Safety Data Sheet
acc. to OSHA HCS

Printing date 10/09/2018 Reviewed on 10/06/2017

1 Identification

· **Product identifier**

· **Trade name: ALT R227 resin**

· **Article number:** 109-000-yyyU
· **Application of the substance / the mixture** Binder

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

ALT Global, LLC
12 Dwight Place
Fairfield, NJ 07004
USA
Tel.: +1 973-287-6158
Fax: +1 973-287-6168
Internet: www.altglobal.com

· **Information department:**

Division product safety
Mr. Bonyadlou
Tel.: +1 973-287-6158
E-Mail: mbonyadlou@altglobal.com
· **Emergency telephone number:**

For Chemical Emergency
Spill Leak Fire Exposure or Accident
Call CHEMTREC Day or Night

DOMESTIC NORTH AMERICA 800-424-9300

2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.


GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**


GHS02 GHS07

· **Signal word** Warning

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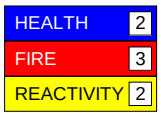
· **Hazard-determining components of labeling:**
methyl methacrylate
benzyl methacrylate
2-ethylhexyl acrylate
· **Hazard statements**
H226 Flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
· **Precautionary statements**

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing vapours.
P280	Wear protective gloves/ eye protection.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P312	Call a poison center/doctor if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 3
Reactivity = 2

· **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 3
Reactivity = 2

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).
· **vPvB:** Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 80-62-6 Index number: 607-035-00-6	methyl methacrylate	25-50%
CAS: 2495-37-6 Index number: 607-134-00-4	benzyl methacrylate	25-50%
CAS: 103-11-7 Index number: 607-107-00-7	2-ethylhexyl acrylate	10-25%

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Take affected persons out of danger area and lay down.

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Involve doctor immediately.
· **After inhalation:**
In case of unconsciousness place patient stably in side position for transportation.
Take affected persons into fresh air and keep quiet.
Seek medical treatment.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** Do not induce vomiting; immediately call for medical help.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
Headache
Dizziness
Skin sensitization.
Irritant to skin, eyes and respiratory system.
· **Indication of any immediate medical attention and special treatment needed**
After inhalation, even in the absence of signs of disease, inhaled corticosteroid (eg Ventolair) give.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** CO_2, sand, extinguishing powder, foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx)
Vapours are heavier than air.
Crawling vapors can result in greater distance from the ignition!
· **Advice for firefighters**
· **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.
· **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation

Keep away from ignition sources

Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:**
Do not flush with water or aqueous cleansing agents

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Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
80-62-6	methyl methacrylate	17 ppm
103-11-7	2-ethylhexyl acrylate	15 ppm
	PEG 200 DMA	30 mg/m³

· **PAC-2:**		
80-62-6	methyl methacrylate	120 ppm
103-11-7	2-ethylhexyl acrylate	120 ppm
	PEG 200 DMA	330 mg/m³

· **PAC-3:**		
80-62-6	methyl methacrylate	570 ppm
103-11-7	2-ethylhexyl acrylate	150 ppm
	PEG 200 DMA	2,000 mg/m³

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Cool down container when heated. Cool containers exposed to heat with water. Emergency cooling must be provided in the event of an ambient fire. Keep container tightly closed to prevent heat build up (pressure increase). Avoid heat.
Do not refill residue into storage receptacles.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
at least 7-fold air changes per hour
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Highly volatile, flammable constituents are released during processing.
Keep ignition sources away - Do not smoke.
Fumes can combine with air to form an explosive mixture.
Only explosion-proof equipment.
Protect against electrostatic charges.
Protect from heat.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Store in a cool location.
· **Information about storage in one common storage facility:**
Store away from oxidizing agents.
Store away from foodstuffs.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Storage in a collecting room is required.
Store under lock and key and with access restricted to technical experts or their assistants only.
max. Storage temperature 30 ° C
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.

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· **Specific end use(s)** Building coating or sealing.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

80-62-6 methyl methacrylate (25-50%)	
PEL	Long-term value: 410 mg/m³, 100 ppm
REL	Long-term value: 410 mg/m³, 100 ppm
TLV	Short-term value: 410 mg/m³, 100 ppm Long-term value: 205 mg/m³, 50 ppm DSEN

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Avoid contact with the eyes and skin.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Keep away from foodstuffs, beverages and feed.
Do not inhale gases / fumes / aerosols.
· **Breathing equipment:**
Ensure good ventilation.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
Check protective gloves prior to each use for their proper condition.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product 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.
· **Penetration time of glove material**
Our Recommendation is mainly on a one-time use as a short-term protection Liquid splashes. For other applications, you should contact a glove manufacturer.
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**
Butyl rubber, BR
· **For the permanent contact gloves made of the following materials are suitable:** Butyl rubber, BR
· **Not suitable are gloves made of the following materials:** Leather gloves
· **Eye protection:**

Tightly sealed goggles

· **Body protection:**

Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	Unpigmentiert
· **Odor:**	Ester-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	101 °C (213.8 °F) (MMA)
· **Flash point:**	23 °C (73.4 °F) (DIN EN ISO 3680)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	252 °C (485.6 °F) (2-EHA)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.
· **Explosion limits:**	
Lower:	1.65 Vol % (MMA)
Upper:	12.5 Vol % (MMA)
· **Vapor pressure at 20 °C (68 °F):**	38.7 hPa (29 mm Hg) (MMA)
· **Density at 20 °C (68 °F):**	1 g/cm³ (8.35 lbs/gal) (EN ISO 2811-1)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.

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· **Partition coefficient (n-octanol/water):**	log Pow: 4,29 (2-EHA); (25 °C, OECD 107) log Pow: 1,38 (MMA)
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic at 20 °C (68 °F):	25 s (ISO 6 mm)
· **Solvent content:**	
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
Solids content:	33.1 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** see Section 10.2
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions**
Exothermic reaction.
Reacts with peroxides and other radical forming substances.
A hazardous polymerization may occur after the exhaustion of the inhibitor.
· **Conditions to avoid** Avoid heat. Avoid direct sunlight.
· **Incompatible materials:** Heftige Reaktionen mit Peroxiden und anderen Reduktionsmittel
· **Hazardous decomposition products:**
No dangerous decomposition prodocts used accordind to specifications.
· **Additional information:**
Emergency procedures will vary depending on individual circumstances. The customer should have a contingency plan to the workplace may be present.

11 Toxicological information

· **Information on toxicological effects** There were no toxicological findings to the mixture.
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	>10,525 mg/kg (rat)
Inhalative	LC50/4h	108 mg/l (rat)

80-62-6 methyl methacrylate		
Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
	NOAEL	2,000 ppm (rat) drinking water, 6-2000 ppm Findings: No toxic effects
Dermal	LC50	>5,000 mg/kg (rabbit)
Inhalative	NOAEL	25 ppm (rat) 25 - 400 ppm Findings: Damage to mucous membranes in the nose at 400 ppm
	LC50/4h	29.8 mg/l (rat)

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2495-37-6 benzyl methacrylate		
Oral	LD50	~5,000 mg/kg (rat) (OECD 401)
103-11-7 2-ethylhexyl acrylate		
Oral	LD50	4,435 mg/kg (rat) (BASF-Test)
Dermal	LC50	7,520 mg/kg (hare)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:** Sensitization possible through skin contact.
· **Other information (about experimental toxicology):**
Due to the high vapor pressure is a harmful concentration in the air quickly been reached. At high concentrations can occur narcotic effect.
· **Subacute to chronic toxicity:** not tested
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
80-62-6	methyl methacrylate	3
103-11-7	2-ethylhexyl acrylate	3
128-37-0	Butylated hydroxytoluene	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**

80-62-6 methyl methacrylate	
EC3/16h	100 mg/l (Pseudomonas putida) (Cell proliferation inhibition test, Bringmann-Kühn)

· **Aquatic toxicity:**

80-62-6 methyl methacrylate	
EC50/48h	69 mg/l (daphnia magna) (OECD 202)
LC50/96h	>79 mg/l (Rainbow trout) (OECD 203)
ErC50/72h	>110 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
NOEC/72h	>110 mg/l (Selenastrum capricornutum) (OECD 201)
EC50/72h	>110 mg/l (Selenastrum capricornutum) (OECD 201)
NOEC	9.4 mg/l (Danio rerio) (OECD 210) fish early life stage test, 35 days
	37 mg/l (daphnia magna) (OECD 211) 21 days
2495-37-6 benzyl methacrylate	
LC50/48h	4.67 mg/l (fish)
103-11-7 2-ethylhexyl acrylate	
other (28d)	>1,000 mg/kg (Soil microorganisms) (OECD 217) The product has not been tested. The statement has been derived from products of a similar structure or composition.

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EC50/48h (static)	1.3 mg/l (daphnia magna) (OECD-Richtline 202) Part 1
LC50/96h (static)	1.81 mg/l (Rainbow trout) (OECD 203)
NOEC/21d	0.19 mg/l (daphnia magna) The details of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from products of a similar structure or composition.
EC50/72h (static)	1.71 mg/l (scenedesmus subspicatus) (OECD 201) Die Angaben der toxischen Wirkung bezieht sich auf die analytisch ermittelte Konzentration.

· **Persistence and degradability** No further relevant information available.
· **Other information:** The product is easily biodegradable.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** May be accumulated in organism
· **Mobility in soil**
MMA: A binding to the solid phase of soil, sediment and sewage sludge is not expected. From the water surface the substance is slowly evaporated into the atmosphere. Where the substance into the environment he verleibt preferably in the compartment into which it has emerged.
2-EHA: The product floats on water and does not dissolve. Adsorption on soil is not likely.
· **Additional ecological information:**
· **CSB-value:** 2-EHA: Theoretical oxygen demand (TOD) = 5.6 g/g
· **BSB5-value:** 0.14 g/g (MMA)
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).
· **vPvB:** Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
Hazardous waste according to Waste Catalogue (EWC). If recycling is not possible, waste must be in compliance with local regulations to be removed.
· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncured product residues are special waste.
Cured product residues are not hazardous waste.

· **Uncleaned packagings:**
· **Recommendation:**
This material and its container must be disposed of as hazardous waste.
Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**
· **DOT, ADR, IMDG, IATA** UN1263

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· **UN proper shipping name**	
· **DOT**	Paint
· **ADR**	1263 Paint
· **IMDG, IATA**	PAINT
· **Transport hazard class(es)**	
· **DOT**	
	
· **Class**	3 Flammable liquids
· **Label**	3
· **ADR, IMDG, IATA**	
	
· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	30
· **EMS Number:**	F-E,S-E
· **Stowage Category**	A
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1263 PAINT, 3, III

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Trade name: ALT R227 resin

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15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

80-62-6	methyl methacrylate

· **TSCA (Toxic Substances Control Act):**

80-62-6	methyl methacrylate
2495-37-6	benzyl methacrylate
103-11-7	2-ethylhexyl acrylate
	PEG 200 DMA
3147-75-9	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol
8002-74-2	Paraffin waxes and Hydrocarbon waxes
128-37-0	Butylated hydroxytoluene

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

80-62-6	methyl methacrylate	E, NL

· **TLV (Threshold Limit Value established by ACGIH)**

80-62-6	methyl methacrylate	A4
128-37-0	Butylated hydroxytoluene	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning young persons must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 16 Other information

These figures relate to the product as delivered.

Sector of Use
Relevant identified uses of the mixture
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU19 Building and construction work
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

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Uses advised against
SU21 Consumer uses: Private households / general public / consumers

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints**
Teaching about hazards and precautions to hand the operating instructions (Technical Rule 555). Instruction must take place before the start of employment and at least annually thereafter.
· **Date of preparation / last revision** 10/09/2018 / 26
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 3: Flammable liquids – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· **Sources**
www.gestis.de
www.echa.eu
logkow.cisti.nrc.ca
· *** Data compared to the previous version altered.**

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* 1 Identification

· **Product identifier**

· **Trade name: ALT S215 Filler**

· **Article number:** 150-904-532U
· **Application of the substance / the mixture** Filling mortar

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

ALT Global, LLC
12 Dwight Place
Fairfield, NJ 07004
USA
Tel.: +1 973-287-6158
Fax: +1 973-287-6168
Internet: www.altglobal.com

· **Information department:**

Division product safety
Mr. Bonyadlou
Tel.: +1 973-287-6158
E-Mail: mbonyadlou@altglobal.com
· **Emergency telephone number:**

For Chemical Emergency
Spill Leak Fire Exposure or Accident
Call CHEMTREC Day or Night

DOMESTIC NORTH AMERICA 800-424-9300

2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS08 Health hazard

Repr. 1A H360 May damage fertility or the unborn child.


GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**


GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
dicyclohexyl phthalate
dibenzoyl peroxide

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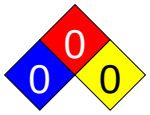
· **Hazard statements**
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.
· **Precautionary statements**
P261 Avoid breathing vapours.
P280 Wear protective clothing/ eye protection.
P280 Wear protective gloves.
P302+P352 If on skin: Wash with plenty of water.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).
· **vPvB:** Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture: consisting of the following components.

· **Dangerous components:**		
CAS: 94-36-0 Index number: 617-008-00-0	dibenzoyl peroxide	≥0.1-≤0.5%
CAS: 84-61-7 Index number: 607-719-00-4	dicyclohexyl phthalate	≥0.1-≤0.5%
CAS: 13463-67-7	titanium dioxide	≥0.1-≤0.5%

4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Generally the product does not irritate the skin.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
If symptoms persist consult doctor.
Do not induce vomiting; immediately call for medical help.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
Irritant to skin, eyes and respiratory system.

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· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Keep away from ignition sources

Avoid formation of dust.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:** Pick up mechanically.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
14808-60-7	Quartz (SiO2)	0.075 mg/m³
1317-61-9	C.I.Pigment black 11	21 mg/m³
112945-52-5	SYNTHETIC AMORPHOUS SILICA	18 mg/m³
94-36-0	dibenzoyl peroxide	15 mg/m³
13463-67-7	titanium dioxide	30 mg/m³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m³
1344-28-1	aluminium oxide	15 mg/m³
1314-23-4	zirconium oxide	14 mg/m³

· **PAC-2:**		
14808-60-7	Quartz (SiO2)	33 mg/m³
1317-61-9	C.I.Pigment black 11	230 mg/m³
112945-52-5	SYNTHETIC AMORPHOUS SILICA	100 mg/m³
94-36-0	dibenzoyl peroxide	1,200 mg/m³
13463-67-7	titanium dioxide	330 mg/m³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m³
1344-28-1	aluminium oxide	170 mg/m³
1314-23-4	zirconium oxide	110 mg/m³

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· **PAC-3:**		
14808-60-7	Quartz (SiO2)	200 mg/m³
1317-61-9	C.I.Pigment black 11	1,400 mg/m³
112945-52-5	SYNTHETIC AMORPHOUS SILICA	630 mg/m³
94-36-0	dibenzoyl peroxide	7,000 mg/m³
13463-67-7	titanium dioxide	2,000 mg/m³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m³
1344-28-1	aluminium oxide	990 mg/m³
1314-23-4	zirconium oxide	680 mg/m³

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
at least 7-fold air changes per hour
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Store in dry conditions.
max. Storage temperature 30 ° C
keine Lagerung im Fahrzeug - nur Transport
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

94-36-0 dibenzoyl peroxide (≥0.1-≤0.5%)	
PEL	Long-term value: 5 mg/m³
REL	Long-term value: 5 mg/m³
TLV	Long-term value: 5 mg/m³
13463-67-7 titanium dioxide (≥0.1-≤0.5%)	
PEL	Long-term value: 15* mg/m³ *total dust
REL	See Pocket Guide App. A
TLV	Long-term value: 10 mg/m³

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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
· **Breathing equipment:** Not required.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Check protective gloves prior to each use for their proper condition.
Check the permeability prior to each anewed use of the glove.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product 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.
· **Penetration time of glove material**
Our Recommendation is mainly on a one-time use as a short-term protection Liquid splashes. For other applications, you should contact a glove manufacturer.
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**
Butyl rubber, BR
· **For the permanent contact gloves made of the following materials are suitable:** Butyl rubber, BR
· **Not suitable are gloves made of the following materials:** Leather gloves
· **Eye protection:**

EN-Standard: EN 166

· **Body protection:**

Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Like powder
Color:	Different according to coloring
· **Odor:**	undistinguishable
· **Odor threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Change in condition**	
Melting point/Melting range:	1,713 °C (3,115.4 °F)
Boiling point/Boiling range:	>999 °C (>1,830.2 °F)

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· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure:**	Not applicable.
· **Density at 20 °C (68 °F):**	2.61 g/cm³ (21.78 lbs/gal) (EN ISO 2811-1)
· **Relative density**	Not determined.
· **Vapor density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Solvent content:**	
Water:	0.0 %
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
Solids content:	100.0 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** see Section 10.2
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:**
No dangerous decomposition prodocts used accordind to specifications.
· **Additional information:**
Emergency procedures will vary depending on individual circumstances. The customer should have a contingency plan to the workplace may be present.

11 Toxicological information

· **Information on toxicological effects** There were no toxicological findings to the mixture.

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· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Dermal	LC50	>67,499 mg/kg (rat)

94-36-0 dibenzoyl peroxide		
Oral	LD50	>2,000 mg/kg (mouse)
Inhalative	LC50	>24,300 mg/l (rat) (Staub)
	LC50/4h	>24.3 mg/l (rat) (Staub)
84-61-7 dicyclohexyl phthalate		
Oral	LD50	>5,000 mg/kg (rat)
13463-67-7 titanium dioxide		
Oral	LD50	>20,000 mg/kg (rat)
Dermal	LC50	>10,000 mg/kg (hare)
Inhalative	LC50/4h	>6.82 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Subacute to chronic toxicity:**
not tested

94-36-0 dibenzoyl peroxide		
Oral	NOAEL	200 mg/kg/d (rat) adverse effect observed
		500 mg/kg/d (unknown) Concentration at which no adverse effect was observed.
	NOAEL/29d	1,000 mg/kg/d (unknown) Concentration at which no adverse effect was observed.
84-61-7 dicyclohexyl phthalate		
Oral	NOAEL	50 mg/kg/d (rat) (subchronische orale Toxizität (90d)) Konzentration, bei der kein schädlicher Effekt beobachtet wurde. Entwicklungstoxizität: Konzentration, bei der kein schädlicher Effekt beobachtet wurde; 250 mg/kg/d (oral) (Ratte) Fruchtbarkeit: Konzentration, bei der kein schädlicher Effekt beobachtet wurde; 16-21 mg/kg/d (oral) (Ratte)

· **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
14808-60-7	Quartz (SiO2)	1
94-36-0	dibenzoyl peroxide	3
13463-67-7	titanium dioxide	2B
7631-86-9	silicon dioxide, chemically prepared	3

· **NTP (National Toxicology Program)**		
14808-60-7	Quartz (SiO2)	K

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
94-36-0 dibenzoyl peroxide	
EC50	35 mg/l (bacteria) (Atmungsinhibierungstest für Belebtschlamm) 0,5 h
EC50/48h	0.11 mg/l (daphnia magna) (OECD-Richtline 202)
LC50/96h	0.06 mg/l (fish)
NOEC/72h	0.02 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
EC50/72h	0.0711 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
NOEC	0.077 mg/l (daphnia magna) (OECD-Richtline 202) 48 h
	0.0316 mg/l (Rainbow trout) OECD 203 96 h
84-61-7 dicyclohexyl phthalate	
NOEL	>100 mg/l (bacteria) Activated sludge; 3h-Untere Wirkungsschwelle
EC50/48h	>2 mg/l (daphnia magna) max. erreichbare Konzentration
LC50/96h	>2 mg/l (Oryzias latipes) max. erreichbare Konzentration

· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential**
Dibenzoyl peroxide:
Partition coefficient: n-octanol/water : log Pow: 3.2 (20 °C)
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).
· **vPvB:** Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
Hazardous waste according to Waste Catalogue (EWC). If recycling is not possible, waste must be in compliance with local regulations to be removed.
· **Recommendation:**
Uncured product residues are special waste.
Cured product residues are not hazardous waste.
Empty containers to an approved waste handling site for recycling or disposal.

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· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, ADR, ADN, IMDG, IATA**	Void
· **UN proper shipping name**	
· **DOT, ADR, ADN, IMDG, IATA**	Void
· **Transport hazard class(es)**	
· **DOT, ADR, ADN, IMDG, IATA**	
· **Class**	Void
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	Void
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Remarks:**	Classification according to viscosity clause (2.2.3.1.5)
· **IMDG**	
· **Remarks:**	Classification according to viscosity clause (2.3.2.5)
· **UN "Model Regulation":**	Void

15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

94-36-0	dibenzoyl peroxide
1344-28-1	aluminium oxide

· **TSCA (Toxic Substances Control Act):**

14808-60-7	Quartz (SiO2)
1317-61-9	C.I.Pigment black 11
94-36-0	dibenzoyl peroxide
84-61-7	dicyclohexyl phthalate
13463-67-7	titanium dioxide
7631-86-9	silicon dioxide, chemically prepared
1344-28-1	aluminium oxide
1314-23-4	zirconium oxide

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7732-18-5	water, distilled, conductivity or of similar purity

· **Proposition 65**

· **Chemicals known to cause cancer:**

14808-60-7	Quartz (SiO2)
13463-67-7	titanium dioxide

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

14808-60-7	Quartz (SiO2)	A2
94-36-0	dibenzoyl peroxide	A4
13463-67-7	titanium dioxide	A4
1344-28-1	aluminium oxide	A4
1314-23-4	zirconium oxide	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

14808-60-7	Quartz (SiO2)
13463-67-7	titanium dioxide

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning young persons must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

· **Other regulations, limitations and prohibitive regulations** Es gelten die jeweiligen Landesvorschriften.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 16 Other information

These figures relate to the product as delivered.

Sector of Use
Relevant identified uses of the mixture
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU19 Building and construction work
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against
SU21 Consumer uses: Private households / general public / consumers

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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· **Training hints**
Teaching about hazards and precautions to hand the operating instructions (Technical Rule 555). Instruction must take place before the start of employment and at least annually thereafter.
· **Date of preparation / last revision** 10/09/2018 / -
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 1A: Reproductive toxicity – Category 1A
· **Sources**
www.gestis.de
www.echa.eu
logkow.cisti.nrc.ca
· *** Data compared to the previous version altered.**