# IRMCO FLUIDS ® 313-F60

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
SDS Reference Number: 888
Issue date: 6/1/2015 Revision date: 4/1/2025 Supersedes: 3/7/2024 Version: 3.0

## SECTION 1 Identification

### 1.1. Product identifier

Product form : Mixture
Product name : IRMCO FLUIDS ® 313-F60
Product code : 313-F60

### 1.2. Other means of identification

No additional information available

### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Industrial use

### 1.4. Supplier's details

FUCHS LUBRICANTS CO.
17050 Lathrop Avenue
Harvey, IL 60426
USA
T 708-333-8900 - F 708-333-9180
sds@fuchs.com - www.fuchs.com/us
Contact: EHS Department

### 1.5. Emergency phone number

Emergency number : 708-333-8900 (Bus. hrs) | 800-255-3924 (24 hrs)

## SECTION 2 Hazard Identification

### 2.1. Classification of the substance or mixture

#### GHS US classification

| | | |
|---|---|---|
| Skin corrosion/irritation, Category 2 | H315 | Causes skin irritation. |
| Serious eye damage/eye irritation, Category 2B | H320 | Causes eye irritation. |

Full text of H statements : see section 16

### 2.2. Label elements

#### GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Warning
Hazard statements (GHS US) : H315 - Causes skin irritation
H320 - Causes eye irritation
Precautionary statements (GHS US) : P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves.
P302+P352 - If on skin: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 - If skin irritation occurs: Get medical advice.

P337+P313 - If eye irritation persists: Get medical advice.
P362+P364 - Take off contaminated clothing and wash it before reuse.

### 2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

### 2.4. Hazards not otherwise classified

No additional information available

### 2.5. Unknown acute toxicity

No additional information available

## SECTION 3 Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name | Product identifier | % |
|---|---|---|
| Triethanolamine | CAS-No.: 102-71-6 | 1-5 |

Full text of hazard classes and H-statements : see section 16

## SECTION 4 First aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow affected person to breathe fresh air. Allow the victim to rest. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

### 4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : May cause respiratory irritation. May cause damaging effects to central nervous system, metabolism and gastrointestinal tract.

Symptoms/effects after skin contact : May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : Causes eye irritation.

Symptoms/effects after ingestion : Irritation of the gastric/intestinal mucosa. On ingestion, may affect the liver and kidneys.

### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

| | | |
|---|---|---|
| Suitable extinguishing media | : | Foam. Dry powder. Carbon dioxide. Water spray. Sand. |
| Unsuitable extinguishing media | : | Do not use a heavy water stream. |

### 5.2. Specific hazards arising from the chemical

No additional information available

### 5.3. Special protective equipment and precautions for fire-fighters

| | | |
|---|---|---|
| Firefighting instructions | : | Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. |
| Protection during firefighting | : | Do not enter fire area without proper protective equipment, including respiratory protection. |
| Other information | : | Intense heat may cause container to burst. |

## SECTION 6 Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

| | | |
|---|---|---|
| Emergency procedures | : | Evacuate unnecessary personnel. |

#### For emergency responders

| | | |
|---|---|---|
| Protective equipment | : | Equip cleanup crew with proper protection. |
| Emergency procedures | : | Ventilate area. |
| Environmental precautions | : | Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. |

### 6.2. Methods and materials for containment and cleaning up

| | | |
|---|---|---|
| Methods for cleaning up | : | Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. |

See Heading 8,Exposure controls and personal protection

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

| | | |
|---|---|---|
| Precautions for safe handling | : | Handle in accordance with good industrial hygiene and safety procedures. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. Avoid contact with skin and eyes. Prolonged or repeated contact with the skin may cause dermatitis. Ensure adequate ventilation. Avoid breathing mist, spray. |
| Hygiene measures | : | Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. |

### 7.2. Conditions for safe storage, including incompatibilities

| | | |
|---|---|---|
| Storage conditions | : | Do not freeze. The liquid may freeze if stored outside. Keep container closed when not in use. Store in a well-ventilated place. Keep cool. |
| Incompatible products | : | Strong bases. Strong acids. Oxidizing agent. Do not add nitrites or other nitrosating agents. |

## SECTION 8 Exposure controls/personal protection

### 8.1. Control parameters

| IRMCO FLUIDS ® 313-F60 | |
|---|---|
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL TWA | 0.5 mg/m³ (total particulate mass) General Recommended Exposure Limit for Metalworking Fluids (NIOSH, 1998). |

| Triethanolamine (102-71-6) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Triethanolamine |
| ACGIH OEL TWA | 5 mg/m³ |
| Remark (ACGIH) | Eye & skin irr |
| Regulatory reference | ACGIH 2024 |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station to maintain airborne concentrations below exposure limits identified in Section 8.1. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

### 8.3. Individual protection measures, such as personal protective equipment

**Personal protective equipment:**
Avoid all unnecessary exposure. Gloves. Safety glasses.

| **Hand protection:** |
|---|
| Wear chemically resistant gloves |

| **Eye protection:** |
|---|
| Chemical goggles or safety glasses. Contact lenses should not be worn |

| **Skin and body protection:** |
|---|
| Wear suitable protective clothing |

| **Respiratory protection:** |
|---|
| In case of inadequate ventilation wear respiratory protection. |

**Personal protective equipment symbol(s):**

**Other information:**
Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke during use.

## SECTION 9 Physical and chemical properties

### 9.1. Basic physical and chemical properties

Physical state : Liquid
Appearance : clear.
Color : Colorless to Amber

| | | |
|---|---|---|
| Odor | : | characteristic |
| Odor threshold | : | No data available |
| pH | : | 8.14 |
| Melting point | : | No data available |
| Freezing point | : | ≈ 32 °F |
| Boiling point | : | ≈ 212 °F |
| Flash point | : | No data available |
| Flammability (solid, gas) | : | Non flammable. |
| Vapor pressure | : | No data available |
| Relative vapor density at 20°C | : | No data available |
| Relative density | : | ≈ 1.02 |
| Density | : | ≈ 8.53 lb/gal |
| Solubility | : | Soluble in water.<br>Water: 100 % |
| Partition coefficient n-octanol/water (Log Pow) | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity, kinematic | : | ≈ 5.4 mm²/s @ 40ºC |
| Explosion limits | : | No data available |
| Particle characteristics | : | No data available |

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

VOC content : Not Applicable

## SECTION 10 Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions. No polymerization.

### 10.3. Possibility of hazardous reactions

Do not add nitrites or other nitrosating agents. Addition of nitrites may lead to formation of nitrosamines, a substance known to be carcinogenic in laboratory animals.

### 10.4. Conditions to avoid

Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases. Oxidizing agent. Do not add nitrites or other nitrosating agents.

### 10.6. Hazardous decomposition products

Under fire conditions, fumes may contain the original material in addition to unidentified toxic and/or irritating compounds. Carbon monoxide. Carbon dioxide. Nitrogen oxides.

## SECTION 11 Toxicological information

Likely routes of exposure : Dermal. Inhalation.

### 11.1. Information on toxicological effects

| | | |
|---|---|---|
| Acute toxicity (oral) | : | Not classified |
| Acute toxicity (dermal) | : | Not classified |

Acute toxicity (inhalation) : Not classified

| Triethanolamine (102-71-6) | |
|---|---|
| LD50 oral rat | 6400 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 7 day(s)) |
| LD50 dermal rabbit | > 2000 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Experimental value, Dermal, 14 day(s)) |
| ATE US (oral) | 6400 mg/kg body weight |

Skin corrosion/irritation : Causes skin irritation.
pH: 8.14

| Triethanolamine (102-71-6) | |
|---|---|
| pH | 11 (25 %) |

Serious eye damage/irritation : Causes eye irritation.
pH: 8.14

| Triethanolamine (102-71-6) | |
|---|---|
| pH | 11 (25 %) |

Respiratory or skin sensitization : Not classified (The product may be a skin sensitizer. It may also be a skin irritant and repeated contact may increase this effect.)

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

| Triethanolamine (102-71-6) | |
|---|---|
| NOAEL (chronic,oral,animal/male,2 years) | 63 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies) |
| IARC group | 3 - Not classifiable |

Reproductive toxicity : Not classified

| Triethanolamine (102-71-6) | |
|---|---|
| NOAEL (animal/male, F0/P) | 1000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study), Guideline: other:, Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects) |
| NOAEL (animal/female, F0/P) | 300 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study), Guideline: other:, Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects) |

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

| Triethanolamine (102-71-6) | |
|---|---|
| NOAEL (oral,rat,90 days) | 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |

Aspiration hazard : Not classified

| IRMCO FLUIDS ® 313-F60 | |
|---|---|
| Viscosity, kinematic | ≈ 5.4 mm²/s @ 40ºC |

| Triethanolamine (102-71-6) | |
|---|---|
| Viscosity, kinematic | 830.2 mm²/s (20 °C, Equivalent or similar to OECD 114) |

| | | |
|---|---|---|
| Potential Adverse human health effects and symptoms | : | Based on available data, the classification criteria are not met. |
| Symptoms/effects | : | Not expected to present a significant hazard under anticipated conditions of normal use. |
| Symptoms/effects after inhalation | : | May cause respiratory irritation. May cause damaging effects to central nervous system, metabolism and gastrointestinal tract. |
| Symptoms/effects after skin contact | : | May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking. |
| Symptoms/effects after eye contact | : | Causes eye irritation. |
| Symptoms/effects after ingestion | : | Irritation of the gastric/intestinal mucosa. On ingestion, may affect the liver and kidneys. |

## SECTION 12 Ecological information

### 12.1. Ecotoxicity

| | | |
|---|---|---|
| Hazardous to the aquatic environment, short–term (acute) | : | Not classified |
| Hazardous to the aquatic environment, long–term (chronic) | : | Not classified |

| Triethanolamine (102-71-6) | |
|---|---|
| LC50 - Fish [1] | 11800 mg/l (APHA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Nominal concentration) |
| EC50 - Crustacea [1] | 609.88 mg/l (ASTM E1192, 48 h, Ceriodaphnia dubia, Static system, Fresh water, Experimental value, Lethal) |
| EC50 72h - Algae [1] | 512 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |
| EC50 72h - Algae [2] | 216 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |
| ErC50 algae | 216 mg/l (DIN 38412-9, 72 h, Scenedesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration) |
| NOEC chronic fish | > 1 mg/l Test organisms (species): other: |

### 12.2. Persistence and degradability

| IRMCO FLUIDS ® 313-F60 | |
|---|---|
| Persistence and degradability | Not established. |

| Triethanolamine (102-71-6) | |
|---|---|
| Persistence and degradability | Biodegradable in the soil, No inhibition of nitrification, Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.02 g $O_2$/g substance |
| Chemical oxygen demand (COD) | 1.5 g $O_2$/g substance |
| ThOD | 2.04 g $O_2$/g substance |

### 12.3. Bioaccumulative potential

| IRMCO FLUIDS ® 313-F60 | |
|---|---|
| Bioaccumulative potential | Not established. |

| Triethanolamine (102-71-6) | |
|---|---|
| BCF - Fish [1] | 0.4 – 3.9 l/kg (Equivalent or similar to OECD 305, 6 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value) |

| Triethanolamine (102-71-6) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | -1.9 (Weight of evidence approach, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

### 12.4. Mobility in soil

| Triethanolamine (102-71-6) | |
|---|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 1.06 – 1.27 (log Koc, SRC PCKOCWIN v1.66, Calculated value) |
| Ecology - soil | Highly mobile in soil. |

### 12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

Other information : Avoid release to the environment.

## SECTION 13 Disposal considerations

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not re-use empty containers without proper cleaning or reconditioning.
Additional information : Non hazardous waste per Resource Conservation and Recovery Act (RCRA).
Ecological waste information : Avoid release to the environment.

## SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

### 14.1. UN number

Not regulated for transport

### 14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Not regulated
Proper Shipping Name (TDG) : Not regulated
Proper Shipping Name (IMDG) : Not regulated
Proper Shipping Name (IATA) : Not regulated

### 14.3. Transport hazard class(es)

**DOT**
Transport hazard class(es) (DOT) : Not regulated

**TDG**
Transport hazard class(es) (TDG) : Not regulated

**IMDG**
Transport hazard class(es) (IMDG) : Not regulated

**IATA**
Transport hazard class(es) (IATA) : Not regulated

### 14.4. Packing group

| | | |
|---|---|---|
| Packing group (DOT) | : | Not regulated |
| Packing group (TDG) | : | Not regulated |
| Packing group (IMDG) | : | Not regulated |
| Packing group (IATA) | : | Not regulated |

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Transport in bulk

Not applicable

### 14.7. Special precautions for user

**DOT**
Not regulated

**TDG**
Not regulated

**IMDG**
Not regulated

**IATA**
Not regulated

## SECTION 15 Regulatory information

### 15.1. Federal regulations

| IRMCO FLUIDS ® 313-F60 | |
|---|---|
| Not subject to reporting requirements of the United States SARA Section 313 | |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard<br>Delayed (chronic) health hazard |

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

### 15.2. International regulations

**CANADA**

| Triethanolamine (102-71-6) |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

**EU-Regulations**

No additional information available

**National regulations**

| IRMCO FLUIDS ® 313-F60 |
|---|
| All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory<br>All the constituents of this preparation are registered in the EINECS inventory or in the ELINCS list |

| Triethanolamine (102-71-6) |
|---|
| Listed on INSQ (Mexican National Inventory of Chemical Substances) |

### 15.3. State regulations

| Component | State or local regulations |
|---|---|
| Triethanolamine(102-71-6) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |

## SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 4/1/2025

Issue date : 6/1/2015

Data sources : This material is classified as hazardous under OSHA regulations. This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

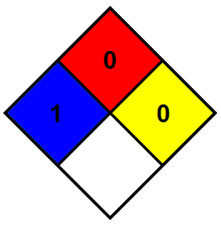
Other information : IRMCO products are mixtures protected as trade secrets according to 29 CFR 1910.1200(i). As per GHS regulation, ingredients that contribute to the classification and exceed cut-off values are listed in section 3. For more information contact IRMCO.

| Full text of hazard classes and H-statements | |
|---|---|
| H315 | Causes skin irritation |
| H320 | Causes eye irritation |

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.




Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : B - Safety glasses, Gloves

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.