

Printing date 12/23/2015

Safety Data Sheet acc. to OSHA HCS

Reviewed on 12/23/2015

Trade name: g_L emover Product number: $A205100$ CAS Number: $127.19-5$ FC number: $204.826.4$ Index number: $616-011-00-4$ Application of the substance / the mixture To be used by technically qualified personnel for research and development use only. Details of the supplier of the safety data sheet Manufacturer/Supplier: MicroChem Corp. 200 Flanders Road Westborough, MA 01581 USA Information department: Product Safety Enail: Product Safety Enail: Product Safety 800-424-9300 Chemtree Unternational Emergency : 703-527-3887 Hazard(s) identification Classification of the substance or mixture $\widetilde{\psi}$ GHS08 Health hazard Rep: 1B H360 May damage fertility or the unborn child. $\widetilde{\psi}$ GHS07 Acute Tox. 4 H312 Harmful in contact with skin. Acute Tox. 4 H312 Harmful if inhaled. H227 Combustible liquid. H227 Combustible liquid. Label elements GHS08I dal alebeled according to the Globally Harmonized System (GHS).		
Trade name: EI-Remover Product number: 137-19-5 EC number: 204-826-4 Index number: 616-011-00-4 Application of the substance / the mixture To be used by technically quidified personnel for research and development use only. Defails of the supplier of the safety data sheet Manufacturer/Supplier: MicroChem Corp. 200 Flanders Road Westborough, MA 01581 USA Information department: Product Safety@ Email: productsafety@microchem.com Emergency telephone number: MicroChem Corp. Chemtre: Ust Emergency: 800-924-9300 Chemtre: Ust Benergency: 800-924-9300 Chemtre: Ust Benergency: 800-924-9300 Chemtre: Ust Benergency: 800-924-9300 </th <th>Identification of the substance/mixture and of the comp</th> <th>any</th>	Identification of the substance/mixture and of the comp	any
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Manufacturer/Supplier: MicroChem Corp. 200 Flanders Road Westborough, MA 01581 USA Information department: Product Safety Binal: Product Safety Email: Product Safety MicroChem Corp : 617-965-5511 Chemtrec USA Emergency : MicroChem Corp : 617-965-5511 Chemtrec USA Emergency : 703-527-3887 Hazard(s) identification Classification of the substance or mixture $\widehat{\mathcarrellow}$ GHS08 Health hazard Repr. 18 H360 May damage fertility or the unborn child. $\widehat{\mathcarrellow}$ $\widehat{\mathcarrellow}$ GHS07 Acute Tox. 4 H312 Harmful in contact with skin. Acute Tox. 4 H332 Harmful if inhaled. H227 Combustible liquid. Label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms $\widehat{\mathcarrellow}$ GHS07 GHS07 GHS08 Signal word Danger	EC number: 204-826-4 Index number: 616-011-00-4 Application of the substance / the mixture	opment use only.
$Product Safety$ $Email:: product Safety @microchem.com$ $Emergency: telephone number:$ $MicroChem Corp : 617-965-5511$ $Chemtrec: USA Emergency : 800-424-9300$ $Chemtrec: International Emergency : 703-527-3887$ $Hazard(s)$ identification $Classification of the substance or mixture$ \widetilde{vor} $GHS08$ Health hazard $Repr. 1B$ H360 May damage fertility or the unborn child. \widetilde{vor} $GHS07$ Acute Tox. 4 H312 Harmful in contact with skin. Acute Tox. 4 H332 Harmful if inhaled. $H227$ Combustible liquid. Label elements GHS08 Isolal labeled according to the Globally Harmonized System (GHS). Hazard pictograms \widetilde{vor} $\widetilde{oHS07}$ GHS07 Acute tox. 4 H332 Harmful if inhaled. $H227$ Combustible liquid. Label elements GHS07 GHS08 GHS07 GHS08 Signal word Danger	200 Flanders Road	
Classification of the substance or mixture GHS08 Health hazard Repr. 1B H360 May damage fertility or the unborn child.	Email: productsafety@microchem.com Emergency telephone number: MicroChem Corp : 617-965-5511 Chemtrec USA Emergency : 800-424-9300	
$\widehat{\operatorname{Cute}} \operatorname{Fox} 4 H312 \ Harmful \ in \ contact \ with \ skin.$ Acute Tox. 4 H332 \ Harmful \ if \ inhaled. H227 \ Combustible \ liquid. Label elements GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms $\widehat{\operatorname{CHS}} \operatorname{CHS} $	2 Hazard(s) identification	
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	(Contd. of page 1)
· Hazard-determ	ining components of labeling:
N,N-dimethylac	
· Hazard stateme	nts
H227 Ca	ombustible liquid.
Н312+Н332 На	armful in contact with skin or if inhaled.
H360 Ma	ay damage fertility or the unborn child.
• Precautionary s	statements
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305+P351+P351+P351	338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if
D204 D240	present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for
D270 D270	breathing.
P370+P378	In case of fire: Use for extinction: Alcohol resistant foam.
P370+P378	In case of fire: Use for extinction: Fire-extinguishing powder.
P370+P378 P302+P352	In case of fire: Use for extinction: Carbon dioxide. IF ON SKIN: Wash with plenty of soap and water.
P302+P332 P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international
1 501	regulations.
· Classification s	
· NFPA ratings (
 HMIS-ratings (HEALTH 2 FIRE 2 REACTIVITY 0 Other hazards 	Health = *2 Fire = 2 Reactivity = 0 and vPvB assessment cable.
	/information on ingredients
· CAS No. Descri	
	imethylacetamide
· Identification n	umber(s)
• EC number: 20	4-826-4
· Index number:	616-011-00-4
·SVHC	
127-19-5 N N-0	limethylacetamide

127-19-5 N,N-dimethylacetamide

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4 First-aid measures

- · Description of first aid measures
- General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Immediately remove any clothing soiled by the product.

• After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:

Wash eyes immediately with a large amount of water or normal saline, occassionally lifting upper and lower eye lids until no evidence of chemical remains (at least 20 minutes). Remove contact lenses if present and easy to remove. Seek immediate medical attention.

· After swallowing:

Do not induce vomiting unless instructed to do so by a physician. Wash out mouth with water and keep person at rest. Seek immediate medical attention.

· 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 Treat symptomatically.

5 Fire-fighting measures

· Extinguishing media

- Suitable extinguishing agents: Alcohol resistant foam Fire-extinguishing powder Carbon dioxide
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture

Containers may explode due to pressure increase when container is exposed to extreme heat. Vapors may travel a considerable distance to a source of ignition and flash back along vapor trail.

- Advice for firefighters
- · Protective equipment: Wear SCBA.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
 Wear protective equipment. Keep unprotected persons away.
 Ensure adequate ventilation
 Keep away from ignition sources
 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 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.

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See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling Ensure good ventilation/exhaust at the workplace.
- · Information about protection against explosions and fires:
- Protect from heat. 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 containers: Store in a cool location.
- · Information about storage in one common storage facility:
- Store away from oxidizing agents. Do not store together with alkalis (caustic solutions).
- Further information about storage conditions:
- Keep container well-sealed in cool, dry location.
- Protect from heat and direct sunlight.
- Store receptacle in a well ventilated area.
- 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:

127-19-5 N,N-dimethylacetamide

- PEL Long-term value: 35 mg/m³, 10 ppm Skin
- REL Long-term value: 35 mg/m³, 10 ppm Skin
- TLV Long-term value: 36 mg/m³, 10 ppm Skin; BEI

· Ingredients with biological limit values:

127-19-5 N,N-dimethylacetamide

BEI 30 mg/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: N-Methylacetamide

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

· Exposure controls

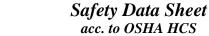
· Personal protective equipment:

General protective and hygienic measures: Keep away from food and beverages. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.

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• **Respiratory equipment:** In case of low exposure, use cartridge respirator. In case of intensive or longer exposure, use SCBA.

· Protection of hands:



Protective gloves

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

Nitrile rubber, NBR

• *Penetration time of glove material Contact glove manufacture for break-through time.* • *Eye protection:*



Tightly sealed goggles

9 Physical and chemical properties

General Information		
Appearance:		
Form:	Fluid	
Color:	Colorless	
Odor:	Ammonia-like	
Odour threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	-20 °C (-4 °F)	
Boiling point/Boiling range:	165 °C (329 °F)	
Flash point:	66 °C (151 °F)	
Flammability (solid, gaseous):	Not applicable.	
Ignition temperature:	390 °C (734 °F)	
Decomposition temperature:	Not determined.	
Auto igniting:	Not determined.	
Danger of explosion:	Not determined.	
Explosion limits:		
Lower:	1.7 Vol %	
Upper:	11.5 Vol %	
Vapor pressure at 20 °C (68 °F):	3.3 hPa (2 mm Hg)	
<i>Density at 20 °C (68 °F):</i>	0.9434 g/cm ³ (7.873 lbs/gal)	
Relative density	Not determined.	
Vapour density	Not determined.	



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· Evaporation rate	1.6-2.3 (BuAc=1)	
· Solubility in / Miscibility with		
Water:	Fully miscible.	
· Partition coefficient (n-octand	ol/water): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Organic solvents:	0.0 %	
· Other information	No further relevant information available.	

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10 Stability and reactivity

- · Reactivity
- · Chemical stability Stable under normal use conditions
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid Contact with incompatible materials.
- Incompatible materials: Strong oxidizing agents Strong bases
- Hazardous decomposition products: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Ammonia

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · LD/LC50 values that are relevant for classification:

127-19-5 N,N-dimethylacetamide

Oral LD50 4930 mg/kg (Rat)

Dermal LD50 2240 mg/kg (rabbit)

- · Primary irritant effect:
- · on the skin: May cause skin irritation
- on the eye: Irritating effect.
- Sensitization: Sensitization possible through skin contact.
- · Additional toxicological information:
- · Carcinogenic categories

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not 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:

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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- · 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 as regular garbage/trash. Do not allow product to reach sewage system. Disposal must be made in accordance with Federal, State, and Local regulations.

· Uncleaned packagings:

• Recommendation: Disposal must be made in accordance with Federal, State, and Local regulations.

4 Transport information	
· UN-Number · DOT, ADR, IMDG, IATA	UN1993
· UN proper shipping name · DOT, ADR · IMDG, IATA	Flammable liquids, n.o.s. (N,N-dimethylacetamide) FLAMMABLE LIQUID, N.O.S. (N,N-dimethylacetamide)
· Transport hazard class(es)	
· DOT, ADR, IMDG, IATA · Class	3 Flammable liquids.
· Packing group · ADR	III
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
• Transport in bulk according to Annex . MARPOL73/78 and the IBC Code	II of Not applicable.
· UN ''Model Regulation'':	UN1993, Flammable liquids, n.o.s. (N,N-dimethylacetamide), 3, II.

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15 Regulatory information

 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara

• Section 355 (extremely hazardous substances):

Substance is not listed.

• Section 313 (Specific toxic chemical listings):

Substance is not listed.

• TSCA (Toxic Substances Control Act): All ingredients are listed or comply with TSCA regulations. • Proposition 65

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

127-19-5 N,N-dimethylacetamide

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

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

· Massachusetts State Right To Know List

127-19-5 N,N-dimethylacetamide

· New Jersey State Right To Know List

127-19-5 N,N-dimethylacetamide

· Pennsylvania Hazardous Substances List

127-19-5 N,N-dimethylacetamide

· California SCAQMD Rule 443.1 VOC's: No information available.

· GHS label elements

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

· Hazard pictograms



· Signal word Danger

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Н360 Ма	ay damage fertility or the unborn child.
· Precautionary s	tatements
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P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305+P351+P.	338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if
	present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for
	breathing.
P370+P378	In case of fire: Use for extinction: Alcohol resistant foam.
P370+P378	In case of fire: Use for extinction: Fire-extinguishing powder.
P370+P378	In case of fire: Use for extinction: Carbon dioxide.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
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.

· 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 MSDS: Product safety department
- · Contact: Mr. Cole

· Revision History: New SDS

- · Date of preparation / last revision 12/23/2015 / -
- Abbreviations and acronyms:

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
- 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

-USA ·