Soybean oil, epoxidized, acrylate (cas 91722-14-4) MSDS

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
EPOXIDISED SOYA BEAN OIL

SYNONYMS
"soybean oil, epoxidized acrylic", "soybean oil epoxidized acrylic", "soya bean acrylate", "acrylated epoxidized soybean oil", "Photomer 3005", mfa

PRODUCT USE
Multifunctional acrylate used in UV-cured inks etc.

SUPPLIER Company: Quantum Chemicals Pty Ltd
Address:
70 Quantum Close
Dandenong South
Victoria 3175
Telephone: 03 8795 8000
Emergency Tel: 1300 131 001
Fax 03 8795 8099

HAZARD RATINGS

Flammability
Toxicity
Body Contact
Reactivity
Chronic

SCALE: Mn/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

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CD 2007/3 Section 2 - HAZARDS IDENTIFICATION
POISONS SCHEDULE
None

RISK SAFETY
Irritating to eyes respiratory system and skin. Do not breathe gas/ fumes/ vapour/ spray.
Possible skin sensitiser*. Avoid contact with skin.
* (limited evidence). Wear eye/ face protection.
To clean the floor and all objects contaminated by this material use water and detergent.
In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.
If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre (show this container or label).

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS
NAME CAS RN %
soyabean oil epoxidised 91722-14-4 >98
inhibited (typically) with
4-methoxyphenol (MEHQ) 150-76-5

Section 4 - FIRST AID MEASURES
SWALLOWED ?? Immediately give a glass of water.
?? First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE
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.
?? If pain persists or recurs seek medical attention.
?? Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
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.

INHALE ?? If fumes or combustion products are inhaled remove from contaminated area.
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?? Lay patient down. Keep warm and rested.
?? Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
?? Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
?? Transport to hospital, or doctor, without delay.

NOTES TO PHYSICIAN
Treat symptomatically.
Section 5 - FIRE FIGHTING MEASURES

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

FIRE FIGHTING
?? Alert Fire Brigade and tell them location and nature of hazard.
?? May be violently or explosively reactive.
?? Wear full body protective clothing with breathing apparatus.
?? Prevent, by any means available, spillage from entering drains or water course.
?? Fight fire from a safe distance, with adequate cover.
?? If safe, switch off electrical equipment until vapour fire hazard removed.
?? Use water delivered as a fine spray to control the 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 (CO2), acrolein, nitrogen oxides (NOx),
other pyrolysis products typical of burning organic material.
May emit corrosive fumes.

FIRE INCOMPATIBILITY
Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine
bleaches, pool chlorine etc. as ignition may result.

HAZCHEM: None

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS
Slippery when spilt.
?? Remove all ignition sources.
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?? Clean up all spills immediately.
?? Avoid breathing vapours and contact with skin and eyes.
?? Control personal contact 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
Slippery when spilt.
After clean up operations, decontaminate and launder all protective clothing and
equipment before storing and re-using.
Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

?? Most acrylic monomers have low viscosity therefore pouring, material transfer and
processing of these materials do not necessitate heating.
?? Viscous monomers may require heating to facilitate handling. To facilitate product
transfer from original containers, product must be heated to no more than 60 deg. C. (140
F.), for not more than 24 hours.
?? Do NOT use localised heat sources such as band heaters to heat/ melt product.
?? Do NOT use steam.
?? Hot boxes or hot rooms are recommended for heating/ melting material. The hot box or
hot room should be set a maximum temperature of 60 deg. C. (140 F.).
?? Do NOT overheat - this may compromise product quality and/or result in an uncontrolled
hazardous polymerisation.
?? If product freezes, heat as indicated above and mix gently to redistribute the
inhibitor. Product should be consumed in its entirety after heating/ melting; avoid
multiple "reheats" which may affect product quality or result in product degradation.
?? Product should be packaged with inhibitor(s). Unless inhibited, product may polymerise,
raising temperature and pressure, possibly rupturing container. Check inhibitor level
periodically, adding to bulk material if needed. In addition, the product's inhibitor(s)
require the presence of dissolved oxygen. Maintain, at a minimum, the original headspace
in the product container and do NOT blanket or mix with oxygen-free gas as it renders the
inhibitor ineffective. Ensure air space (oxygen) is present during product heating /
melting.
?? Store product indoors at temperatures greater than the product's freezing point (or
greater than 0 deg. C. (32 F.) if no freezing point available and below 38 deg. C (100
F.).
?? Avoid prolonged storage (longer than shelf-life) storage temperatures above 38 deg. C
(100 F.).
?? Store in tightly closed containers in a properly ventilated storage area away from heat,
sparks, open flame, strong oxidisers, radiation and other initiators.
?? Prevent contamination by foreign materials.
?? Prevent moisture contact.
?? Use only non-sparking tools and limit storage time. Unless specified elsewhere, shelf
-life is 6 months from receipt.
?? 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.

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?? 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 storing and handling recommendations.
?? 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.

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

STORAGE INCOMPATIBILITY
Exposure to light, free radical initiators, iron, rust, oxidisers, and strong bases. Storage beyond expiration date, may initiate polymerisation.
Contamination with polymerisation catalysts - peroxides, persulfates, oxidising agents - also strong acids, strong alkalis, will cause polymerisation with exotherm - generation of heat.
Polymerisation of large quantities may be violent - even explosive.
A controlled temperature not exceeding 60°C may be used for limited periods.
Product may polymerise at high temperatures producing sufficient heat to cause thermal decomposition and/or rupture of containers. Thermal decomposition can leave to the evolution of irritant vapours or gases and/or fires.

STORAGE REQUIREMENTS
?? 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 storing and handling recommendations.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

+ X + X 0 +

+: May be stored together
O: May be stored together with specific preventions
X: Must not be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS
Source Material TWA mg/m³

Australia Exposure Standards 4-methoxyphenol (MEHQ) (4-5 Methoxyphenol)
The following materials had no OELs on our records
?? soybean oil acrylate, epoxidised: CAS:91722-14-4 EPOXIDISED SOYA BEAN OIL
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MATERIAL DATA
Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers’ responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLVC) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five
category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

?? cause inflammation
?? cause increased susceptibility to other irritants and infectious agents
?? lead to permanent injury or dysfunction
?? permit greater absorption of hazardous substances and
?? acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

CEL TWA: 1 mg/m3 [compare WEEL-TWA* for multifunctional acrylates (MFAs)]

Exposure to MFAs has been reported to cause contact dermatitis in humans and serious eye injury in laboratory animals. Exposure to some MFA-resin containing aerosols has also been reported to cause dermatitis. As no assessment of the possible effects of long-term exposure to aerosols was found, a conservative Workplace Environmental Exposure Level (WEEL) was suggested by the American Industrial Hygiene Association (AIHA).

INGREDIENT DATA

4-methoxyphenol (MEHQ): MEHQ has caused ocular toxicity in animals and skin depigmentation in rodents and workers. The recommendation for the TLV-TWA arises from documented eye and skin toxicities and by analogy with hydroquinone.

PERSONAL PROTECTION

EYE

?? Safety glasses with side shields.
?? Chemical goggles.
?? Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens 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]

HANDS/FEET

Suitability and durability of glove type is dependent on usage. Factors such as:

?? frequency and duration of contact,
?? chemical resistance of glove material,
?? glove thickness and
?? dexterity,

are important in the selection of gloves.

Wear chemical protective gloves, eg. PVC.

Wear safety footwear or safety gumboots, eg. Rubber.

NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

#76a-p()

OTHE ?? Overalls.
RESPIRATO Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level Maximum Protection Half-face Respirator Full-face Respirator

<table>
<thead>
<tr>
<th>ppm (volume) Factor</th>
<th>Breathing Zone Level</th>
<th>Maximum Protection</th>
<th>Half-face Respirator</th>
<th>Full-face Respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 10 A- AUS P</td>
<td>1000</td>
<td>A- AUS P</td>
<td>1000</td>
<td>A- AUS P</td>
</tr>
<tr>
<td>5000 50 Airline *</td>
<td>5000</td>
<td>50 Airline *</td>
<td>5000</td>
<td>50 Airline *</td>
</tr>
<tr>
<td>10000 100 - A- 3 P</td>
<td>10000</td>
<td>- A- 3 P</td>
<td>10000</td>
<td>- A- 3 P</td>
</tr>
<tr>
<td>100+ Airline**</td>
<td>100+</td>
<td>Airline**</td>
<td>100+</td>
<td>Airline**</td>
</tr>
</tbody>
</table>

* - Continuous Flow ** - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.
For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS
General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant: Air Speed:
- solvent, vapours, degreasing etc., evaporating 0.25-0.5 m/s (50-100 f/min) from tank (in still air).
- aerosols, fumes from pouring operations, 0.5-1 m/s (100-200 f/min.)

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intermittent container filling, low speed conveyor transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)
direct spray, spray painting in shallow booths, 1-2.5 m/s (200-500 f/min.)
drum filling, conveyor loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) grinding, abrasive blasting, tumbling, high 2.5-10 m/s (500-2000 f/min.)
speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion)

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 1: Disturbing room air currents capture
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.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Clear pale yellow, viscous oil with acrylate odour; does not mix with water.

PHYSICAL PROPERTIES
Liquid.
Does not mix with water.
Sinks in water.

Molecular Weight: Not applicable
Boiling Range (°C): Not available
Melting Range (°C): Not available
Specific Gravity (water=1): 1.040
Solubility in water (g/L): Immiscible
pH (1% solution): Not applicable
Vapour Pressure (kPa): Negligible
Volatile Component (%vol): Negligible
Evaporation Rate: < 1
Relative Vapour Density (air=1): >1
Flash Point (°C): >110
Lower Explosive Limit (%): Not available
Upper Explosive Limit (%): Not available
Autoignition Temp (°C): Not available
Decomposition Temp (°C): Not available.
State: Liquid
Viscosity: Not available

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Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY
?? Presence of incompatible materials.
?? Product is considered stable.
?? Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED: The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g., liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing
mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

**EYE**
This material can cause eye irritation and damage in some persons.

**SKIN**
All multifunctional acrylates (MFA) produce skin disorders and sensitise the skin and inflammation. Vapours generated by the heat of milling may occur in sufficient concentration to produce inflammation. Because exposure to industrial aerosols of MFA includes exposure to resin systems, photo-initiators, solvents, hydrogen-transfer agents, stabilisers, surfactants, fillers and polymerisation inhibitors, poisoning may arise due to a range of chemical actions.

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.

**INHALE** Not normally a hazard due to non-volatile nature of product.
No report of respiratory illness in humans as a result of exposure to multifunctional acrylates has been found.
The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
The material has NOT been classified by EC Directives or other classification systems as "harmful by inhalation". This is because of the lack of corroborating animal or human evidence. In the absence of such evidence, care should be taken nevertheless to ensure exposure is kept to a minimum and that suitable control measures be used, in an occupational setting to control vapours, fumes and aerosols.

**CHRONIC HEALTH EFFECTS**
Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

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All multifunctional acrylates (MFA) produce skin disorders and sensitise the skin and inflammation. Vapours generated by the heat of milling may occur in sufficient concentration to produce inflammation. Because exposure to industrial aerosols of MFA includes exposure to resin systems, photo-initiators, solvents, hydrogen-transfer agents, stabilisers, surfactants, fillers and polymerisation inhibitors, poisoning may arise due to a range of chemical actions.

**TOXICITY AND IRRITATION**
Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. 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. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.
No significant acute toxicological data identified in literature search.

Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH₂=CHCOO or CH₂=C(CH₃)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing. This position has now been revised and acrylates and methacrylates are no longer de facto carcinogens.

4-METHOXYPHENOL (MEHQ):

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY IRRITATION

Oral (rat) LD₅₀: 1600 mg/kg Skin (rabbit): 6000 mg/12d- I Mild

Section 12 - ECOLOGICAL INFORMATION

Substances containing unsaturated carbons are ubiquitous in indoor environments. They result from many sources (see below). Most are reactive with environmental ozone and many produce stable products which are thought to adversely affect human health. The potential for surfaces in an enclosed space to facilitate reactions should be considered.

Source of unsaturated Unsaturated substances Major Stable Products produced substances (Reactive Emissions) following reaction with ozone.

Occupants (exhaled breath, ski Isoprene, nitric oxide, Methacrolein, methyl vinyl oils, personal care products) squalene, unsaturated sterols, ketone, nitrogen dioxide, oleic acid and other acetone, 6MHO, geranyl acetone, unsaturated fatty acids, 4OPA formaldehyde, nonanol, unsaturated oxidation products decanal, 9- o xo- nonanoic acid, azelaic acid, nonanoic acid.

Soft woods, wood flooring, Isoprene, limonene, alpha- Formaldehyde, 4- AMC, including opress, cedar and pinene, other terpenes and pinoaldehyde, pinc acid, silver fir boards, houseplants sesquiterpenes pinonic acid, formic acid, methacrolein, methyl vinyl ketone, SOAs including ultrafine particles

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Carpets and carpet backing 4- Phenylcyclohexene, 4- Formaldehyde, acetaldehyde, vinylcyclohexene, styrene, 2- benzaldehyde, hexanal, nonanal, ethylhexyl acrylate, 2 - nonenal unsaturated fatty acids and esters

Linoleum and paints/polishes Linoleic acid, linolenic acid Propanal, hexanal, nonanal, 2- containing linseed oil heptanal, 2- nonenal, 2- decenal, 1- pentene- 3 - one, propionic acid, n- butyric acid

Latex paint Residual monomers formaldehyde

Certain cleaning products, Limonene, alpha- pinene, Formaldehyde, acetaldehyde, polishes, waxes, air fresheners terpinolene, alpha- terpineol, glycolaldehyde, formic acid, linalool, linalyl acetate and acetic acid, hydrogen and other terpinoids, longifolene organic peroxides, acetone, and other sesquiterpenes benzaldehyde, 4- hydroxy- 4- methyl- 5- hexen- 1- al, 5 - ethenyl- dihydro- 5- methyl- 2(3H)- furanone, 4- AMC, SOAs including ultrafine particles natural rubber adhesive Isoprene, terpenes Formaldehyde, methacrolein, methyl vinyl ketone

Photocopier toner, printed Styrene Formaldehyde, benzaldehyde
Environmental tobacco smoke: Styrene, acrolein, nicotine, Formaldehyde, benzaldehyde, hexanal, glyoxal, N-methylformamide, nicotinamide, cotinine. 

Soiled clothing, fabrics: Squalene, unsaturated sterols, Acetone, geranyl acetone, 6MHQ, bedding oleic acid and other saturated 4OPA, formaldehyde, nonanal, fatty acids decanal, 9-octanoic acid, azelaic acid, nonanoic acid. 

Soiled particle filters: Unsaturated fatty acids from Formaldehyde, nonanal, and plant waxes, leaf litter, and other aldehydes; azelaic acid; other vegetative debris; soot; nonanoic acid; 9-octanoic acid; diesel particle acid and other oxo-acids; compounds with mixed functional groups (=O, -OH, and -COOH). 

Ventilation ducts and duct linings: Unsaturated fatty acids and C5 to C10 aldehydes. 


Perfumes, colognes, essential: Limonene, alpha-pinene, Formaldehyde, 4-AMC, acetone, oils (e.g. lavender, linalool, linalyl acetate, 4-hydroxy-4-methyl-5-eucalyptus, tea tree) terpinene-4-ol, gamma-3-hexen-1-ol, 5-ethyl-terpinene dihydro-5-methyl-2(3H)furanone, SOAs including ultrafine particles. 

Overall home emissions: Limonene, alpha-pinene, Formaldehyde, 4-AMC, styrene pinonaldehyde, acetone, pinic acid, pinonic acid, formic acid, benzaldehyde, SOAs including ultrafine particles. 

Abbreviations: 4-AMC, 4-acetyl-1-methylcyclohexene; 6MHQ, 6-methyl-5-heptene-2-one, 4OPA, 4-oxopentanal, SOA, Secondary Organic Aerosols. 

Reference: Charles J Weschler; Environmental Health Perspectives, Vol 114, October 2006. 

Ecotoxicity of acrylates is a function of n-octanol/water partition coefficient (log Pow, log Kow). Compounds with a log Pow >5 exhibit simple narcosis, but at lower log Pow the toxicity of acrylates is greater than predicted for simple narcotics. 

Fish LC50 (96hr.) (mg/l): 200 (48hr) log Pow (Verschueren 1983): 1.34. 

Degradation Biological: by soil microflora 16 days.
Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS
soybean oil acrylate, epoxidised (CAS: 91722-14-4) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)

Section 16 - 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.

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