Valtron AD4015B

Valtech Corporation

Part Number:
Version No: **2.2**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

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S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Valtron AD4015B
Synonyms	AD4015B
Other means of identification	

Recommended use of the chemical and restrictions on use

Relevant identified uses	Adhesive

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Valtech Corporation**	**Valtech (Shanghai) Limited**	**Valtech (Malaysia) Sdn Bhd**
Address	2113 Sanatoga Station Road, Pottstown PA 19464 -3275 United States	7-1288 Canggonglu, Fengxian Shanghai 201417 China	No.8, Jalan Sungai Kayu Ara 32/31 Taman Perusahaan Berjaya,40460 Shah Alam, Selangor Malaysia
Telephone	1 610 705 5900	86 21 5744 8080	6010 8822 918
Fax	610 705 0300	Not Available	Not Available
Website	www.valtechcorp.com	Not Available	Not Available
Email	info@valtechcorp.com	Not Available	Not Available

Emergency phone number

Association / Organisation	**Velocity EHS / ChemTel**	**Velocity EHS / ChemTel**	**Velocity EHS / ChemTel**
Emergency telephone number(s)	1-800-255-3924 (US & Canada)	400-120-0751 (China)	800 099 0731 (Mexico)
Other emergency telephone number(s)	1 813 248 0585 (International)	000-800-100-4086 (India)	Not Available

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond

Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Hazardous to the Aquatic Environment Long-Term Hazard Category 4

Label elements

Hazard pictogram(s)	
Signal word	Warning

Hazard statement(s)

H315	Causes skin irritation.
H319	Causes serious eye irritation.

H413	May cause long lasting harmful effects to aquatic life.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
471-34-1	14	calcium carbonate
21645-51-2	25	aluminium hydroxide
33007-83-9	25	trimethylolpropane tris(3-mercaptopropionate)
72244-98-5	30	trimercaptan ether, propoxylated
90-72-2	3	2,4,6-tris[(dimethylamino)methyl]phenol
68511-62-6	1	C.I. Pigment Yellow 150
506-87-6	2	ammonium carbonate

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ Immediately give a glass of water. ▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

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- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

Special hazards arising from the substrate or mixture

Fire Incompatibility	‣ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting	‣ Alert Fire Brigade and tell them location and nature of hazard. ‣ Wear full body protective clothing with breathing apparatus. ‣ Prevent, by any means available, spillage from entering drains or water course. ‣ Use water delivered as a fine spray to control fire and cool adjacent area. ‣ Avoid spraying water onto liquid pools. ‣ **DO NOT** approach containers suspected to be hot. ‣ Cool fire exposed containers with water spray from a protected location. ‣ If safe to do so, remove containers from path of fire.
Fire/Explosion Hazard	‣ Combustible. ‣ Slight fire hazard when exposed to heat or flame. ‣ Heating may cause expansion or decomposition leading to violent rupture of containers. ‣ On combustion, may emit toxic fumes of carbon monoxide (CO). ‣ May emit acrid smoke. Mists containing combustible materials may be explosive. Combustion products include: carbon dioxide (CO_2) nitrogen oxides (NO_x) sulfur oxides (SO_x) metal oxides other pyrolysis products typical of burning organic material. May emit corrosive fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	WARNING: Never use dry, powdered hypochlorite or other strong oxidizer for mercaptan spills, as autoignition can occur. ‣ Remove all ignition sources. ‣ Clean up all spills immediately. ‣ Avoid breathing vapours and contact with skin and eyes. ‣ Control personal contact with the substance, by using protective equipment. ‣ Contain and absorb spill with sand, earth, inert material or vermiculite. ‣ Wipe up. ‣ Place in a suitable, labelled container for waste disposal.
Major Spills	Moderate hazard. ‣ Clear area of personnel and move upwind. ‣ Alert Fire Brigade and tell them location and nature of hazard. ‣ Wear breathing apparatus plus protective gloves. ‣ Prevent, by any means available, spillage from entering drains or water course. ‣ No smoking, naked lights or ignition sources. ‣ Increase ventilation. ‣ Stop leak if safe to do so. ‣ Contain spill with sand, earth or vermiculite. ‣ Collect recoverable product into labelled containers for recycling. ‣ Absorb remaining product with sand, earth or vermiculite. ‣ Collect solid residues and seal in labelled drums for disposal. ‣ Wash area and prevent runoff into drains. ‣ If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	The careful design and assembly of equipment is paramount to the control of mercaptan odors. Although careful planning reduces the chances for leaks developing in the system, it is important to be prepared to locate and stop small leaks promptly. It is recommended that a leak check be made prior to every run carried out under pressure in metal equipment with a mercaptan or hydrogen sulfide present. An effective method to obtain a leak-free system involves two steps: 1. Charge the system with nitrogen gas or other inert, nontoxic gas to a pressure at least as high as will be used in practice, and check for a drop in pressure with time on a suitable gauge. In some cases, it is advantageous to block off sections of the system to facilitate finding the leak. If any leaks are detected by using a foaming detergent solution, correct them and recheck.

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2. Recharge the system with hydrogen sulfide gas. Since hydrogen sulfide is very toxic, it is good practice to charge the system in steps of increasing pressure, until it is certain that no large leaks are present. Any remaining small leaks can be located quickly by examining the system with lead acetate paper. Dilution of the hydrogen sulfide with nitrogen can also be considered.

To control odors in mercaptan reactions in the laboratory. All reactions must be carried out in a hood or, in the case of pressure reactions, in a closed in area equipped with an efficient exhaust fan. In the laboratory, the two basic types of reactions used are batch and continuous. Batch-type reactions at atmospheric pressure are generally conducted in glass equipment. If no significant quantity of a volatile mercaptan is present, the reaction can be carried out in a hood equipped with a charcoal bed in the exhaust line to absorb the mercaptan. In reactions where appreciable quantities of a volatile mercaptan are present, a vent gas line can be connected to two caustic scrubbers in series, with an empty trap inserted between the reaction and scrubbers to avoid reverse flow of caustic into the reaction. Continuous-type reactions often include a continuous flow of volatile C1 to C4 mercaptans. In this case, the vented gases can be fed to an outside gas burner and stack for destruction of the odor by combustion.

A hood, equipped with a charcoal filter in the exhaust line, and a high linear air velocity (100 ft./min., minimum) is necessary for mercaptan reactions carried out in glass and certain small-scale reactions with stainless-steel. In reactions where relatively small amounts of mercaptans can escape, the charcoal bed can absorb the mercaptans and prevent the escape of odor to the outside atmosphere. However, in reactions with hydrogen sulfide or lower molecular weight mercaptans, e.g., C1-C4 mercaptans, the quantity of effluent gases is directed to an outside gas burner to convert the odorous compounds to acceptable combustion products, including CO2 and SO2.
A very familiar and successful method for containing the odors of mercaptan (primarily C1 and C6) in laboratory reactions and distillations is to connect the condenser vent to two caustic scrubbers in series with an empty trap between the system and the scrubbers to catch the caustic in the event of reverse flow. Gas bubblers fitted with sintered-glass dip tubes and charged with aqueous sodium hydroxide (5 to 20%) are commonly used. Frequently, a low flow of inert gas, e.g., nitrogen, is used to maintain a steady flow through the bubbler.
Sodium hypochlorite solution (3-10%) destroys the odor by converting the mercaptan predominantly to the corresponding sulfonic acid (sodium salt). A wash bottle with hypochlorite solution is very convenient for quickly eliminating or controlling the odor from small spills or when cleaning up glass equipment. A bath of this solution is also very useful. WARNING! Do not add this solution to a large quantity of concentrated mercaptan, since a violent reaction may occur.
A 30-40% aqueous solution of lead acetate trihydrate serves acts as a detector for methyl and ethyl mercaptan as well as hydrogen sulfide. A wash bottle of lead acetate solution is used to moisten a piece of filter paper or paper towel which is then held close to (no contact) the suspected leak. With hydrogen sulfide the paper turns black and with the two mercaptans a yellow color is obtained (high sensitivity).

A large plastic bag should be kept in the hood, to store any odorous waste materials. The plastic bags can then be sealed in fiber drums for disposal. Glass bottles containing mercaptans and other odorous compounds can also be packed in fiber drums for odor-containment and properly marked for disposal.

A box of disposable gloves should be available, and the gloves should be discarded (in plastic bag in hood) after each use. Disposable aprons or lab coats are recommended, since clothing contacted with mercaptan is often difficult to deodorise.

Types of tubing found useful with mercaptans include: Teflon7, TFE, FEP, and PFA, Bev-a-line (IV or V), and 316 stainless steel. Bev-a-line tubing has a polyethylene liner cross-linked to an ethylene vinyl acetate shell, a useful temperature range of -60 C to +250 C, and is heat bondable. It is less expensive than TFE tubing and is convenient for flexible connections between glass and metal tubing lines. It is available from most laboratory supply houses. Copper and brass are unacceptable materials for handling mercaptans, because mercaptans are H2S are highly corrosive to copper and brass. Care should be taken not to use valves and gauges with brass components.

Atofina Chemicals

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- **DO NOT** enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, **DO NOT** eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
- **DO NOT** allow clothing wet with material to stay in contact with skin

Other information

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Storage incompatibility

Calcium carbonate:
- is incompatible with acids, ammonium salts, fluorine, germanium, lead diacetate, magnesium, mercurous chloride, silicon, silver nitrate, titanium.

Contact with acid generates carbon dioxide gas, which may pressurise and then rupture closed containers
Organosulfides (thiols, mercaptans) are incompatible with acids, diazo and azo compounds, halocarbons, isocyanates, aldehydes, alkali metals, nitrides, hydrides, and other strong reducing agents. Reactions with these materials generate heat and in many cases hydrogen gas. Many of these compounds may liberate hydrogen sulfide upon decomposition or reaction with an acid.
- Avoid reaction with oxidising agents

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SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	calcium carbonate	Marble- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	calcium carbonate	Limestone- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	calcium carbonate	Calcium Carbonate- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	calcium carbonate	Limestone- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	calcium carbonate	Marble- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	calcium carbonate	Calcium Carbonate- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	calcium carbonate	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	calcium carbonate	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	calcium carbonate	Calcium carbonate - total	10 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	calcium carbonate	Calcium carbonate - respirable	5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	calcium carbonate	Calcium carbonate - respirable	5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	calcium carbonate	Marble - respirable	5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	calcium carbonate	Limestone - respirable	5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	calcium carbonate	Calcium carbonate - total	10 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	calcium carbonate	Marble - total	10 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	calcium carbonate	Limestone - total	10 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	aluminium hydroxide	Particulates Not Otherwise Regulated (PNOR)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	aluminium hydroxide	Particulates Not Otherwise Regulated (PNOR)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	aluminium hydroxide	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	aluminium hydroxide	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	aluminium hydroxide	Particulates not otherwise regulated	Not Available	Not Available	Not Available	See Appendix D
US NIOSH Recommended Exposure Limits (RELs)	C.I. Pigment Yellow 150	Nickel metal and other compounds (as Ni)	0.015 mg/m3	Not Available	Not Available	Ca; See Appendix A [*Note: The REL does not apply to Nickel carbonyl.]

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
calcium carbonate	45 mg/m3	210 mg/m3	1,300 mg/m3
aluminium hydroxide	8.7 mg/m3	73 mg/m3	440 mg/m3
2,4,6-tris[(dimethylamino)methyl]phenol	6.5 mg/m3	72 mg/m3	430 mg/m3
ammonium carbonate	0.31 mg/m3	3.5 mg/m3	21 mg/m3

Ingredient	Original IDLH	Revised IDLH
calcium carbonate	Not Available	Not Available
aluminium hydroxide	Not Available	Not Available
trimethylolpropane tris(3-mercaptopropionate)	Not Available	Not Available
trimercaptan ether, propoxylated	Not Available	Not Available
2,4,6-tris[(dimethylamino)methyl]phenol	Not Available	Not Available

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Ingredient	**Original IDLH**	**Revised IDLH**
C.I. Pigment Yellow 150	10 mg/m3	Not Available
ammonium carbonate	Not Available	Not Available

Occupational Exposure Banding

Ingredient	**Occupational Exposure Band Rating**	**Occupational Exposure Band Limit**
trimethylolpropane tris(3-mercaptopropionate)	E	≤ 0.1 ppm
trimercaptan ether, propoxylated	D	> 0.1 to ≤ 1 ppm
2,4,6-tris[(dimethylamino)methyl]phenol	C	> 1 to ≤ 10 parts per million (ppm)
ammonium carbonate	E	≤ 0.01 mg/m³
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design o ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying 'escape' velocities which, in turn, determine the 'captu velocities' of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Individual protection measures, such as personal protective equipment

Eye and face protection

- Safety glasses with side shields.
- Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

Skin protection

See Hand protection below

Hands/feet protection

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

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	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: ·frequency and duration of contact, ·chemical resistance of glove material, ·glove thickness and ·dexterity Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent). ·When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. ·When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. ·Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. ·Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are rated as: ·Excellent when breakthrough time > 480 min ·Good when breakthrough time > 20 min ·Fair when breakthrough time < 20 min ·Poor when glove material degrades For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: ·Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. ·Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
Body protection	See Other protection below
Other protection	‣ Overalls. ‣ P.V.C apron. ‣ Barrier cream. ‣ Skin cleansing cream. ‣ Eye wash unit.

Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Yellow

Physical state	Liquid	**Relative density (Water = 1)**	1.138 - 1.210
Odour	Ammonia - like	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	77,600 - 117,600
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available

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Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Immiscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available
Heat of Combustion (kJ/g)	Not Available	**Ignition Distance (cm)**	Not Available
Flame Height (cm)	Not Available	**Flame Duration (s)**	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	**Enclosed Space Ignition Deflagration Density (g/m3)**	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	‣ Unstable in the presence of incompatible materials. ‣ Product is considered stable. ‣ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Thiols (particularly ethyl mercaptan) produce lethargy or sleepiness. Exposure to high levels may result in nausea, vomiting, restlessness, muscle incoordination and/or paralysis, bluing of skin, depression of breathing, coma and death. Prolonged exposure may cause headache, nausea and ultimately loss of consciousness. Inhalation hazard is increased at higher temperatures.
Ingestion	The material has **NOT** been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack o corroborating animal or human evidence.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	This material can cause eye irritation and damage in some persons.
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course. Pure calcium carbonate does not cause the disease pneumoconiosis probably due to its rapid elimination from the body. However, its unsterilised particulates can infect the lung and airway to cause inflammation. High blood concentrations of calcium ion may give rise to dilation of blood vessels and depress heart function, leading to low blood pressure and fainting (syncope). Calcium ions enhance the effects of digitalis on the heart, and may precipitate digitalis poisoning. Calcium salts also reduce the absorption of tetracyclines. In newborns, giving calcium during treatment has resulted in calcification of soft tissue. Repeated and long term exposure to mercaptans may result in damage to the lungs, kidneys and liver. There are reports of lung damage due to excessive inhalation of alumina dust. Ingestion of large amounts of aluminium hydroxide for prolonged periods may cause phosphate depletion, especially if phosphate intake is low. This may cause loss of appetite, muscle weakness, muscular disease and even softening of the bones. These effects have not been reported in people occupationally exposed to aluminium hydroxide.

Valtron AD4015B	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
calcium carbonate	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye (Rodent - rabbit): 750ug/24H - Severe
	Inhalation (Rat) LC50: >3 mg/l4h[1]	Eye: no adverse effect observed (not irritating)[1]
	Oral (Rat) LD50: >2000 mg/kg[1]	Skin (Rodent - rabbit): 500mg/24H - Moderate
		Skin: no adverse effect observed (not irritating)[1]

Continued...

aluminium hydroxide

TOXICITY	IRRITATION
Inhalation (Rat) LC50: >2.3 mg/l4h[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: >2000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

trimethylolpropane tris(3-mercaptopropionate)

TOXICITY	IRRITATION
Inhalation (Rat) LC50: >3.363 mg/L4h[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: 500 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

trimercaptan ether, propoxylated

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >10200 mg/kg[2]	Not Available
Oral (Rat) LD50: 2600 mg/kg[2]	

2,4,6-tris[(dimethylamino)methyl]phenol

TOXICITY	IRRITATION
dermal (rat) LD50: >973 mg/kg[1]	Eye (Rodent - rabbit): 50ug/24H - Severe
Oral (Rat) LD50: 1200 mg/kg[2]	Eye: adverse effect observed (irreversible damage)[1]
	Skin (Rodent - rabbit): 2mg/24H - Severe
	Skin (Rodent - rabbit): 500uL/24H - Severe
	Skin (Rodent - rat): 0.025mL - Mild
	Skin (Rodent - rat): 0.25mL - Severe
	Skin: adverse effect observed (corrosive)[1]

C.I. Pigment Yellow 150

TOXICITY	IRRITATION
Inhalation (Rat) LC50: 52.222 mg/L4h[2]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: 5000 mg/kg[2]	Skin: no adverse effect observed (not irritating)[1]

ammonium carbonate

TOXICITY	IRRITATION
Oral (Rat) LD50: 2150 mg/kg[2]	Not Available

Legend: *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

CALCIUM CARBONATE	No evidence of carcinogenic properties. No evidence of mutagenic or teratogenic effects. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
TRIMERCAPTAN ETHER, PROPOXYLATED	Polyethers (such as ethoxylated surfactants and polyethylene glycols) are highly susceptible to being oxidized in the air. They then form complex mixtures of oxidation products. Animal testing reveals that whole the pure, non-oxidised surfactant is non-sensitizing, many of the oxidation products are sensitisers. The oxidization products also cause irritation.
2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL	Overexposure to most of these materials may cause adverse health effects. Many amine-based compounds can cause release of histamines, which, in turn, can trigger allergic and other physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient. There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing. Inhalation: Inhaling vapours may result in moderate to severe irritation of the tissues of the nose and throat and can irritate the lungs. Higher concentrations of certain amines can produce severe respiratory irritation, characterized by discharge from the nose, coughing, difficulty in breathing and chest pain. Chronic exposure via inhalation may cause headache, nausea, vomiting, drowsiness, sore throat, inflammation of the bronchi and lungs, and possible lung damage. Repeated and/or prolonged exposure to some amines may result in liver disorders, jaundice and liver enlargement. Some amines have been shown to cause kidney, blood and central nervous system disorders in animal studies. While most polyurethane amine catalysts are not sensitisers, some certain individuals may also become sensitized to amines and my experience distress while breathing, including asthma-like attacks, whenever they are subsequently exposed to even very small amounts of vapours. Once sensitized, these individuals must avoid any further exposure to amines. Chronic overexposure may lead to permanent lung injury, including reduction in lung function, breathlessness, chronic inflammation of the bronchi, and immunologic lung disease. Products with higher vapour pressures may reach higher concentrations in the air, and this increases the likelihood of worker exposure. Inhalation hazards are increased when exposure to amine catalysts occurs in situations that produce aerosols, mists or heated vapours. Such situations include leaks in fitting or transfer lines. Medical conditions generally aggravated by inhalation exposure include asthma, bronchitis and emphysema. Skin contact: Skin contact with amine catalysts poses a number of concerns. Direct skin contact can cause moderate to severe irritation and injury, from simple redness and swelling to painful blistering, ulceration, and chemical burns. Repeated or prolonged exposure may also result in severe cumulative skin inflammation. Skin contact with some amines may result in allergic sensitization. Sensitised persons should avoid all contact with amine catalysts. Whole-body effects resulting from the absorption of the amines though skin exposure may include headaches, nausea, faintness, anxiety, decrease in blood pressure, reddening of the skin, hives, and facial swelling. These symptoms may be related to the pharmacological action of the amines, and they are usually temporary.

Continued...

	Eye contact: Amine catalysts are alkaline and their vapours are irritating to the eyes, even at low concentrations. Direct contact with liquid amine may cause severe irritation and tissue injury, and the "burning" may lead to blindness. Contact with solid products may result in mechanical irritation, pain and corneal injury. Exposed persons may experience excessive tearing, burning, inflammation of the conjunctiva, and swelling of the cornea, which manifests as a blurred or foggy vision with a blue tint, and sometimes a halo phenomenon around lights. These symptoms are temporary and usually disappear when exposure ends. Some people may experience this effect even when exposed to concentrations that do not cause respiratory irritation. Ingestion: Amine catalysts have moderate to severe toxicity if swallowed. Some amines can cause severe irritation, ulcers and burns of the mouth, throat, gullet and gastrointestinal tract. Material aspirated due to vomiting can damage the bronchial tubes and the lungs. Affected people may also experience pain in the chest or abdomen, nausea, bleeding of the throat and gastrointestinal tract, diarrhea, dizziness, drowsiness, thirst, collapse of circulation, coma and even death. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.
C.I. PIGMENT YELLOW 150	**WARNING:** This substance has been classified by the IARC as Group 1: **CARCINOGENIC TO HUMANS**. * REACH Dossier
CALCIUM CARBONATE & TRIMETHYLOLPROPANE TRIS(3-MERCAPTOPROPIONATE) & 2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL & AMMONIUM CARBONATE	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.
CALCIUM CARBONATE & 2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
ALUMINIUM HYDROXIDE & TRIMETHYLOLPROPANE TRIS(3-MERCAPTOPROPIONATE) & TRIMERCAPTAN ETHER, PROPOXYLATED & 2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL & AMMONIUM CARBONATE	No significant acute toxicological data identified in literature search.
TRIMETHYLOLPROPANE TRIS(3-MERCAPTOPROPIONATE) & TRIMERCAPTAN ETHER, PROPOXYLATED	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✓	**Reproductivity**	✗
Serious Eye Damage/Irritation	✓	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✗	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*
✓ *– Data available to make classification*

SECTION 12 Ecological information

Toxicity

Valtron AD4015B

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

calcium carbonate

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>14mg/l	2
LC50	96h	Fish	>165200mg/L	4
NOEC(ECx)	1h	Fish	4-320mg/l	4

aluminium hydroxide

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96h	Fish	0.57mg/l	2
EC50	72h	Algae or other aquatic plants	0.017mg/L	2
EC50	48h	Crustacea	>0.065mg/l	4
NOEC(ECx)	72h	Algae or other aquatic plants	>100mg/l	1
EC50	96h	Algae or other aquatic plants	0.005mg/L	2

Continued...

trimethylolpropane tris(3-mercaptopropionate)

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>0.12mg/l	2
EC50	48h	Crustacea	>0.35mg/l	2
LC50	96h	Fish	0.034mg/l	2
NOEC(ECx)	96h	Fish	0.017mg/l	2

trimercaptan ether, propoxylated

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

2,4,6-tris[(dimethylamino)methyl]phenol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	2.8mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>100mg/l	2
EC10(ECx)	72h	Algae or other aquatic plants	~1.13mg/l	2

C.I. Pigment Yellow 150

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>100mg/l	2
NOEC(ECx)	504h	Crustacea	>=0.026mg/L	2

ammonium carbonate

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96h	Fish	34.7mg/L	2
EC50(ECx)	24h	Fish	34.7mg/L	2

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

For Mercaptans:
Atmospheric Fate: Evaporation of the lower molecular to the atmosphere is expected to be an important fate process. Alkyl mercaptans are expected to exist primarily in the vapor-phase where they readily degrade, due to reactions with hydroxyl radicals.
Aquatic Fate: Evaporation is expected to be an important transport process for mercaptans in water.
Terrestrial Fate: Sorption to soil is thought to be low, however; the extent of sorption may be directly correlated to the level of organic material within different soil types.
Biological breakdown processes involving methane using bacteria may occur.
Ecotoxicity: Mercaptans exhibit high to moderate toxicities towards aquatic species and there is little evidence of bioconcentration or biomagnification through the food chain.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
trimethylolpropane tris(3-mercaptopropionate)	HIGH	HIGH
2,4,6-tris[(dimethylamino)methyl]phenol	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
trimethylolpropane tris(3-mercaptopropionate)	LOW (LogKOW = 3.1031)
2,4,6-tris[(dimethylamino)methyl]phenol	LOW (LogKOW = 0.773)

Mobility in soil

Ingredient	Mobility
trimethylolpropane tris(3-mercaptopropionate)	LOW (Log KOC = 12020)
2,4,6-tris[(dimethylamino)methyl]phenol	LOW (Log KOC = 15130)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:
- Reduction

Continued...

- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- **DO NOT** allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
calcium carbonate	Not Available
aluminium hydroxide	Not Available
trimethylolpropane tris(3-mercaptopropionate)	Not Available
trimercaptan ether, propoxylated	Not Available
2,4,6-tris[(dimethylamino)methyl]phenol	Not Available
C.I. Pigment Yellow 150	Not Available
ammonium carbonate	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
calcium carbonate	Not Available
aluminium hydroxide	Not Available
trimethylolpropane tris(3-mercaptopropionate)	Not Available
trimercaptan ether, propoxylated	Not Available
2,4,6-tris[(dimethylamino)methyl]phenol	Not Available
C.I. Pigment Yellow 150	Not Available
ammonium carbonate	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

Continued...

calcium carbonate is found on the following regulatory lists

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5
US - Massachusetts - Right To Know Listed Chemicals
US - New Jersey Right to Know Hazardous Substances
US - Pennsylvania - Hazardous Substance List
US DOE Temporary Emergency Exposure Limits (TEELs)
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US OSHA Permissible Exposure Limits (PELs) Table Z-1 (Spanish)
US OSHA Permissible Exposure Limits (PELs) Table Z-3
US OSHA Permissible Exposure Limits (PELs) Table Z-3 (Spanish)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

aluminium hydroxide is found on the following regulatory lists

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5
US DOE Temporary Emergency Exposure Limits (TEELs)
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US OSHA Permissible Exposure Limits (PELs) Table Z-1 (Spanish)
US OSHA Permissible Exposure Limits (PELs) Table Z-3
US OSHA Permissible Exposure Limits (PELs) Table Z-3 (Spanish)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

trimethylolpropane tris(3-mercaptopropionate) is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

trimercaptan ether, propoxylated is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

2,4,6-tris[(dimethylamino)methyl]phenol is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Pigment Yellow 150 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans
US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants
US - California Proposition 65 - Carcinogens
US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List
US Clean Air Act - Hazardous Air Pollutants
US CWA (Clean Water Act) - Priority Pollutants
US CWA (Clean Water Act) - Toxic Pollutants
US Environmental Defense Scorecard Recognized Carcinogens
US EPCRA Section 313 Chemical List
US National Toxicology Program (NTP) 15th Report Part A Known to be Human Carcinogens
US National Toxicology Program (NTP) 15th Report Part B. Reasonably Anticipated to be a Human Carcinogen
US New York City Community Right-to-Know: List of Hazardous Substances
US NIOSH Recommended Exposure Limits (RELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

ammonium carbonate is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals
US - New Jersey Right to Know Hazardous Substances
US - Pennsylvania - Hazardous Substance List
US CWA (Clean Water Act) - List of Hazardous Substances
US DOE Temporary Emergency Exposure Limits (TEELs)
US New York City Community Right-to-Know: List of Hazardous Substances
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Additional Regulatory Information

Not Applicable

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No

Continued...

Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
ammonium carbonate	5000	2270

US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know-Act of 1986 (40 CFR 372):

CAS No	%[weight]	Name
68511-62-6	1	C.I. Pigment Yellow 150

This information must be included in all SDSs that are copied and distributed for this material.

Additional Federal Regulatory Information

Not Applicable

State Regulations

US. California Proposition 65

⚠ **WARNING:** This product can expose you to chemicals including **C.I. Pigment Yellow 150**, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

Additional State Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (aluminium hydroxide; trimethylolpropane tris(3-mercaptopropionate); trimercaptan ether, propoxylated; 2,4,6-tris[(dimethylamino)methyl]phenol; C.I. Pigment Yellow 150; ammonium carbonate)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (trimercaptan ether, propoxylated)
Japan - ENCS	No (trimercaptan ether, propoxylated)
Korea - KECI	Yes
New Zealand - NZIoC	No (trimethylolpropane tris(3-mercaptopropionate))
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'
Taiwan - TCSI	Yes
Mexico - INSQ	No (trimethylolpropane tris(3-mercaptopropionate); trimercaptan ether, propoxylated; C.I. Pigment Yellow 150)
Vietnam - NCI	Yes
Russia - FBEPH	No (trimethylolpropane tris(3-mercaptopropionate); trimercaptan ether, propoxylated; C.I. Pigment Yellow 150)
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

Continued...

SECTION 16 Other information

Revision Date	10/30/2024
Initial Date	10/30/2024

SDS Version Summary

Version	Date of Update	Sections Updated
1.2	10/29/2024	Hazards identification - Classification

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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Continued...

end of SDS