	ALSEAL MARKETING SDN. BHD.
	Safety Data Sheet
	AS-3006 **Premier Black RTV**

Issued date: 08/05/17 **Revision date: 23/02/18** **Revision No.: 2**

1. Identification of the substance/preparation and of the company/undertaking

Product name : AS-3006 Premier Black RTV
Product use : Silicone sealant
Company : Alseal Marketing Sdn Bhd
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2. Hazard(s) identification

Substance/Mixture :Mixture

Hazard classification :Skin Sens.1

Eye Irrit.2

Pictogram :GHS07 Exclamation mark

Signal word :Warning

Hazard statement(s):

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

Precautionary statement(s):

P261	Avoid breathing vapours.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with soap and water.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.

Other hazards which do not result in classification but contribute to overall hazards: None known

3. Composition/Information on ingredients

Chemical name	CAS No.	EINECS No.	%
Limestone	1317-65-3	215-279-6	30 - 50
Amorphous fumed silica	68611-44-9	271-893-4	1 - 10
Methyltris(ethylmethylketoxime)silane	22984-54-9	245-366-4	1 - 10
Vinyltris(ethylmethylketoxime)silane	2224-33-1	218-747-8	0.1 – 1.0
3-(2-aminoethylamino)propyltrimethoxysilane	1760-24-3	217-164-6	0.1 – 1.0

4. First-aid measures

In case of inhalation:
Remove to fresh air, keep warm and at rest. Contact physician if symptom persists.

In case of skin contact:
Remove contaminated clothing. Rinse with copious amount of water and soap. Get medical advice if skin irritation or a rash occurs. Wash clothing before reuse.

In case of eye contact:
Contact lenses should be removed. Rinse with copious amount of water immediately.Seek medical advice if eye irritation develops and persists.

In case of ingestion:
DO NOT induce vomiting. Rinse mouth thoroughly with water. Get medical attention if symptompersists.

Personal protection equipment for first-aiders:
Pay attention to any potential hazards and use recommended personal protection equipment if potential for exposure exists.

Most important symptoms and effects, acute and delayed:
Causes serious eye irritation.May cause an allergic skin reaction.

5. Fire-fighting measures

Suitable extinguishing media:
Water, alcohol-resistant foam, carbon dioxide, dry chemical.

Unsuitable extinguishing media:
None known.

Specificfirefighting procedures:

Remove undamaged containers from fire area if it is safe to do so. Use extinguishing media that is suitable to local circumstances and surrounding environment.

Special person protection equipment for firefighters:
NIOSH-approved self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Specific hazards arising from firefighting:
Exposure to combustion products may be a hazard to health.

Thermal decomposition products:
Carbon dioxide, carbon monoxide, silicon oxides, and nitrogen oxides. At temperatures above 150 °C formaldehyde will form.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedure:
Use recommendedpersonal protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

Measure for cleaning/collecting:
Wipe or soak with inert liquid binding material (sand, sawdust, etc).Scrape away cured material. Dispose the spilt material according to local or national regulations. Section 13 of this safety data sheet provides information regarding certain local or national requirements.

Additional information:
Prevent spillage from entering drainage/sewer systems. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

7. Handling and storage

Handling:
Sealant releases methylethylketoxime (MEKO) during application and curing therefore ensure good ventilation during use. Avoid contact with skin and eyes. Do not eat, drink, or smoke when using the product.

Storage:
Ensure containers and cartridgesare tightly closed. Store in a dry, well-ventilated area, and protected from direct sunlight with temperature not exceeding 30 °C. Keep away from incompatibles. Refer to section 10 for incompatible materials.

8. Exposure controls/personal protection

Components	CAS No.	Form of exposure (Value type)	Control Parameter	Basis
Limestone	1317-62-3	8 hours TWA (Particulate matter containing no asbestos and <1% crystalline silica)	10 mg/m^3	Malaysia OSHA
Limestone (total dust)	1317-62-3	8 hours TWA	10 mg/m^3	US OSHA
Limestone (respirable fraction)	1317-62-3	8 hours TWA	5 mg/m^3	US OSHA

Limestone (inhalable dust)	1317-62-3	8 hours TWA	10 mg/m^3	UK WEL
Limestone (respirable dust)	1317-62-3	8 hours TWA	4 mg/m^3	UK WEL
Limestone	1317-62-3	8 hours TWA (Particulate matter containing no asbestos and <1% crystalline silica)	10 mg/m^3	Safe Work Australia
Amorphous fumed silica (inhalable particulate)	68611-44-9	8 hours TWA (Particulate matter containing no asbestos and <1% crystalline silica)	10 mg/m^3	Malaysia OSHA
Amorphous fumed silica (respirable particulate)	68611-44-9	8 hours TWA (Particulate matter containing no asbestos and <1% crystalline silica)	3 mg/m^3	Malaysia OSHA
Amorphous fumed silica (inhalable dust)	68611-44-9	8 hours TWA	6 mg/m^3	UK WEL
Amorphous fumed silica (respirable dust)	68611-44-9	8 hours TWA	2.4 mg/m^3	UK WEL
Amorphous fumed silica (respirable dust)	68611-44-9	8 hours TWA (Particulate matter containing no asbestos and <1% crystalline silica)	2 mg/m^3	Safe Work Australia

Engineering controls:
Product curing may form hazardous compounds. Ensure adequate ventilation and minimise workplace exposure concentrations.

Industrial hygiene:
Remove immediately all contaminated clothing. Do not inhale vapour. Wash hands and contaminated areas with water and soap before leaving the work site. Change clothing before leaving workplace and wash before reuse. Do not eat, drink, or smoke while using product.

Hand protection:
Suitable impervious protective gloves (latex, nitrile, etc.). Breakthrough time is not tested for this product. Change gloves often if possible.

Respiratory protection:
A NIOSH-approved respirator with filter for organic vapours is recommended where local ventilation is not adequate.

Eye/Face protection:
Protective goggles/safety glasses.

9. Physical and chemical properties

Appearance : Thixotropic paste
Odour :Slight unique odour
Odour threshold : Not determined

pH	: Not applicable
Freezing/Melting point	: Not determined
Boiling point range	: Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability	: Not classified as flammable
Explosive properties	: Not classified as explosive
Oxidising properties	: Not classified as oxidising
Vapour pressure	: Not applicable
Vapour density	: Not applicable
Relative density	: 1.35
Solubility in water	: Not determined
N-octanol/water partition coefficient	: Not determined
Decomposition temperature	: Not determined
Viscosity	: Not applicable

10. Stability and reactivity

Reactivity:
No reactive hazards known.

Stability:
Stable under recommended handling and storage conditions.

Conditions to avoid:
Exposure to water/water vapour and humid air.Strong oxidising agents.

Hazardous reactions:
Hazardous polymerisation will not occur.Can react with strong oxidising agents. Hazardous decomposition products will be formed if exposed to water or humid air, and if used at elevated temperature.

Hazardous decomposition products:
Methylethylketoxime (MEKO) is formed after exposure to water or moisture in air. Formaldehyde is formed at elevated temperature.

Incompatible materials:
Moisture and strongoxidising agents.

11. Toxicology information

No specific oral, inhalation or dermal toxicology data is known for this product. Any toxicological data included in this section is based on the data associated with the components.

Acute oral toxicity, LD_{50} (rat):
Not classified based on available information and/or concentration of components.

Limestone	>2,000 mg/kg
Amorphous fumed silica	>20,000 mg/kg
Methyltris(ethylmethylketoxime)silane	>2,520 mg/kg

Vinyltris(ethylmethylketoxime)silane	>2,000 mg/kg
3-(2-aminoethylamino)propylmethoxysilane	2,295 mg/kg

Acute dermal toxicity, LD_{50} (rabbit):
Not classified based on available information and/or concentration of components.

Amorphous fumed silica	>20,000 mg/kg
Methyltris(ethylmethylketoxime)silane	>2,000 mg/kg
3-(2-aminoethylamino)propylmethoxysilane	2,000 mg/kg

Acute inhalation toxicity, LC_{50} (4 hours, rat):
Not classified based on available information and/or concentration of components.

3-(2-aminoethylamino)propyltrimethoxysilane	>1.49 mg/L (mist)

Serious eye damage/eye irritation:
Classified as eye irritant

Limestone	Not eye irritant.
Methyltris(ethylmethylketoxime)silane	Irritation to eyes, but reversible after 7 days.
Vinyltris(ethylmethylketoxime)silane	Irreversible effects on the eye.
3-(2-aminoethylamino)propylmethoxysilane	Irreversible effects on the eye.

Skin corrosion/skin irritation:
Not classified based on available information and/or concentration of components.

Limestone	Not skin irritant.
Methyltris(ethylmethylketoxime)silane	Not skin irritant.
3-(2-aminoethylamino)propylmethoxysilane	Not skin irritant.

Respiratory/Skin sensitisation:
Not classified as respiratory sensitiser, but may cause an allergic skin reaction.

Limestone	Not sensitising on skin.
Methyltris(ethylmethylketoxime)silane	Probability or evidence of skin sensitisation in humans.
Vinyltris(ethylmethylketoxime)silane	Probability or evidence of skin sensitisation in humans.

3-(2-aminoethylamino)propylmethoxysilane	Probability or evidence of skin sensitisation in humans.

Germ cell mutagenicity:
Not classified based on available information and/or concentration of components.

Limestone	Negative genotoxicity *in vitro*.
Methyltris(ethylmethylketoxime)silane	Negative genotoxicity *in vitro*.
Vinyltris(ethylmethylketoxime)silane	Negative genotoxicity *in vitro*. Negative genotoxicity *in vivo*.

Carcinogenicity:
Not classified based on available information and/or concentration of components.

Reproductive toxicity:
Not classified based on available information and/or concentration of components.

Limestone	No effect on fertility and foetal development.
Methyltris(ethylmethylketoxime)silane	No effect on fertility and foetal development.
3-(2-aminoethylamino)propylmethoxysilane	No effect on fertility and foetal development.

Specific target organ toxicity – single exposure:
Not classified based on available information and/or concentration of components.

Methyltris(ethylmethylketoxime)silane	Exposure by ingestion. Shown significant health effect at concentrations of 10-100 mg/kg bw.
Vinyltris(ethylmethylketoxime)silane	Exposure by ingestion. Shown significant health effect at concentrations of 10-100 mg/kg bw.
3-(2-aminoethylamino)propylmethoxysilane	Exposure by ingestion. No significant health effect at concentration of 100 mg/kg bw or less.

Specific target organ toxicity – repeated exposure:
Not classified based on available information and/or concentration of components.

Limestone	Exposure for 6 weeks by ingestion on rats. NOAEL: 1,000 mg/kg
Methyltris(ethylmethylketoxime)silane	Exposure by ingestion for 28 days on rats showed haematotoxic effects at 50 mg/kg bw/day. NOAEL: 10 mg/kg bw/day
Vinyltris(ethylmethylketoxime)silane	Exposure by ingestion for 28 days on rats showed haematotoxic effects at 50 mg/kg bw/day. NOAEL: 10 mg/kg bw/day
3-(2-aminoethylamino)propylmethoxysilane	Exposure by ingestion for 28 days on rats. NOAEL: 500 mg/kg bw/day
	Exposure by dermal for 11 days on rats. NOAEL: 1,545 mg/kg bw/day

Aspiration toxicity:

Not classified based on available information and/or concentration of components.

Likely route of administration:
Inhalation, skin contact, and ingestion.

Additional notes:
This product will release methylethylketoxime (MEKO) on curing or in contact with water/moisture. A lifetime (about two years) inhalation study in male and female mice and rats revealed that liver tumours were observed in male mice and rats at a high exposure level of 375 ppm.

12. Ecological information

Individual components of this mixture have been independently tested by the raw material suppliers and any known results have been presented below. The results for the individual components may not be representative of the ecological toxicity of this finished product. This finished product has not been tested to determine individual toxicological/ecological limits.

Ecology toxicity:
No adverse effect on aquatic organisms is predictedbased on available information and/or concentration of components..

Limestone Toxicity to fish Toxicity to crustacean Toxicity to algae or other aquatic plants	 Exposure for 96 hours, LC_{50}:>100 mg/L Exposure for 48 hours, EC_{50}: >100 mg/L Exposure for 72 hours, EC_{50}: >14 mg/L
Methyltris(ethylmethylketoxime)silane Toxicity to fish Toxicity to crustacean Toxicity to algae or other aquatic plants	 Exposure for 96 hours, LC_{50}: >120 mg/L Exposure for 48 hours, EC_{50}: >120 mg/L Exposure for 72 hours, EC_{50}: 94 mg/L
3-(2-aminoethylamino)propylmethoxysilane Toxicity to fish Toxicity to crustacean Toxicity to algae or other aquatic plants	 Exposure for 96 hours, LC_{50}: 597 mg/L Exposure for 48 hours, EC_{50}: 81 mg/L Exposure for 72 hours, EC_{50}: 8.8 mg/L

Persistence and degradability:
Not likely to be persistentbased on available information and/or concentration of components.

Methyltris(ethylmethylketoxime)silane	Not readily biodegradable. Exposure for 21 days, 14.5% biodegradation.
Vinyltris(ethylmethylketoxime)silane	Not readily biodegradable. 1 second half-life degradation.
3-(2-aminoethylamino)propylmethoxysilane	Not readily biodegradable. 39% biodegradation. 0.025 hours half-life degradation.

Bioaccumulative potential:
No bioaccumulation potential based on available information and/or concentration of components..

Methyltris(ethylmethylketoxime)silane	Log K_{ow}: 11.2
3-(2-aminoethylamino)propylmethoxysilane	Log K_{ow}: -0.3

Mobility in soil:

No data available.

13. Disposal information

Waste treatment/disposal methods - unused products
Waste disposal must be in compliance with environmental protection requirements and local regulations.

Waste treatment/disposal methods - contaminated packaging
Dispose of as unused product. Empty container should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

Road transport (UNRTDG)	**:** Not regulated as dangerous goods.
UN number	**:**Not applicable
Proper shipping name	**:**Not applicable
Technical name	**:**Not applicable
Hazard class	**:**Not applicable
Classification code	**:**Not applicable
Packing group	**:**Not applicable

Marine transport (IMDG)	**:** Not regulated as dangerous goods.
UN number	**:**Not applicable
Proper shipping name	**:**Not applicable
Technical name	**:**Not applicable
Hazard class	**:**Not applicable
EmS	**:**Not applicable
Packing group	**:**Not applicable
Marine pollutant	**:**Not applicable

Air transport (IATA)	**:** Not regulated as dangerous goods.
UN number	**:**Not applicable
Proper shipping name	**:**Not applicable
Technical name	**:**Not applicable
Hazard class	**:**Not applicable
Packing group	**:**Not applicable

15. Regulatory information

Safety, health, and environmental regulations specific for the hazardous chemical in question:
Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2010 (Malaysia)

Occupational Safety and Health (Classification, Labelling, and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 (Malaysia)

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (European Union)

Occupational Safety and Health Administration (OSHA) (2006) Air Contaminants. 29 CFR 1910.1000 (United States of America)

Work Health and Safety Act 2011 (Australia)

EH40/2005 Workplace exposure limits (United Kingdom)

Chemical inventory status:

Australia AICS	: All ingredients listed or exempt.
Canada DSL	: All ingredients listed or exempt.
China IECSC	:All ingredients listed or exempt.
Korea KECI	:All ingredients listed or exempt.
Philippines PICCS	:All ingredients listed or exempt.
United States TCSA	:All ingredients listed or exempt.

16. Other information

Definitions:

TWA	**:** Time-weighted average.
STEL	**:** Short-term exposure level.
OSHA	**:** Occupational Safe and Health Act
WEL	**:** Workplace exposure limits
LD_{50}	**:** The minimum dose required for lethal effects in 50% of agiven population of test specimens.
ppm	**:** part per million
bw	**:** body weight
NOAEL	**:** No-observed-adverse-effect-level
NIOSH	**:** National Institute for Occupational Safety and Health.
UNRTDG	**:** United Nations Recommendations on the Transport of Dangerous Goods
IMDG	**:** International Maritime Dangerous Goods
IATA	**:** International Air Transport Association
AICS	**:** Australian Inventory of Chemical Substances
DSL	**:** Domestic Substance List
IECSC	**:** Inventory of Existing Chemical Substances in China.
KECI	**:** Korea Existing Chemicals Inventory.
HSNO	**:** Hazardous Substance and New Organisms
PICCS	**:** Philippines Inventory of Chemicals and Chemical Substances.
TSCA	**:** Toxic Substances Control Act.

All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist.The details contained herein are based on our present state of knowledge and experience incharacterising our product with regard to any possible safety requirement at the date of its publication. We do, however, pass them on without any warranty or property assurances.