Safety Data Sheet
acc. to OSHA HCS

Printing Date 04/03/2018 Revision Number 1 Revision Date 04/03/2018

*
1 Identification

· **Product identifier**

· **Trade name: AT-4020 Part A**
· **Relevant identified uses of the substance or mixture.** Resin

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Weld Mount System
63 Epping Road
Raymond, NH 03077

· **Information department:** Environment protection department.
· **Emergency telephone number:**
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

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2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

GHS08 Health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

GHS07

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 GHS05 GHS07 GHS08

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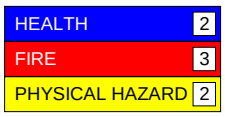
· **Signal word** Danger
· **Hazard statements**
Highly flammable liquid and vapor.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.
· **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dusts or mists.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
Get medical advice/attention if you feel unwell.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 3
Reactivity = 2

· **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 3
Physical Hazard = 2

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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Trade name: AT-4020 Part A

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture

· **Hazardous components:**		
80-62-6	methyl methacrylate	50-100%
79-41-4	methacrylic acid	2.5-10%
	Polyurethane methacrylate blend	2.5-10%
128-37-0	2,6-di-tert-butyl-p-cresol	2.5-10%
98-59-9	tosyl chloride	≤2.5%
28961-43-5	ethoxylated trimethylolpropane triacrylate	≤2.5%
80-15-9	α,α -dimethylbenzyl hydroperoxide	≤1%

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4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for 20 minutes under running water. Call a Doctor immediately.
· **After swallowing:**
Rinse mouth with water.
Do not induce vomiting; immediately call for medical help.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Foam
CO2, sand, extinguishing powder. Do not use water.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
· **Protective equipment:** Protective clothing and respiratory protective device.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Dispose of contaminated material as waste in accordance with federal state and local regulations.
· **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
79-41-4	methacrylic acid	6.7 ppm
98-59-9	tosyl chloride	0.45 mg/m³
80-15-9	α,α -dimethylbenzyl hydroperoxide	0.15 ppm

· **PAC-2:**		
80-62-6	methyl methacrylate	120 ppm
79-41-4	methacrylic acid	61 ppm
98-59-9	tosyl chloride	5 mg/m³
80-15-9	α,α -dimethylbenzyl hydroperoxide	1.6 ppm

· **PAC-3:**		
80-62-6	methyl methacrylate	570 ppm
79-41-4	methacrylic acid	220 ppm
98-59-9	tosyl chloride	30 mg/m³
80-15-9	α,α -dimethylbenzyl hydroperoxide	9.7 ppm

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Open containers in a well ventilated area and avoid breathing headspace vapors.
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep container closed when not in use.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store at temperatures not exceeding 37C.
Store in a cool location away from direct heat.
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Further information about storage conditions:**
Protect from contamination.
Protect from humidity and water.
Store in dry conditions.
Keep receptacle tightly sealed.

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· **Specific end use(s)** No further relevant information available.

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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 other constituents have no known exposure limits.

80-62-6 methyl methacrylate	
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
79-41-4 methacrylic acid	
REL	Long-term value: 70 mg/m³, 20 ppm Skin
TLV	Long-term value: 70 mg/m³, 20 ppm
128-37-0 2,6-di-tert-butyl-p-cresol	
REL	Long-term value: 10 mg/m³
TLV	Long-term value: 2* mg/m³ *as inhalable fraction and vapor
98-59-9 tosyl chloride	
WEEL	Ceiling limit value: 5 mg/m³
80-15-9 α,α -dimethylbenzyl hydroperoxide	
WEEL	Long-term value: 6 mg/m³, 1 ppm Skin

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

· **Exposure controls**
· **Personal protective equipment (see listings below)**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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· **Material of gloves**
Nitrile rubber, NBR
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.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**

Tightly sealed goggles

Use full face shield over protective eye wear when there is a risk of a splash.
· **Body protection:** Protective work clothing

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Gel
Color:	Off White
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point:	Undetermined.
Boiling point:	101 °C (213.8 °F)
· **Flash point:**	10 °C (50 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	430 °C (806 °F)
· **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.
· **Flammable limits:**	
Lower:	2.1 Vol %
Upper:	12.5 Vol %
· **Vapor pressure at 20 °C (68 °F):**	47 hPa (35.3 mm Hg)
· **Specific gravity at 20 °C (68 °F):**	0.97 g/cm³ (8.09465 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not soluble

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· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**
Dynamic: Not determined.
Kinematic: Not determined.

· **Solvent content:**

Solids content: Not available.
· **Other information** Mixed product VOC content: <50 g/l

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10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions**
Danger of polymerization.
Polymerization may occur upon loss of inhibitor.
· **Conditions to avoid**
Heat, flames, sparks, hot surfaces, ignition sources.
Direct sunlight
· **Incompatible materials:**
Strong oxidizers, acids, and bases.
Reacts with amines.
Reacts with moisture
reducing agents.
· **Hazardous decomposition products:**
Nitrogen oxides
Carbon monoxide and carbon dioxide
Hydrogen cyanide (prussic acid)
Isocyanate
Hydrocarbons

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
80-62-6 methyl methacrylate		
Oral	LD50	7,872 mg/kg (rat)
79-41-4 methacrylic acid		
Oral	LD50	1,332 mg/kg (mouse)
Dermal	LD50	500 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** Causes severe skin burns.
· **on the eye:** Causes serious eye damage
· **Sensitization:** Skin Contact - May cause allergic skin reaction.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

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Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
80-62-6	methyl methacrylate	3
128-37-0	2,6-di-tert-butyl-p-cresol	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** At present there are no ecotoxicological assessments.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

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13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Must be specially treated adhering to official regulations.

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

14 Transport information

· **UN-Number**
· **DOT, IMDG, IATA** UN1133

· **UN proper shipping name**
· **DOT** Adhesives
· **IMDG, IATA** ADHESIVES

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Trade name: AT-4020 Part A

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· **Transport hazard class(es)**

· **DOT**

· **Class**	3 Flammable liquids
· **Label**	3

· **IMDG, IATA**

· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	UN 1133 ADHESIVES, 3, II

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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 ingredients is listed.

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

80-62-6	methyl methacrylate
80-15-9	α,α -dimethylbenzyl hydroperoxide

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

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **TSCA new (21st Century Act) (Substances not listed)**

	Polyurethane methacrylate blend
28961-43-5	ethoxylated trimethylolpropane triacrylate

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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· **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.

· **(DSL) Canada Dosmestic Substance List**
All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **New Jersey Right-to-Know List:**

80-62-6	methyl methacrylate
1317-65-3	Limestone
79-41-4	methacrylic acid
128-37-0	2,6-di-tert-butyl-p-cresol
80-15-9	α,α -dimethylbenzyl hydroperoxide

· **New Jersey Special Hazardous Substance List:**

80-62-6	methyl methacrylate	F3, R2
79-41-4	methacrylic acid	CO, F2, R2
80-15-9	α,α -dimethylbenzyl hydroperoxide	F2, R4

· **Pennsylvania Right-to-Know List:**

80-62-6	methyl methacrylate
1317-65-3	Limestone
79-41-4	methacrylic acid
128-37-0	2,6-di-tert-butyl-p-cresol
80-15-9	α,α -dimethylbenzyl hydroperoxide

· **Pennsylvania Special Hazardous Substance List:**

80-62-6	methyl methacrylate	E
80-15-9	α,α -dimethylbenzyl hydroperoxide	E

· **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	2,6-di-tert-butyl-p-cresol	A4

· **MAK (German Maximum Workplace Concentration)**

128-37-0	2,6-di-tert-butyl-p-cresol	4

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

· **National regulations:**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

· **Department issuing SDS:** *Environment protection department.*
· **Creation Date:** *04/03/2018*
· **Date of preparation / last revision** *04/03/2018 / -*
· **Abbreviations and acronyms:**
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)
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. 2: Flammable liquids – Category 2
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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*
1 Identification

· **Product identifier**

· **Trade name: AT-4020 Part B**
· **Relevant identified uses of the substance or mixture.** Activator

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Weld Mount System
63 Epping Road
Raymond, NH 03077

· **Information department:** Environment protection department.
· **Emergency telephone number:**
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

GHS07

Skin Irrit. 2 H315 Causes skin 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** Danger
· **Hazard statements**
Highly flammable liquid and vapor.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
· **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.

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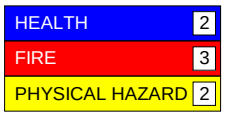
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor if you feel unwell.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Health = 2
Fire = 3
Reactivity = 2

· **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 3
Physical Hazard = 2

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** *Not applicable.*
· **vPvB:** *Not applicable.*

*
3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** *Mixture*

· **Hazardous components:**		
80-62-6	*methyl methacrylate*	*50-100%*
13463-67-7	*titanium dioxide*	*2.5-10%*

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:**
Supply fresh air or oxygen; call for doctor.
Overexposure, remove to fresh air and seek medical attention.
· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

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· **After eye contact:**
Rinse opened eye for 20 minutes under running water. If eye becomes irritated, obtain medical treatment.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Call a doctor immediately.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **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, sand, extinguishing powder. Do not use water.
Foam
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
· **Protective equipment:** Protective clothing and respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste in accordance with federal state and local regulations.
Ensure adequate ventilation.
· **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
13463-67-7	titanium dioxide	30 mg/m³

· **PAC-2:**		
80-62-6	methyl methacrylate	120 ppm
13463-67-7	titanium dioxide	330 mg/m³

· **PAC-3:**		
80-62-6	methyl methacrylate	570 ppm
13463-67-7	titanium dioxide	2,000 mg/m³

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Trade name: AT-4020 Part B

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*
7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep container closed when not in use.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location away from direct heat.
Store at temperatures not exceeding 37.7C
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from contamination.
Store in dry conditions.
Protect from heat and direct sunlight.
· **Specific end use(s)** No further relevant information available.

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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:**	
80-62-6 methyl methacrylate	
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
13463-67-7 titanium dioxide	
PEL	Long-term value: 15* mg/m³ *total dust
REL	See Pocket Guide App. A
TLV	Long-term value: 10 mg/m³ withdrawn from NIC

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

· **Exposure controls**
· **Personal protective equipment (see listings below)**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the skin.

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Avoid contact with the eyes and skin.

· **Breathing equipment:**
Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**
Nitrile rubber, NBR
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.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**
Safety glasses with side shields.

Tightly sealed goggles

· **Body protection:** Protective work clothing

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Paste
Color:	White
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point:	Undetermined.
Boiling point:	101 °C (213.8 °F)
· **Flash point:**	10 °C (50 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	430 °C (806 °F)
· **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.

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· **Flammable limits:**	
Lower:	2.1 Vol %
Upper:	12.5 Vol %
· **Vapor pressure at 20 °C (68 °F):**	47 hPa (35.3 mm Hg)
· **Specific gravity at 20 °C (68 °F):**	0.97 g/cm³ (8.09465 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Insoluble
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	0.0 %
· **Other information**	Mixed product VOC content: <50 g/l

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **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**
Heat, flames, sparks, hot surfaces, ignition sources.
Direct sunlight
· **Incompatible materials:**
Strong oxidizers, acids, and bases.
Reacts with amines.
Reacts with moisture
reducing agents.
· **Hazardous decomposition products:**
Nitrogen oxides
Carbon monoxide and carbon dioxide
Hydrogen fluoride
Hydrogen cyanide (prussic acid)
Isocyanate
Hydrocarbons

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
80-62-6 methyl methacrylate		
Oral	LD50	7,872 mg/kg (rat)

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· **Primary irritant effect:**
· **on the skin:** Skin irritant.
· **on the eye:** May irritate the eye.
· **Sensitization:** Skin Contact - Sensitization possible through skin contact.
· **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
13463-67-7	titanium dioxide	2B

· **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**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** At present there are no ecotoxicological assessments.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Must be specially treated adhering to official regulations.

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

14 Transport information

· **UN-Number**	
· **DOT, IMDG, IATA**	UN1133
· **UN proper shipping name**	
· **DOT**	Adhesives
· **IMDG, IATA**	ADHESIVES mixture

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· **Transport hazard class(es)**

· **DOT**

· **Class**	3 Flammable liquids
· **Label**	3

· **IMDG, IATA**

· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	339
· **EMS Number:**	F-E,S-D
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	UN1133, Adhesives mixture, 3, II

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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 ingredients is listed.

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

80-62-6	methyl methacrylate

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

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **Proposition 65**

· **Chemicals known to cause cancer:**

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.

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

· **(DSL) Canada Dosmestic Substance List**
All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **New Jersey Right-to-Know List:**
All ingredients are listed.

· **New Jersey Special Hazardous Substance List:**

80-62-6	methyl methacrylate	F3, R2

· **Pennsylvania Right-to-Know List:**
All ingredients are listed.

· **Pennsylvania Special Hazardous Substance List:**

80-62-6	methyl methacrylate	E

· **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
13463-67-7	titanium dioxide	A4

· **MAK (German Maximum Workplace Concentration)**

13463-67-7	titanium dioxide	3A

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

13463-67-7	titanium dioxide

· **National regulations:**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

· **Department issuing SDS:** Environment protection department.
· **Creation Date:** 04/04/2018
· **Date of preparation / last revision** 04/04/2018 / -
· **Abbreviations and acronyms:**
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)

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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. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3