



**SAFETY DATA SHEET**  
According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

**1. IDENTIFICATION**Product identifier

Product name FS-LUBRILAM S23 L

Other means of identification

Product Code(s) 37362

Trade name -  
Substance/mixture SubstanceRecommended use of the chemical and restrictions on use

Identified uses Manufacture of substances. Distribution of substance. Metalworking fluid. Laboratory activities.

Uses advised against Do not use for any purpose other than the one for which it is intended

Details of the supplier of the safety data sheetSupplier Address TOTAL Specialties USA Inc  
1201 Louisiana Street, Suite 1800  
Houston, TX 77002  
Phone: +1 800 323 3198

Contact Point Technical/ HSEQ

E-mail Address specialfluidsusa@total.com

Emergency telephone numberCompany Phone Number +1 (713) 483-5039  
Company Emergency Phone Number 1-866-GENERA-1 (1-866-436-3721)  
Emergency telephone CHEMTREC: +1 800 424 9300 (24h)**2. HAZARDS IDENTIFICATION**ClassificationFlammable liquids - Category 4  
Aspiration toxicity - Category 1Label elements

Version GNAM



SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

**DANGER****Hazard Statements**

Combustible liquid  
May be fatal if swallowed and enters airways

**Precautionary Statements - Prevention**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Wear protective gloves/protective clothing/eye protection/face protection

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Do NOT induce vomiting

**Fire**

In case of fire: Use CO2, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store locked up  
Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/ container to an approved waste disposal plant

**Unknown Acute Toxicity**

No information available

**Hazards not otherwise classified (HNOC)**

Repeated exposure may cause skin dryness or cracking

**Other information****Physical-Chemical Properties**

Vapors may form explosive mixtures with air.  
The material can accumulate static charge and can therefore cause electrical ignition.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Chemical nature**

A complex and variable combination of paraffinic and cyclic hydrocarbons having a carbon number range predominantly of C11 to C14 and boiling in the range of approximately 180°C to 270°C,  
, The aromatic content is < 2%.

Version GNAM



SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

Chemical Name	CAS-No	Weight %
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	^	100

Additional information

Related CAS: 64742-47-8

**4. FIRST AID MEASURES****First aid measures for different exposure routes**

<b>General advice</b>	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
<b>Skin contact</b>	Remove contaminated clothing and shoes. Wash off with soap and water.
<b>Inhalation</b>	In case of exposure to intense concentrations of vapours, fumes or spray, transport the person away from the contaminated zone, keep warm and allow to rest.
<b>Ingestion</b>	Do not ingest. If swallowed then seek immediate medical assistance. Risk of product entering the lungs on vomiting after ingestion. In this case, the casualty should be sent immediately to hospital.
<b>Protection of First-aiders</b>	Use personal protective equipment.

**Most important symptoms/effects, acute and delayed**

<b>Skin contact</b>	Prolonged or repeated contact may dry skin and cause irritation.
<b>Eye contact</b>	Burning feeling and temporary redness.
<b>Inhalation</b>	The inhalation of vapours or aerosols may be irritating for the respiratory tract and for mucous membranes. Vapors inhaled in strong concentration have a narcotic effect on the central nervous system, Nausea.
<b>Ingestion</b>	If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression.
<b>Symptoms</b>	Redness.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician** Treat symptomatically.

Version GNAM



SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

**5. FIRE-FIGHTING MEASURES**

<b><u>Suitable Extinguishing Media</u></b>	Foam. Dry powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Uniform Fire Code</b>	Combustible Liquid: III-A
<b><u>Unsuitable Extinguishing Media</u></b>	Do not use a solid water stream as it may scatter and spread fire.
<b><u>Special Hazard</u></b>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.
<b><u>Explosion Data</u></b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	May be ignited by friction, heat, sparks or flames.
<b><u>Protective Equipment and Precautions for Firefighters</u></b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

<b>General Information</b>	Use personal protective equipment. Evacuate non-essential personnel. Ensure adequate ventilation, especially in confined areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material.
<b>Other information</b>	Remove all sources of ignition.

**Environmental precautions**

<b>General Information</b>	Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills. The product should not be allowed to enter drains, water courses or the soil. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information.
----------------------------	--

**Methods and materials for containment and cleaning up**

<b>Methods for cleaning up</b>	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Following product recovery, flush area with water.
--------------------------------	---

**7. HANDLING AND STORAGE****Precautions for safe handling**

<b>Advice on safe handling</b>	For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.
--------------------------------	---

Version GNAM



SDS # : 37362

## FS-LUBRILAM S23 L

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

<b>Technical measures</b>	Ensure adequate ventilation. Do not spray at high pressure (> 3 bar) .
<b>Prevention of fire and explosion</b>	Handle away from any source of ignition (open flame and sparks) and heat (hot manifolds or casings). Do not smoke. Take precautionary measures against static discharges.
<b>Hygiene measures</b>	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Do not dry hands with rags that have been contaminated with product. Do not use abrasives, solvents or fuels. Wash hands before breaks and at the end of workday.
<b><u>Conditions for safe storage, including any incompatibilities</u></b>	
<b>Technical measures/Storage conditions</b>	Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Storage installations should be designed with adequate bunds so as to prevent ground or water pollution in case of leaks or spills. Keep in a bunded area. Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Ground/bond containers, tanks and transfer/receiving equipment. Store at room temperature. Keep containers tightly closed and properly labelled.
<b>Packaging material</b>	Keep only in the original container or in a suitable container for this kind of product. steel . Stainless steel.
<b>Materials to Avoid</b>	Strong acids. Oxidizing agents.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

**Exposure limits** Contains no substances with occupational exposure limit values.

**Advisory OEL** CEFIC-HSPA : 1200 mg/m<sup>3</sup>

#### Exposure controls

**Engineering Measures** When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.  
Apply technical measures to comply with the occupational exposure limits.

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

Version GNAM



SDS # : 37362

## FS-LUBRILAM S23 L

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

<b>General Information</b>	Protective engineering solutions should be implemented and in use before personal protective equipment is considered. These recommendations apply to the product as supplied. If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.
<b>Eye/Face Protection</b>	If splashes are likely to occur, wear: Safety glasses with side-shields.
<b>Skin and body protection</b>	Wear suitable protective clothing. Protective shoes or boots.
<b>Hand Protection</b>	Protective gloves.
<b>Respiratory protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene measures</b>	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Do not dry hands with rags that have been contaminated with product. Do not use abrasives, solvents or fuels. Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical and chemical properties

<b>Appearance</b>	limpid
<b>Color</b>	colorless
<b>Physical State @20°C</b>	liquid
<b>Odor</b>	Hydrocarbon-like
<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
<b>pH</b>		Not applicable	
<b>Melting point/range</b>		No information available	
<b>Boiling point/boiling range</b>	<b>214 - 235 °C</b> 417 - 455 °F		EN ISO 3405 EN ISO 3405
<b>Flash point</b>	<b>83 °C</b> 181 °F		ASTM D 93 ASTM D 93.
<b>Evaporation rate</b>	1000	EtEt=1	DIN 53170
<b>Flammability Limits in Air</b>			
<b>upper</b>	6 %		
<b>Lower</b>	0.5 %		
<b>Vapor Pressure</b>	0.14 hPa	@ 20 °C	

Version GNAM



SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

<b>Vapor density</b>		No information available	
<b>Relative density</b>	0.83	No information available	
<b>Density</b>	830 kg/m <sup>3</sup>	@ 15 °C	ISO 12185
<b>Water solubility</b>		Not applicable	
<b>Solubility in other solvents</b>		No information available	
<b>logPow</b>		Not applicable	
<b>Autoignition temperature</b>	> 230 °C > 446 °F		ASTM E 659-78 ASTM E 659-78
<b>Decomposition temperature</b>		No information available	
<b>Viscosity, kinematic</b>	< 20.5 mm <sup>2</sup> /s	@ 40 °C	ASTM D 445
<b>Explosive properties</b>	Not considered explosive based on chemical structure and oxygen balance considerations		
<b>Oxidizing Properties</b>	This product is not considered oxidising based on chemical structure considerations		
<b>Possibility of hazardous reactions</b>	Not applicable		
<b>Other information</b>			
<b>Surface tension</b>	0.0251 N/m	@ 25 °C	EN 14370
<b>Freezing Point</b>		No information available	
<b>Pour point</b>	< -50 °C		ASTM D 97

**10. STABILITY AND REACTIVITY**

<b><u>Reactivity</u></b>	None under normal processing.
<b><u>Chemical stability</u></b>	Stable under recommended storage conditions.
<b><u>Possibility of hazardous reactions</u></b>	None under normal processing.
<b><u>Conditions to Avoid</u></b>	Heat, flames and sparks. Take precautionary measures against static discharges.
<b><u>Incompatible Materials</u></b>	Strong acids. Oxidizing agents.
<b><u>Hazardous Decomposition Products</u></b>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information.

**Information on likely routes of exposure**

**Principle Routes of Exposure** Inhalation, Ingestion, Eye contact, Skin contact.

**Numerical measures of toxicity**

<b>ATEmix (oral)</b>	5001 mg/kg
<b>ATEmix (dermal)</b>	5001 mg/kg mg/l

Version GNAM



SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics ^	LD50 > 5000 mg/kg bw (rat - OECD 401)	LD50 (24h) > 5000 mg/kg bw (rabbit - OECD 402)	LC50 (8h) > 5000 mg/m <sup>3</sup> (vapour) (rat - OECD 403)

**Information on toxicological effects**

<b>Symptoms</b>	Redness.
<b>Skin contact</b>	Prolonged or repeated contact may dry skin and cause irritation.
<b>Eye contact</b>	Burning feeling and temporary redness.
<b>Inhalation</b>	The inhalation of vapours or aerosols may be irritating for the respiratory tract and for mucous membranes. Vapors inhaled in strong concentration have a narcotic effect on the central nervous system, Nausea.
<b>Ingestion</b>	If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Not classified.
<b>Serious eye damage/eye irritation</b>	Not classified.
<b>Sensitization</b>	Not classified as a sensitizer.
<b>Carcinogenicity</b>	This product is not classified carcinogenic.

<b>Mutagenicity</b>	This product is not classified as mutagenic.
<b>Reproductive toxicity</b>	The current toxicological knowledge allows to not classify the product as a toxic to reproduction.
<b>STOT-single exposure</b>	Not Classified.
<b>STOT - repeated exposure</b>	Not Classified.
<b>Other adverse effects</b>	Repeated exposure may cause skin dryness or cracking.
<b>Aspiration Hazard</b>	May be fatal if swallowed and enters airways.

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Acute aquatic toxicity - Product Information**

Not applicable

**Acute aquatic toxicity - Component Information**

Version GNAM

SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics ^	ErL50 (72h) > 1000 mg/l (Pseudokirchneriella subcapitata - OECD 201) EbL50 (72h) > 1000 mg/l (Pseudokirchneriella subcapitata - OECD 201)	LL50 (96h) > 1000 mg/l (Oncorhynchus mykiss - OECD 203)	EL50 (48h) > 1000 mg/l (Daphnia magna - OECD 202)	-

**Chronic aquatic toxicity - Product Information**

Not applicable

**Chronic aquatic toxicity - Component Information**

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics ^	NOELR (72h) = 1000 mg/l (Pseudokirchneriella subcapitata - biomass - OECD 201) NOELR (72h) = 1000 mg/l (Pseudokirchneriella subcapitata - growth rate - OECD 201)	NOELR (21d) = 1,22 mg/l (Daphnia magna - QSAR Petrotox)	NOELR (28d) = 0,17 mg/l (Oncorhynchus mykiss - QSAR Petrotox)	

**Effects on terrestrial organisms** No information available.**Persistence and degradability****General Information** Readily biodegradable ( 69 % after 28 days).

Biodegradation						
Type	Method	Sampling time	Specific effects	Values	Unit	Biodegradability
	OECD 301F	28 days		69	%	Readily biodegradable

**Bioaccumulative potential****Product Information** Measured experimental data on hydrocarbon UVCB substances are not meaningful, since each of the constituents is likely to behave differently.**logPow** Not applicable**Component Information** .**Mobility****Soil** Substance is a UVCB. Standard tests for this endpoint are not appropriate**Other adverse effects**

Version GNAM



SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

General Information No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment****Waste Disposal Methods** Dispose of in accordance with local regulations.**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.**14. TRANSPORT INFORMATION****DOT** Not regulated**TDG** Not regulated**MEX** Not regulated**ICAO/IATA** Not regulated**IMDG/IMO** Not regulated**ADR/RID** Not regulated**ADN****UN/ID No** UN9003**Proper shipping name** Substances with a flash-point above 60 degrees C and not more than 100 degrees C**Hazard class** 9**Description** UN9003, SUBSTANCES WITH A FLASH-POINT ABOVE 60 DEGREES C AND NOT MORE THAN 100 DEGREES C (Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics) , 9**15. REGULATORY INFORMATION****Related CAS** 64742-47-8

Version GNAM



SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

**International Inventories**

The substance is listed or exempted from listing in the following inventories:

Europe (EINECS/ELINCS/NLP)

U.S.A. (TSCA)

Canada (DSL/NDSL)

Australia (AICS)

Korea (KECL)

China (IECSC)

Japan (ENCS)

Philippines (PICCS)

New Zealand (NZIoC)

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	Yes
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Version GNAM



SDS # : 37362

**FS-LUBRILAM S23 L**

Date of the previous version: not applicable

Revision Date: 2015-10-23

Version 1

No information available

**16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazard 1</b>	<b>Flammability 2</b>	<b>Instability 0</b>	<b>Physical and chemical hazards -</b>
<b>HMIS</b>	<b>Health Hazard 1</b>	<b>Flammability 2</b>	<b>Physical Hazard 0</b>	<b>Personal protection X</b>

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Hazards are split into categories each with a 0 to 4 rating, 0 meaning no hazard and 4 meaning high hazard

<b>Revision Date:</b>	2015-10-23
<b>Revision Note</b>	(M)SDS sections updated 14, 16
<b>Abbreviations, acronyms</b>	bw = body weight UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals OECD = Organization for Economic Co-operation and Development LL = Lethal Loading bw/day = body weight/day GLP = Good Laboratory Practice fw = fresh water mw = marine water or = occasional release dw = dry weight SCBA = Self Contained Breathing Apparatus

<b>Legend</b>	Section 8 ACGIH - American Conference of Governmental Industrial Hygienists OSHA - Occupational Safety and Health Administration NIOSH - National Institute for Occupational Safety and Health TLV - Threshold Limit Values PEL - Permissible Exposure Limits IDHL - Immediately Dangerous to Life or Health concentrations TWA - Time Weight Average STEL - Short Term Exposure Limits S* - Skin notation TSCA - Toxic Substance Control Act
---------------	---

Version GNAM



---

**SDS # :** 37362**FS-LUBRILAM S23 L****Date of the previous version:** not applicable**Revision Date:** 2015-10-23**Version** 1

---

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the safety data sheet

Version GNAM