

COMPANY IDENTITY: Noble Company
 PRODUCT IDENTITY: FIREFIGHTER GL38

SDS DATE: 01/21/2015
 ORIGINAL: 01/21/2015

SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements of the Global Harmonizing System.
 THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
 IMPORTANT: Read this SDS before handling & disposing of this product.
 Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: FIREFIGHTER GL38
 PRODUCT USES: Chemical Processing

COMPANY IDENTITY: Noble Company
 COMPANY ADDRESS: 7300 Enterprise Dr.
 COMPANY CITY: Spring Lake, MI 49456
 COMPANY PHONE: 1-231-799-8000
 EMERGENCY PHONE: 1-231-799-8000

SECTION 2. HAZARDS IDENTIFICATION

CAUTION

2.1 HAZARD STATEMENTS: (CAT = Hazard Category)

This product does not meet the Global Harmonizing System criteria for classification.
 Hazard(s) not otherwise classified: Not Classified.
 GHS PICTOGRAMS: Not Applicable
 GHS SIGNAL WORD: Not Applicable
 GHS HAZARD STATEMENTS: Not Applicable
 GHS PRECAUTIONARY STATEMENTS: Not Applicable

2.2 PRECAUTIONARY STATEMENTS:

PREVENTION: Observe good industrial hygiene practices. Isolate from extreme heat & flame.
 RESPONSE: Wash hands after handling.
 STORAGE: Store away from incompatible materials.
 DISPOSAL: Dispose of waste and residues in accordance with local authority requirements.

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| MATERIAL | CAS# | EINECS# | WT % |
|----------|--------------|-----------|-------|
| Water | 7732-18-5 | 231-791-2 | 61-63 |
| Glycerol | 56-81-5 | - | 36-38 |
| Dye | Confidential | - | 0- 1 |

The specific chemical component identities and/or the exact component percentages of this material may be withheld as a trade secret. This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1).

TRACE COMPONENTS: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

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SECTION 4. FIRST AID MEASURES

- 4.1 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE & CHRONIC:
See Section 11 for Symptoms/Effects (acute & chronic).
- 4.2 EYE CONTACT:
For eyes, flush with plenty of water for 15 minutes & get medical attention.
- 4.3 SKIN CONTACT:
In case of contact with skin immediately remove contaminated clothing.
Wash thoroughly with soap & water. Wash contaminated clothing before reuse.
- 4.4 INHALATION:
After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR).
- 4.5 SWALLOWING:
Rinse mouth. GET MEDICAL ATTENTION IMMEDIATELY. Do NOT give liquids to an unconscious or convulsing person.

SECTION 5. FIRE FIGHTING MEASURES

- 5.1 FIRE & EXPLOSION PREVENTIVE MEASURES:
NO open flames.
- 5.2 SUITABLE (& UNSUITABLE) EXTINGUISHING MEDIA:
Use dry powder, alcohol-resistant foam, water spray, carbon dioxide.
- 5.3 SPECIAL PROTECTIVE EQUIPMENT & PRECAUTIONS FOR FIRE FIGHTERS:
Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used.
Do not enter confined fire-space without full bunker gear.
(Helmet with face shield, bunker coats, gloves & rubber boots).
- 5.4 SPECIFIC HAZARDS OF CHEMICAL & HAZARDOUS COMBUSTION PRODUCTS:
SLIGHTLY COMBUSTIBLE!
Isolate from oxidizers, heat, & open flame.
Closed containers may explode if exposed to extreme heat.
Applying to hot surfaces requires special precautions.
Continue all label precautions!

SECTION 6. ACCIDENTAL RELEASE MEASURES

- 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT & EMERGENCY PROCEDURES:
Keep unprotected personnel away.
Wear appropriate personal protective equipment given in Section 8.
- 6.2 ENVIRONMENTAL PRECAUTIONS:
Keep from entering storm sewers and ditches which lead to waterways.
- 6.3 METHODS & MATERIAL FOR CONTAINMENT & CLEAN-UP:
Stop spill at source. Dike and contain. Collect leaking liquid in sealable containers.
Absorb remaining liquid in sand or inert absorbent. Remove to safe place.

SECTION 7. HANDLING AND STORAGE

- 7.1 PRECAUTIONS FOR SAFE HANDLING:
Isolate from oxidizers, heat, & open flame. Use only with adequate ventilation.
Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.
Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, braze, or weld. Continue all label precautions!
- 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:
Keep separated from strong oxidants. Do not store above 49 C/120 F.
Keep container tightly closed & upright when not in use to prevent leakage.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 EXPOSURE LIMITS:

| MATERIAL | CAS# | EINECS# | TWA (OSHA) | TLV (ACGIH) |
|----------|--------------|-----------|------------|-------------|
| Water | 7732-18-5 | 231-791-2 | None Known | None Known |
| Glycerol | 56-81-5 | - | None Known | None Known |
| Dye | Confidential | - | None Known | None Known |

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

8.2 APPROPRIATE ENGINEERING CONTROLS:

RESPIRATORY EXPOSURE CONTROLS

A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z86.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

VENTILATION

LOCAL EXHAUST: Necessary MECHANICAL (GENERAL): Acceptable
 SPECIAL: None OTHER: None
 Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

PERSONAL PROTECTIONS:

Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.

WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers.
 Wash at end of each workshift & before eating, smoking or using the toilet.
 Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: Liquid, Orange
 ODOR: Characteristic
 ODOR THRESHOLD: Not Available
 pH (Neutrality): Not Available
 MELTING POINT/FREEZING POINT: +18 C / +64 F (solidifies at much lower temp)
 BOILING RANGE (IBP,50%,Dry Point): 100 100 290* C / 212 212 554* F (*=End Point)
 FLASH POINT (TEST METHOD): 177 C / 352 F (COC)
 EVAPORATION RATE (n-Butyl Acetate=1): Not Applicable
 FLAMMABILITY CLASSIFICATION: Class III-B
 LOWER FLAMMABLE LIMIT IN AIR (% by vol): 10.0 (Lowest Component)
 UPPER FLAMMABLE LIMIT IN AIR (% by vol): Not Available
 VAPOR PRESSURE (mm of Hg)@20 C: 17.5
 VAPOR DENSITY (air=1): 0.670
 GRAVITY @ 68/68 F / 20/20 C:
 DENSITY: 1.102
 SPECIFIC GRAVITY (Water=1): 1.105
 POUNDS/GALLON: 9.205
 WATER SOLUBILITY: Appreciable
 PARTITION COEFFICIENT (n-Octane/Water): -2.6 (calculated)
 AUTO IGNITION TEMPERATURE: Not Applicable
 DECOMPOSITION TEMPERATURE: Not Available
 TOTAL VOC'S (TVOC)*: 0.0 Vol% / 0.0 g/L / 0.000 Lbs/Gal
 NONEXEMPT VOC'S (CVOC)*: 0.0 Vol% / 0.0 g/L / 0.000 Lbs/Gal
 HAZARDOUS AIR POLLUTANTS (HAPS): 0.0 Wt% / 0.0 g/L / 0.000 Lbs/Gal
 NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C) 0.0
 VISCOSITY @ 20 C (ASTM D445): 4.4 mPa.s
 * Using CARB (California Air Resources Board Rules).

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SECTION 10. STABILITY & REACTIVITY

10.1 REACTIVITY & CHEMICAL STABILITY:

Stable under normal conditions, no hazardous reactions when kept from incompatibles.

10.2 POSSIBILITY OF HAZARDOUS REACTIONS & CONDITIONS TO AVOID:

Isolate from oxidizers, heat, & open flame.

10.3 INCOMPATIBLE MATERIALS:

The substance decomposes on extreme heating producing fumes of acrolein.
The substance can readily react with strong oxidants, causing fire & explosion hazard.

10.4 HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Oxides, acrolein from burning.

10.5 HAZARDOUS POLYMERIZATION:

Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 ACUTE HAZARDS

11.11 EYE & SKIN CONTACT:

Not irritating to skin. May be irritating to eyes. Wash thoroughly after handling.

11.12 INHALATION:

Not likely to cause irritation at ambient temperatures. Mist can cause irritation.

11.13 SWALLOWING:

Unlikely to be harmful unless excessive amount is swallowed.

11.2 SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing disorders of any target organs mentioned in this Document can be aggravated by over-exposure by routes of entry to components of this product. Persons with these disorders should avoid use of this product.

11.3 CHRONIC HAZARDS

11.31 CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.

11.32 TARGET ORGANS: May cause damage to target organs, based on animal data.

11.33 IRRITANCY: Irritating to contaminated tissue.

11.34 SENSITIZATION: No component is known as a sensitizer.

11.35 MUTAGENICITY: No known reports of mutagenic effects in humans.

11.36 EMBRYOTOXICITY: No known reports of embryotoxic effects in humans.

11.37 TERATOGENICITY: No known reports of teratogenic effects in humans.

11.38 REPRODUCTIVE TOXICITY: No known reports of reproductive effects in humans.

A MUTAGEN is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate across generational lines. An EMBRYOTOXIN is a chemical which causes damage to a developing embryo (such as: within the first 8 weeks of pregnancy in humans), but the damage does not propagate across generational lines. A TERATOGEN is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A REPRODUCTIVE TOXIN is any substance which interferes in any way with the reproductive process.

11.4 MAMMALIAN TOXICITY INFORMATION

LD50 (Oral): > 2000 mg/kg (Rat)

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SECTION 12. ECOLOGICAL INFORMATION

12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:

LC50 / 96 hours: >5000 mg/L (Fish)
 EC50 / 24 hours: >10000 mg/L (Daphnia magna)
 EC50 / 16 hours: >10000 mg/L (Pseudomonas putida)

12.4 MOBILITY IN SOIL

Mobility of this material has not been determined.

12.5 DEGRADABILITY

This product is completely biodegradable.
 BOD5/COD: 0.87/1.16 (gO₂/g)

12.6 ACCUMULATION

Bioaccumulation of this product has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste disposal requirements. Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal. **ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES.**

SECTION 14. TRANSPORT INFORMATION

MARINE POLLUTANT: No
 DOT/TDG SHIP NAME: Not Regulated
 DRUM LABEL: None
 IATA / ICAO: Not Regulated
 IMO / IMDG: Not Regulated
 EMERGENCY RESPONSE GUIDEBOOK NUMBER: None

SECTION 15. REGULATORY INFORMATION

15.1 EPA REGULATION:

SARA SECTION 311/312 HAZARDS: None Known

All components of this product are on the TSCA list.
 This material contains no known products restricted under SARA Title III, Section 313 in amounts greater or equal to 1%.

15.2 STATE REGULATIONS:

THIS PRODUCT MEETS REQUIREMENTS OF SOUTHERN CALIFORNIA AQMD RULE 443.1 & SIMILAR REGULATIONS

CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):
 This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.

15.3 INTERNATIONAL REGULATIONS

The identified components of this product are listed on the chemical inventories of the following countries:
 Australia (AICS), Canada (DSL or NDSL), China (IECSC), Europe (EINECS, ELINCS), Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC), Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

15.4 CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

D2B: Irritating to skin / eyes.

This product was classified using the hazard criteria of the Controlled Products Regulations (CPR). This Document contains all information required by the CPR.

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SECTION 16. OTHER INFORMATION

16.1 HAZARD RATINGS:

HEALTH (NFPA): 1, HEALTH (HMIS): 1, FLAMMABILITY: 1, PHYSICAL HAZARD: 0
(Personal Protection Rating to be supplied by user based on use conditions.)
This information is intended solely for the use of individuals
trained in the NFPA & HMIS hazard rating systems.

16.2 EMPLOYEE TRAINING

See Section 2 for Risk & Safety Statements. Employees should be made aware
of all hazards of this material (as stated in this SDS) before handling it.

16.3 SDS DATE: 01/21/2015

NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness
for a specific use, with respect to the product or the information provided herein,
except for conformation to contracted specifications. All information appearing herein
is based upon data obtained from manufacturers and/or recognized technical sources.
While the information is believed to be accurate, we make no representations as to its
accuracy or sufficiency.

Conditions of use are beyond our control, and therefore users are responsible for
verifying the data under their own operating conditions to determine whether the product
is suitable for their particular purposes and they assume all risks of their handling,
and disposal of the product. Users also assume all risks in regards to the publication
or use of, or reliance upon information contained herein.
This information relates only to the product designated herein, and does not relate to
its use in combination with any other material or process.

Unless updated, the Safety Data Sheet is valid until 01/21/2018.
Safety Data Sheet was prepared by: Chemical Data Services, e-mail: chemdatsrv@aol.com.