

Material Safety Data Sheet

MSE-GF

Drawing up 24 - 04 - 2007

Revision 22 - 03 - 2011

1. Product and company identification

Product name : AQUASOLVENT GF
 General use : Metal parts washing agent
 Manufacturer's name : AQUA CHEMICAL Co.,LTD
 Address : 3-7-24 Technostage Izumi-city Osaka Japan
 Department : Laboratory (composer) Akihito Ishido
 TEL No. : 0725-53-5510(Japan)
 FAX No. : 0725-53-5520(Japan)
 Emergency point of contact : Chemical products division TEL No. 0725-53-5510

2. Composition/Information on ingrediedients

Type of chemical product : Single
 Preparation type : Petroleum product.
 Main component

CAS No.	%	Chemical name	EINECS No.
68551-17-7	100	Alkanes, C10-13-iso-	271-366-9

3. Hazards identification

Emergency overview

- Clear liquid with petroleum odor.
- Flammable liquid classified into "Class 3.3" by IMO.
Keep away from open flame and ignition sources(Flash point 48 degree C)
- Vaporizes at normal ambient tempertures.Keep component tightly closed.
- Prolonged or frequent contact to skin may cause skin irritation.
Use of safty glasses and oil imprevous is recommended to avoid direct contact.

Human health hazard

Inhalation : The inhalation of vapors or oil mist may cause irritation to nose,throast, and respiratory tract.High vapor concentrations may result in Central Nervous System(CNS) depression.

Ingestion : May result in vomiting. Do not induce vomiting. Aspiration of vomittus into the lungs even in small quantities may result in aspiration pneumonitis.

Eye contact : Direct contact may cause irritation.

Skin contact : Liquid is slightly irritating to the skin. Prolonged and repeated contact may cause irritation or skin disorders such as dermatitis or oil acne.

Signs and symptoms : Irritation is as noted above. Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness and nausea. Inextreme cases, unconsciousness and death may occur. Aspiration pneumonitis may be evidenced by coughing, labored breathing and cyanosis. In severe cases death may occur.

Carcinogenicity : NTP : Not listed.
 : IARC : Not listed.
 : OSHA : Not regulated.(Regrding ingredients)

4. First-aid measures

Eye contact	: In a case of contact with eyes, flush immediately with plenty of cool water for at least 15 minutes while holding eyelids open. Do not permit victim to rub eyes. Get medical attention.
Skin contact	: Remove contaminated clothing/shoes. Wash thoroughly with soap and water. If irritation persists, contact physician.
Ingestion	: May result in vomiting. Do not induce vomiting. Aspiration of vomitus into the lungs must be avoided as even small quantities may result in aspiration pneumonia. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs. Get medical attention.
Inhalation	: Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention. Give artificial respiration if not breathing.

5. Fire-fighting measures

Extinguishing media	: Use water fog, foam, dry chemical or CO ₂ . Do not use a direct stream of water.
Special fire fighting procedures and precautions	: Use water to keep fire-exposed containers cool and to protect personnel. Avoid spraying water directly into storage containers due to danger of boil over. Do not enter confined space without full bunker gear (Helmet with face shield, Bunker coats, Gloves and Rubber Boots). Material can accumulate static charges, which can cause an incendiary electrical discharge.
Unusual fire and Explosion hazards	: Vapor accumulation could flash and/or explode if ignited. Containers exposed to intense heat from fires should be cooled with water to prevent pressure buildup. Containers exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

6. Accidental release measures

Personal precautions	: Avoid direct contact with skin and eyes. Do not breathe vapor. Extinguish naked flames. Remove ignition sources. No smoking. Avoid sparks. Evacuate the area of non-essential personnel. Shut off leaks, if possible without personal risk.
Personal protection	: Wear protective gloves, goggles. For guidance on respiratory protection see section 8.
Environmental precautions	: Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill release response plan should be developed and implemented.
spill or leak procedures	: Combustible. Eliminate potential sources of ignition.
For small spills	: Take up with an absorbent material and place in non-leaking container for proper disposal.
For large spills	: Wear appropriate respirator and other protective clothing. Prevent additional discharge of material, only if safe to do so. Dike and contain. Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent. Prevent liquid from entering sewers, watercourses, or low areas. Soak up residue with an absorbent such as clay, sand or other suitable material. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
Water spill	: Eliminate sources of ignition. Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear. Remove from surface by skimming or with suitable absorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

7. Handling and storage

Electrostatic accumulation hazard	: Material can accumulate static charges, which can cause an incendiary electrical discharge. Use proper grounding procedure.
Conditions and materials to avoid	: Avoid heat, flame and contact with strong oxidizing agent
Storage temperature	: Ambient
Loading or unloading temperature	: Atmospheric
Storage and handling	<p>Keep container closed and store in a cool, well-ventilated place.</p> <p>Do not handle or store near an open flame, heat or other sources of ignition.</p> <p>Do not expose children and the pets to this material. Even emptied, containers can contain explosive vapors. Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers without commercial cleaning or reconditioning.</p>

8. Exposure prevention / Personal protection

Control measures	: Handle in the well-ventilated place or in the presence of adequate ventilation. The use of mechanical dilution ventilation is recommended to control vapor concentration below exposure limits (See section 4), whenever this product is used in a confined space or is agitated.
Respiratory protection	: Avoid prolonged or repeated breathing of vapors and oil mist. If exposure may or does exceed occupational exposure limits (See section 4), use a respiratory protection equipment to prevent overexposure.
Protective clothing	: Avoid prolonged or repeated contact with skin. Wear oil impervious gloves and protective clothing as required to minimize contact.
Eye protection	: Avoid contact with eyes. Wear safety glasses or goggles as appropriate.
Additional information	: Generally, The best material for protective gloves and clothing is provided by nitrile material. Use explosion-proof ventilation as required to control vapor concentration.
PEL (OSHA Permissible exposure limit)	: No established.
TLV (ACGIH Threshold limit value)	: No established.

9. Physical and chemical properties

Appearance and odor	: Colorless transparent liquid.
Specific gravity (15 degree C)	: 0.75
Flash point (TAG closed cup)	: 48 degree C
Flammable limits in air (vol%)	: 0.9–5.8%
Boiling point (degree C)	: 176~180 degree C
Ignition point (degree C)	: 368 degree C
Melting point / Pour point (degree C)	: Not determined.
Vapor pressure (Kpa)	: Not determined.
Vapor density (air=1)	: 5.6g/L
Solubility in water	: Insoluble or negligible.
Kinematic viscosity (cst)	: Not determined.

10. Stability and reactivity

Stability	: At normal ambient temperatures, this product is virtually stable.
Hazardous polymerization	: Will not occur.
Conditions and material to avoid	: Avoid heat, flame and contact with strong oxidizing agents.
Hazardous decomposition products	: Carbon monoxide and unidentified organic compounds may be formed upon combustion.

11. Toxicological information

Basis for assessment	: No data.
Acute toxicity – oral	: Oral (rat) LD ₅₀ 5000mg/kg
Acute toxicity – dermal	: No data.
Acute toxicity – inhalation	: No data.
Eye irritation	: Direct contact may cause irritation.
Skin irritation	: Liquid is slightly irritation to the skin. Prolonged and repeated contact may cause irritation or skin disorders such as dermatitis or oil acne.
Skin sensitization	: Expected to be a low skin sensitizer.
Mutagenicity	: Not expected to be mutagenic.
Carcinogenicity	NTP : Not listed.
	IARC : Not listed.
	OSHA : Not regulated.(Regrding ingredients)
Human effects	: See section 3.

12. Ecological information

Basis for assessment	: No data.
Environmental precautions	: Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill release response plan should be developed and implemented.
Environmental mobility	: This chemical product contains volatile matter and will evaporate to the air if released into the environment. This chemical product flows freely as oil.
Environmental fate and effects	: No data.
Bioaccumulation	: No data.

13. Disposal consideration

Precautions	: Refer to section 7 before handling the product or containers.
Disposal consideration or waste disposal	: Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Incineration should be made in accordance with local or national regulations.
Container disposal	: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.
Local legislation	: The recommendations given hereinabove are considered appropriate for safe disposal. However, local regulations may be more stringent and these must be complied with.

14. Transport information

Transportation requirements

Land

Hazard class	: Class 3.3
UN number	: 1993
Packing group	: PG III
Label	: Flammable Liquid

Sea (IMO)

Hazard class	: Class 3.3
UN number	: 1993
Packing group	: PG III
Label	: Flammable Liquid

Air (ICAO/IATA)

Hazard class	: Class 3.3
UN number	: 1993
Packing group	: PG III
Label	: Flammable Liquid

15. Regulatory information

Explosives Control Law	: not applicable
high-pressure gas safety laws	: not applicable
Fire Defense Law	: not applicable
Poison Law and the Waste Disposal Law	: not applicable
Industrial Safety and Health Law (Japan)	
dangerous article	: not applicable
Ordinance on Prevention of Hazards due to Specified Chemical Substances	: not applicable
Ordinance on the Prevention of Organic Solvent Poisoning	: not applicable
chemical review regulation law	: not applicable
Law for Safety of Vessels	: not applicable
Aviation Law	: not applicable
Marine Pollution Prevention Law	: bulk carrier severally carrier ; not applicable
PRTR Law (Japan)	: not applicable

16. Other information

This information relates onry to the specific material designated and may not be valid for such marerial used in combination with any other materials or in any process. Such information is to the best of AQUA-Chemical company's knowledge and believed accurate and reliable as of the date indicated.

However, No representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.