
L-Ascorbic acid, compd. with (9α,9R)-6'-methoxycinchonan-9-ol (2:1) [146-40-7] A152-8158 $C_{20}H_{24}N_2O_2.2C_6H_8O_6$
L-Ascorbic acid, compd. with nicotinamide [1987-71-9] A152-8268 $C_6H_8O_6.C_6H_6N_2O$
L-Ascorbic acid, compd. with 3-pyridinecarboxamide [1987-71-9] A152-8389 $C_6H_8O_6.C_6H_6N_2O$
L-Ascorbic acid, 6-hexadecanoate [137-66-6] A152-8403 $C_{22}H_{38}O_7$
L-Ascorbic acid, ion(1-), 2-hydroxy-N,N,N-trimethylethanaminium [576-01-2] A152-8512 $C_6H_7O_6.C_5H_{14}NO$
L-Ascorbic acid, monosodium salt [134-03-2] A152-8629 $C_6H_8O_6.Na$
L-Ascorbic acid, monosodium salt, monohydrate [6381-89-6] A152-8733 $C_6H_8O_6.H_2O.Na$
L-Ascorbic acid, 6-palmitate [137-66-6] A152-8855 $C_{22}H_{38}O_7$
L-Ascorbic acid, dehydro- [490-83-5] A152-8967 $C_6H_6O_6$
L-Ascorbic acid, 6-deoxy- [528-81-4] A152-9056 $C_6H_8O_5$
L-(+)-Ascorbic acid [50-81-7] A152-9166 $C_6H_8O_6$
Ascorbic acid calcium salt [5743-27-1] A152-9274 $C_6H_8O_6.^1/_2Ca$
Ascorbic acid nicotinamide complex [1987-71-9] A152-9383 $C_6H_8O_6.C_6H_6N_2O$
Ascorbic acid palmitate [137-66-6] A152-9412 $C_{22}H_{38}O_7$
Ascorbic acid-pyridoxine complex [3369-95-7] A152-9521 $C_8H_{11}NO_3.C_6H_8O_6$
Ascorbic acid sodium salt [134-03-2] A152-9638 $C_6H_7O_6.Na$
L-Ascorbic acid sodium salt [134-03-2] A152-9745 $C_6H_8O_6.Na$
Ascorbicin [134-03-2] A152-9866 $C_6H_8O_6.Na$
Ascorbic palmitate [137-66-6] A152-9971 $C_{22}H_{38}O_7$
Ascorbigen [8075-93-7] A153-0021 $C_{15}H_{15}NO_6.C_{15}H_{15}NO_6$
Ascorbin [134-03-2] A153-0135 $C_6H_8O_6.Na$
Ascorbutina [50-81-7] A153-0245 $C_6H_8O_6$
Ascorbyl monopalmitate [137-66-6] A153-0361 $C_{22}H_{38}O_7$
Ascorbyl palmitate [137-66-6] A153-0477 $C_{22}H_{38}O_7$
L-Ascorbyl palmitate [137-66-6] A153-0584 $C_{22}H_{38}O_7$
Ascorbylpalmitic acid [137-66-6] A153-0691 $C_{22}H_{38}O_7$
Ascorin [50-81-7] A153-0719 $C_6H_8O_6$
Ascorphylline [519-37-9] A153-0835 $C_9H_{12}N_4O_3$
Ascorteal [50-81-7] A153-0948 $C_6H_8O_6$
Ascorvit [50-81-7] A153-1039 $C_6H_8O_6$
Ascorvit CA [69-46-5] A153-1149 $C_9H_8O_4.^1/_2Ca$
Ascosin [1402-88-6] A153-1255
Ascron [77-03-2] A153-1375 $C_9H_{18}NO_2$
Ascumar [152-72-7] A153-1488 $C_{19}H_{16}NO_6$
Ascuron [541-19-5] A153-1592 $C_{14}H_{30}N_2O_4.2I$
Asebogenin [520-42-3] A153-1616 $C_{16}H_{16}O_5$
Asebogenol [520-42-3] A153-1723 $C_{16}H_{16}O_5$
Asecryl [596-51-0] A153-1846 $C_{19}H_{26}NO_3.Br$
Asepsin [103-88-8] A153-1954 C_8H_8BrNO
Asepta Herban [18530-56-8] A153-2049 $C_{13}H_{22}N_2O$
Aseptichrome [129-16-8] A153-2155 $C_{20}H_{10}Br_2HgO_6.2Na$
Aseptil 2 [515-59-3] A153-2260 $C_{10}H_{11}N_3O_2S_2$
Aseptoform Butyl [94-26-8] A153-2383 $C_{11}H_{14}O_3$
Aseptoform E [120-47-8] A153-2402 $C_9H_{10}O_3$
Aseptoform P [94-13-3] A153-2516 $C_{10}H_{12}O_3$
Aseptolan [87-17-2] A153-2628 $C_{13}H_{11}NO_2$
Aseptolan Soluble [2593-10-4] A153-2731 $C_{13}H_{11}NO_2.Na$
Aseptorid [1161-88-2] A153-2859 $C_7H_{10}N_2O_2S.C_7H_9N_3O_2S_2$
Asex [7775-09-9] A153-2963 $ClHO_2.Na$
ASH [1210-56-6] A153-3057 $C_{13}H_{16}N_2O$
Ash acid [5460-09-3] A153-3165 $C_{10}H_9NO_7S_2.Na$
Asiaticosid [16830-15-2] A153-3274 $C_{48}H_{78}O_{19}$
Asiaticoside [16830-15-2] A153-3386 $C_{48}H_{78}O_{19}$
Asilen [3337-71-1] A153-3417 $C_8H_{10}N_2O_4S$
Asiphyl [127-64-4] A153-3526 $C_6H_6AsNO_3.^1/_2Hg$
Asiprenol [7683-59-2] A153-3635 $C_{11}H_{17}NO_3$
ASK [87-17-2] A153-3744 $C_{13}H_{11}NO_2$
Askaridol [512-85-6] A153-3864 $C_{10}H_{16}O_2$
ASL 279 [51-67-6] A153-3972 $C_5H_{11}NO_2$
ASM 4010MA [101-72-4] A153-4067 $C_{15}H_{18}N_2$
Asmacoril [525-82-6] A153-4173 $C_{15}H_{10}O_2$
Asmalar [7683-59-2] A153-4285 $C_{11}H_{17}NO_3$
ASM-DNT [93-46-9] A153-4317 $C_{26}H_{20}N_2$
ASM DOD [92-88-6] A153-4425 $C_{12}H_{10}O_2$
ASM MB [583-39-1] A153-4536 $C_7H_6N_2S$
Asmofug E [7681-11-0] A153-4640 IK
Asolectin [*8002-43-5] A153-4751
ASP47 [3689-24-5] A153-4873 $C_8H_{20}O_5P_2S_2$
ASP 51 [3244-90-4] A153-4982 $C_{12}H_{28}O_5P_2S_2$
ASP 100 [1327-36-2] A153-5071
ASP 105 [1327-36-2] A153-5187
ASP 200 [1327-36-2] A153-5294
ASP 400 [1327-36-2] A153-5317
ASP 500 [1327-36-2] A153-5438
Asparagic acid [56-84-8] A153-5542 $C_4H_7NO_4$
L-Asparagic acid [56-84-8] A153-5658 $C_4H_7NO_4$
Asparaginase [9015-68-3] A153-5766
L-Asparaginase [9015-68-3] A153-5888
L-Asparaginase X [9015-68-3] A153-5901
Asparagine [70-47-3] A153-6061 $C_4H_8N_2O_3$
Asparagine, D- [2058-58-4] A153-6187 $C_4H_8N_2O_3$
Asparagine, L- [70-47-3] A153-6211 $C_4H_8N_2O_3$
Asparagine, monohydrate, D- [5794-24-1] A153-6326 $C_4H_8N_2O_3.H_2O$
Asparagine, monohydrate, L- [5794-13-8] A153-6440 $C_4H_8N_2O_3.H_2O$
Asparagine, monosodium salt, L- [16079-51-9] A153-6557 $C_4H_8N_2O_3.Na$
(-)-Asparagine [70-47-3] A153-6663 $C_4H_8N_2O_3$
D-Asparagine [2058-58-4] A153-6778 $C_4H_8N_2O_3$
D-β-Asparagine [2058-58-4] A153-6891 $C_4H_8N_2O_3$
L-Asparagine [70-47-3] A153-6914 $C_4H_8N_2O_3$

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TSCA CANDIDATE LIST OF CHEMICAL SUBSTANCES

CHEMICAL SUBSTANCES OF UNKNOWN OR VARIABLE COMPOSITION, COMPLEX REACTION PRODUCTS, AND BIOLOGICAL MATERIALS SECTION (UVCB SECTION)

Acid chlorides
- Tall oil fatty acid chlorides [*61790-34-9]
- Tallow fatty acyl chloride [*61790-27-0]

Alkali metal compounds
- Sodium metaphosphate [*10361-03-2]

Alkaline earth compounds
- Calcium-manganese tallate [*61789-35-3]
- Lanolin fatty acid, barium salt [*61788-50-9]
- Naphthenic acid, barium salt [*61789-67-1]
- Naphthenic acid, calcium salt [*61789-36-4]
- Oil-soluble petroleum sulfonate, barium salt [*61790-48-5]
- Oil-soluble petroleum sulfonate, calcium salt [*61789-86-4]
- Oil-soluble petroleum sulfonate, magnesium salt [*61789-87-5]
- Resin acid, calcium salt [*9007-13-0]

Alkanes
- Chlorinated paraffins [*61788-76-9]

Alkenes
- Phosphosulfurized polybutene [*61788-35-0]

Amber
- Amber [*9000-02-6]
- Oil of Amber [*8002-67-3]

Amides
- Benzyl(coconut oil amidoethyl)dimethylammonium chloride [*61789-69-3]
- Benzyl(coconut oil amidopropyl)dimethylammonium chloride [*61789-70-6]
- Palm oil acids-ethylenediamine condensate, monoethoxylated [*61790-73-6]

Amino acids
- N-[2-(Carboxymethylamino)ethyl]-*N*-(2-hydroxyethyl)coconut oil amide, sodium salt [*61791-32-0]
- *N*-(Coconut oil acyl)sarcosine, sodium salt [*61791-59-1]
- *N*-(Coconut oil alkyl)-β-alanine, partial sodium salt [*61791-61-5]
- *N*-(Coconut oil alkyl)-β-alanine, sodium salt [*61791-60-4]
- [(Coconut oil alkyl)amino]butyric acid, sodium salt [*61791-62-6]
- *N*-(2-Coconut oil amidoethyl)-*N*-(2-hydroxyethyl)glycine [*61791-33-1]
- *N*-(Tallow alkyl)-3-iminodipropionic acid, disodium salt [*61791-56-8]

Asbestos
- Asbestos [*1332-21-4]

Asphalt
- Asphalt [*8052-42-4]

Bacteria

Balsams
- Balsam Canada [*8007-47-4]
- Balsam Gurjun [*8030-55-5]
- Balsam Peru [*8007-00-9]
- Mastic [*61789-92-2]

Beeswax
- Beeswax [*8012-89-3]
- Ethoxylated sorbitol beeswax ester [*61790-89-4]

Betaines
- [1-Carboxy(homo[coconut oil alkyl])]trimethyl(ammonium hydroxide) inner salt [*61789-37-5]
- (Carboxymethyl)[3-(coconut oil amido)propyl]dimethylammonium hydroxide, inner salt [*61789-40-0]

Borates
- Glycerol sesquiester of hydrogenated castor oil acids, borated and ethoxylated [*61789-16-0]

Carbonates
- Sepia [*8030-69-1]

Carbon black
- Carbon black [*1333-86-4]

Carboxylic acids
- [1-Carboxy(homo[coconut oil alkyl])]trimethyl(ammonium hydroxide) inner salt [*61789-37-5]

Carrageen
- Carrageenan [*9000-07-1]

Caseins
- Casein [*9000-71-9]

Castor oil
- Castor alcohol [*61789-41-1]
- Castor oil [*8001-79-4]
- Castor oil acids [*61789-44-4]

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