

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/09/2023

Reviewed on 11/09/2023

1 Identification

· Product identifier

· Trade name: **ICON Knife Grade**
 · Application of the substance / the mixture Adhesives

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier: InnoChem LLC Phone: 770-409-8789
 6300 Button Gwinnett Dr. Fax: 770-409-9096
 Atlanta, GA 3040 e-mail info@innocemllc.com

· Information department: Laboratory

2 Hazard(s) identification

· Classification of the substance or mixture

Flammable Liquids 2 H225 Highly flammable liquid and vapor.
 Skin Irritation 2 H315 Causes skin irritation.
 Sensitization - Skin 1 H317 May cause an allergic skin reaction.
 Specific Target Organ Toxicity - Single Exposure 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-determining components of labeling:

· Hazard statements methyl methacrylate
 H225 Highly flammable liquid and vapor.
 H315 Causes skin 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.
 P243 Take precautionary measures against static discharge.
 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.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 1
 Fire = 3
 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 1
 Fire = 3
 Reactivity = 0

· Other hazards

During processing and product hardening the network generator is released as fume. Consequently, take care for adequate air conditioning and for fume exhaustion on request.

· Results of PBT and vPvB assessment

· PBT: Not applicable.

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· vPvB: Not applicable.**3 Composition/information on ingredients**· **Chemical characterization: Mixtures**· Description: Mixture: consisting of the following components.· Dangerous components:

CAS: 80-62-6 EINECS: 201-297-1 Index number: 607-035-00-6	methyl methacrylate ----- Flammable Liquids 2, H225 Skin Irritation 2, H315; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335
CAS: 38668-48-3 EINECS: 254-075-1	1,1'-(p-tolylimino)dipropan-2-ol ----- Acute Toxicity - Oral 2, H300; Acute Toxicity - Inhalation 3, H331 Eye Damage 1, H318

4 First-aid measures· **Description of first aid measures**

- General information: Take affected persons out into the fresh air.
Position and transport stably on side.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: If skin irritation continues, consult a doctor.
- After eye contact: Immediately wash with water and soap and rinse thoroughly.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed Breathing difficulty
Headache
Dizziness
Coughing
Nausea
- 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** During heating or in case of fire poisonous gases are produced.
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx)
In certain fire conditions, traces of other toxic gases cannot be excluded.
- **Advice for firefighters**
- Protective equipment: Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

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· Additional information

Wear fully protective suit.
 Mount respiratory protective device.
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 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 product to reach sewage system or any water course.
 Inform respective authorities in case of seepage into water course or sewage system.
 Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Dispose of the collected material according to regulations.
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose contaminated material as waste according to section 13.
 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
67762-90-7	Siloxanes and silicones, di-Me, reaction product with silica	120 mg/m ³
110-16-7	maleic acid	2.1 mg/m ³

· PAC-2:

80-62-6	methyl methacrylate	120 ppm
67762-90-7	Siloxanes and silicones, di-Me, reaction product with silica	1,300 mg/m ³
110-16-7	maleic acid	23 mg/m ³

· PAC-3:

80-62-6	methyl methacrylate	570 ppm
67762-90-7	Siloxanes and silicones, di-Me, reaction product with silica	7,900 mg/m ³
110-16-7	maleic acid	140 mg/m ³

7 Handling and storage**· Handling:****· Precautions for safe handling**

Keep receptacles tightly sealed.
 Store in cool, dry place in tightly closed receptacles.
 Keep away from heat and direct sunlight.
 Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
 Use only in well ventilated areas.
 Ensure good ventilation/exhaustion at the workplace.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.

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· **Conditions for safe storage, including any incompatibilities**

- Storage:
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
Prevent any seepage into the ground.
- Information about storage in one common storage facility: Store away from oxidizing agents.
Store away from foodstuffs.
- Further information about storage conditions: Store receptacle in a well ventilated area.
Keep receptacle tightly sealed.
- Storage class: 3
- **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 section 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 remaining constituent has no known exposure limits.

80-62-6 methyl methacrylate

PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Long-term value: 410 mg/m ³ , 100 ppm
TLV	Short-term value: 100 ppm Long-term value: 50 ppm DSEN, A4

- Additional information: The lists that were valid during the creation were used as basis.
- **Exposure controls**
- Personal protective equipment:
- General protective and hygienic measures: Do not eat, drink, smoke or sniff while working.
Use skin protection cream for skin protection.
Clean skin thoroughly immediately after handling the product.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
- Breathing equipment: Short term filter device:
Filter A/P2
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: After use of gloves apply skin-cleaning agents and skin cosmetics.
Preventive skin protection by use of skin-protecting agents is recommended.
The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.
This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In

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case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).

**Protective gloves**

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Fluorocarbon rubber (Viton)

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

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 gloves made of the following materials are suitable:

Fluorocarbon rubber (Viton)
Vitoject (KCL, Art_No. 890)

· As protection from splashes gloves made of the following materials are suitable:

Fluorocarbon rubber (Viton)
Vitoject (KCL, Art_No. 890)
Nitrile rubber, NBR
Camatril (KCL, Art_No. 730, 731, 732, 733)
Butyl rubber, BR
Butoject (KCL, Art_No. 897, 898)

· Not suitable are gloves made of the following materials:

Natural rubber, NR
Leather gloves
Strong 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: Pasty
Color: Colorless

· Odor: Aromatic

· Odor threshold: Not determined.

· pH-value: Not applicable.
Not determined.

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 101 °C (213.8 °F)

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· <u>Flash point:</u>	10 °C (50 °F)
· <u>Auto igniting:</u>	430 °C (806 °F)
· <u>Ignition temperature:</u>	Product is not selfigniting.
· <u>Danger of explosion:</u>	Product does not present an explosion hazard.
· <u>Explosion limits:</u>	
<u>Lower:</u>	2.1 Vol %
<u>Upper:</u>	12.5 Vol %
· <u>Vapor pressure at 20 °C (68 °F):</u>	47 hPa (35.3 mm Hg)
· <u>Density at 20 °C (68 °F):</u>	1.05 g/cm ³ (8.76 lbs/gal)
· <u>Specific gravity:</u>	Not determined.
· <u>Solubility in / Miscibility with Water:</u>	Not miscible or difficult to mix.
· <u>Viscosity:</u>	
<u>Dynamic:</u>	Not determined.
<u>Kinematic:</u>	Not determined.
· <u>Solvent content:</u>	
<u>Organic solvents:</u>	32.4 %
<u>Solids content:</u>	7.6 %
· <u>Other information</u>	
	No further relevant information available.

10 Stability and reactivity

· <u>Reactivity</u>	No further relevant information available.
· <u>Chemical stability</u>	
· <u>Thermal decomposition / conditions to be avoided:</u>	No decomposition if used according to specifications.
· <u>Possibility of hazardous reactions</u>	Exothermic polymerization. Reacts with strong oxidizing agents. Reacts with strong alkali. Reacts with strong acids. Reacts with peroxides and other radical forming substances.
· <u>Conditions to avoid</u>	No further relevant information available.
· <u>Incompatible materials:</u>	No further relevant information available.
· <u>Hazardous decomposition products:</u>	Nitrogen oxides (NO _x) Carbon monoxide and carbon dioxide Possible in traces.

11 Toxicological information· **Information on toxicological effects**· Acute toxicity:

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	>5,128-<41,026 mg/kg (rat)
Inhalative	LC50/4 h	103 mg/l

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80-62-6 methyl methacrylate

Oral	LD50	7,872 mg/kg (rat) (OECD 401)
	NOAEL	2,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4h	4,632 mg/m ³ (rat)
	LC50/4 h	29.8 mg/l (rat)
	NOAEL	25 mg/m ³ (rat)

38668-48-3 1,1'-(p-tolylimino)dipropan-2-ol

Oral	LD50	>25-<200 mg/kg (rat) (OECD 423)
Dermal	LD50	>2,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	0.5 mg/l (ATE)

· **Primary irritant effect:**· **on the skin:**

Irritant to skin and mucous membranes.

· **Sensitization:**

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

· **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:****80-62-6 methyl methacrylate**

EC50/96h	170 mg/l (Pseudokirchneriella subcapitata)
EC50/48h	69 mg/l (daphnia magna) (OECD 202)
EC0	100 mg/l (pseudomonas putida)
NOEC	9.4 mg/kg (Danio rerio.) (OECD 210)
NOEC	>100 mg/l (Selenastrum capricornutum)
NOEC/21d	37 mg/l (daphnia magna) (OECD 202)
EC50/72h	>110 mg/l (Selenastrum capricornutum)
LC50/96h	153.9-341.8 mg/l (lem)
	>79 mg/l (Oncorhynchus mykiss) (OECD 203)
	125-275 mg/l (pimephales promelas)
	326.4-426.9 mg/l (poecilia reticulata)

38668-48-3 1,1'-(p-tolylimino)dipropan-2-ol

EC50/48h	28.8 mg/l (daphnia magna) (OECD 202)
EC20/0.5h	>1,995 mg/l (BES) (OECD 209)
EC50/72h	245 mg/l (Desmodesmus subspicatus) (OECD 201)
LC50/96h	17 mg/l (Brachydanio rerio)

· **Persistence and degradability**

No further relevant information available.

· **Behavior in environmental systems:**· **Bioaccumulative potential**

No further relevant information available.

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- Mobility in soil No further relevant information available.
- **Additional ecological information:**
- General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water
- **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 not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: acetone
Alcohol

14 Transport information

- **UN-Number**
- DOT, ADR, IMDG, IATA UN1866
- **UN proper shipping name**
- DOT Resin solution
- ADR 1866 RESIN SOLUTION, special provision 640D
- IMDG, IATA RESIN SOLUTION
- **Transport hazard class(es)**
- DOT
- 
- Class 3 Flammable liquids
- Label 3
- ADR
- 
- Class 3 (F1) Flammable liquids
- Label 3
- IMDG, IATA
- 
- Class 3 Flammable liquids
- Label 3
- **Packing group**
- DOT, ADR, IMDG, IATA II
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Warning: Flammable liquids

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- Hazard identification number (Kemler code): 33
- EMS Number: F-E, S-E
- Stowage Category B

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

- **Transport/Additional information:** to handle similar to packing group II
- DOT
- Quantity limitations On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L
- Remarks: to handle similar to packing group II

- ADR
- Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- Remarks: to handle similar to packing group II

- IMDG
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- Remarks: to handle similar to packing group II

- IATA
- Remarks: to handle similar to packing group II

- **UN "Model Regulation":** UN 1866 RESIN SOLUTION, 3, II

* 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

ACTIVE

67762-90-7 Siloxanes and silicones, di-Me, reaction product with silica

ACTIVE

38668-48-3 1,1'-(p-tolylimino)dipropan-2-ol

ACTIVE

- Hazardous Air Pollutants

80-62-6 methyl methacrylate

- 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:

38668-48-3 1,1'-(p-tolylimino)dipropan-2-ol

- Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

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· Cancerogenity categories· EPA (Environmental Protection Agency)

80-62-6 methyl methacrylate

E, NL

· TLV (Threshold Limit Value)

80-62-6 methyl methacrylate

A4

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

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

None of the ingredients is listed.

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms

GHS02 GHS07

· Signal word

Danger

· Hazard-determining components of labeling:

methyl methacrylate

· Hazard statements

H225 Highly flammable liquid and vapor.

H315 Causes skin 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.

P243

Take precautionary measures against static discharge.

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.

P333+P313

If skin irritation or rash occurs: Get medical advice/attention.

P403+P233

Store in a well-ventilated place. Keep container tightly closed.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

· 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.

· Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

· VOC USA

339.9 g/l / 2.84 lb/gal

· VOC EU

339.9 g/l

· **Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

16 Other information

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.

· **Department issuing SDS:**

Laboratory

· **Contact:**· Date of preparation / last revision

11/09/2023

· Abbreviations and acronyms:

ADR: Accord relatif au transport international 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

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IATA: International Air Transport Association
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
Flammable Liquids 2: Flammable liquids – Category 2
Acute Toxicity - Oral 2: Acute toxicity – Category 2
Acute Toxicity - Inhalation 3: Acute toxicity – Category 3
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Sensitization - Skin 1: Skin sensitisation – Category 1
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

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