

COMMET Fe-30/C

Safety Data Sheet

according to Regulation (EU) 2015/830
Revision date: 09/06/2017

Version: 08

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier:

Product Form : Mixture
Product Chemical Name : Colloidal Iron Oxide Dispersed in Isoparaffinic Hydrocarbon (Isopar-L)
Synonyms : Ferro-Fluid, Iron Colloid
Trade Name : **COMMET Fe-30/C**

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Intended Use : Fuel Additive

1.3 Details of Supplier of the safety data sheet:

Manufacturer & supplier
COMAR Chemicals (Pty) Ltd
Neil Hare Road
Atlantis Industrial
Cape Town
South Africa
Tel : (+27) 21 577-1333
Fax : (+27) 21 577-1343
e-mail: info@comarchem.co.za
www.comarchem.com

1.4 Emergency Telephone number:

Emergency number +27-827740071 / +27 21 5771333/ +27 825774766

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

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Classification :
Aspiration toxicant: Category 1
H304 May be fatal if swallowed and enters airways

Classification according to EU Directive 67/548/EEC/1999/45 EC

Xn : Harmful
R65 : Harmful, may cause lung damage if swallowed
R66 : Repeated Exposure may cause skin dryness or cracking

2.2 Label Elements

Hazard pictograms :



Signal Word : **Danger**

COMMET Fe-30/C

Safety Data Sheet

according to Regulation (EU) 2015/830
Revision date: 09/06/2017

Version: 07

Hazard Statements:

H304 : May be fatal if swallowed and enters airways

Precautionary statements:

P210: Keep away from flames and hot surfaces. -- No smoking.

P280: Wear protective gloves and eye / face protection.

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P331: Do NOT induce vomiting.

P332 + P313: If skin irritation occurs: Get medical advice/ attention.

P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO₂) for extinction.

P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.

P501: Dispose of contents and container in accordance with local regulations.

Contains: Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

2.3 Other Hazards

Other hazards which do result in classification :

Physical / Chemical Hazards:

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited. Combustible.

Health Hazards:

Repeated exposure may cause skin dryness or cracking. Mildly irritating to skin. May be irritating to the eyes, nose, throat, and lungs.

Environmental Hazards:

No significant hazards

COMMET Fe-30/C

Safety Data Sheet

according to Regulation (EU) 2015/830
Revision date: 09/06/2017

Version: 07

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Product definition (REACH) : Mixture

Product definition : Mixture

Component	CAS No.	EC No.	CUS No.	Concentration (% m/m)	Symbol, Risk Phrases	GHS/CLP Classification
Iron Oxide (as Magnetite - Fe ₃ O ₄)	1317-61-9		0031416-9	38 - 45	Not Classified	Not Classified
Oleic Acid (dispersant)	112-80-1	2040071	0021198-3	10 - 20	Not classified	Not Classified
Alkanes, C11-C13 - Iso alkanes, <2% aromatics		920-901-0	not available	35 - 55	Xn, R65, R66	Asp.Tox.1 H304

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid measures

- AFTER INHALATION

Assistants must be equipped with breathing apparatus. In case of poisoning the affected person must be removed out of the contaminated area and artificial respiration be applied. In case of breathing difficulties, the Patient must be kept calm, and medical assistance must be obtained.

- AFTER SKIN CONTACT

Remove clothing and wash affected areas thoroughly with water and soap.

- AFTER EYE CONTACT

Rinse thoroughly with water until irritation stops. If irritation continues, consult a Doctor.

- AFTER INGESTION

Keep affected person calm, and call a Doctor. Do not induce vomiting

4.2 Most important symptoms & effects, both acute & delayed

No important symptoms or effects.

4.3 Indication of any immediate medical attention and special treatment needed

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media : Powder, Foam, sand ,or CO₂

Un-suitable extinguishing media : Do not use water-jet

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

: In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous combustion product

: Decomposition may include the following products : Carbon oxides and Iron oxides

COMMET Fe-30/C

Safety Data Sheet

according to Regulation (EU) 2015/830
Revision date: 09/06/2017

Version: 07

5.3 Advice for fire-fighters

Special precautions for fire-fighters :	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Special Protection Equipment for fire-fighters :	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

FLAMMABILITY PROPERTIES (for solvent)

Flash Point [Method]: >61°C (142°F) [ASTM D-93]

Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 7.0 LEL: 0.6 [Extrapolated]

Auto-ignition Temperature: >200°C (392°F) [Extrapolated]

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and clean-up

Small spill :	Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor.
Large spill :	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other Sections

Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7 : HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not smoke. Remove sources of ignition. Avoid contact with skin, eyes and clothing. Handle material in adequately ventilated areas. Ensure proper use of recommended safety apparel. Do not use compressed air or compressed oxygen for transfer of product. Partially used drums must be securely closed after use.

Material is a static accumulator. Storage and transfer containers must be bonded and earthed. Product residue and can be hazardous.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry and ventilated area. Keep away from incompatible materials such as oxidising agents. Ensure material is kept in a closed container. Keep away from ignition sources.

7.3 Specific end use (s)

Recommendations	:	See Section 1
Industrial sector specific Solutions	:	Not available

COMMET Fe-30/C

Safety Data Sheet

according to Regulation (EU) 2015/830
Revision date: 09/06/2017

Version: 07

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

EXPOSURE LIMITS :

Iron Oxides :

Dust and fumes of Iron Oxide : NIOSH : Iron oxide fume (Fe₂O₃):TWA 5 mg/m³
Dept. Of Labour (South Africa) (Govt. Notice R1179) 1995
TWA OEL-RL : 0.1 mg/m³

Alkanes C11- C13 Iso- alkanes. (ISOPAR-L) :

Biological Exposure Index: ACGIH : TLV-TWA : 171 ppm, 1200 mg/m³ (Exxon-Mobil 2000).

8.2 Exposure Controls

- Risk management measures :

Occupational exposure controls- Technical measures

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

- Personal protection measures :

- Inhalation : Approved Dust Respirator recommended.



- Skin Contact : PVC/rubber gloves (impervious)



- Eye Contact : Full-cover goggles recommended



General Hygiene and Protective measures : Keep away from food. Wash hands thoroughly with water and soap before breaks and at the end of a work day.
Provide separate storage of work clothes and private clothes.

- Environmental exposure controls

Technical measure

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

COMMET Fe-30/C

Safety Data Sheet

according to Regulation (EU) 2015/830
Revision date: 09/06/2017

Version: 07

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Colloidal Liquid
Colour	Dark Brown - black
Odour	Hydrocarbon smell
pH	not measurable
Boiling Point	>170 °C
Solidification temperature	<-20 °C
Flash Point	> 62 °C
Density	(as per ASTM D 93) 1250 kg/m ³ (as per ASTM D 1298)

9.2 Other information

SOLVENT COMPONENT :

Boiling point/range	>170 - 250 °C
Explosive limits	approx 0.6 % to 7 % vol/vol
Vapour pressure	< 0.04kPa at 20 deg.C
Solubility	soluble in organic solvents such as white spirits, xylol, alcohol, glycol

SECTION 10 : STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity available for this product

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not swallow. Avoid release to the environment.

10.5 Incompatible materials

Highly reactive or incompatible with oxidizing materials.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous reactions will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects

- Acute Toxicity :

- **Iron Oxide :** Not considered to be a carcinogen by IARC, ACGIH or OSHA
- **Oleic Acid :** LD50 Oral (Rat) >2000mg/kg Non-toxic
- **Isoparaffin :** Practically non-toxic

SECTION 12 : ECOLOGICAL INFORMATION

12.1 Toxicity

Material is not expected to demonstrate chronic toxicity, or be harmful to aquatic organisms.

12.2 Persistence and degradability:

Material is expected to be biodegradable

12.3 Bioaccumulative potential

Not available

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Material is volatile and will partition rapidly to air.

COMMET Fe-30/C

Safety Data Sheet

according to Regulation (EU) 2015/830
Revision date: 09/06/2017

Version: 07

12.5 Result of PBT and vPvB assessment

PBT : Does not contain substance that is PBT
vPvB : Does not contain substance that is vPvB

12.6 Other adverse effects

Other adverse effects : Not available
VOC : YES

Ecotoxicity (ISOPAR-L)

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	48 hour(s)	Daphnia magna	ELO 1000 mg/l: data for similar materials
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	ELO 1000 mg/l: data for similar materials
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	NOELR 1000 mg/l: data for similar materials
Aquatic - Acute Toxicity	96 hour(s)	Oncorhynchus mykiss	LL0 1000 mg/l: data for similar materials
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	NOELR 1 mg/l: data for the material

Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results: Basis
Water	Ready Biodegradability	28 day(s)	Percent Degraded 31.3 : similar material

NOTE: Not toxic to aquatic organisms at maximum water solubility.

SECTION 13 : DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product :

Methods of disposal

: Examine possibilities for re-utilisation. Product residues and un-cleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. When un-cleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues. For disposal within the EC, the appropriate code according to the European Waste List (EWL) should be used. It is among the tasks of the polluter to assign the waste to waste codes specific to industrial sectors and processes according to the European Waste List (EWL).

Packaging :

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special Precautions

: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

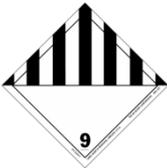
COMMET Fe-30/C

Safety Data Sheet

according to Regulation (EU) 2015/830
Revision date: 09/06/2017

Version: 07

SECTION 14 : TRANSPORT INFORMATION

	ADR / RID	ADN	IMDG	IATA
14.1 UN Number	Not Regulated	9003	Not Regulated	Not Regulated
14.2 UN Proper shipping name		Substance with Flash point >60 <100 deg.C (Isoundecanes)		
14.3 Transport hazard class / marks				
14.4 Packing Group		N/A		
14.5 Environmental hazards		None		
14.6 Special precautions for user / Additional information		Label : 9(F)		

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subjected to authorization

Substance of very high concern (SVHC)

None of the components are listed.

Other EU regulations

- 2004/42/CE [on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC.]
- 98/24/EC [... on the protection of workers from the risk related to chemical agents at work ...]. Refer to Directive for details of requirements.
- 1272/2008 [on classification, labelling and packaging of substances and mixtures.. and amendments thereto]

Refer to the relevant EU/national regulation for details of any actions or restrictions required by the above Regulation(s)/Directive(s).

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are required.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

: ATE = Acute toxicity estimate
CLP = Classification, Labelling and Packaging Regulation
[Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bio-accumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration number
vPvB = Very Persistent and very Bio-accumulative
VOC = Volatile organic compounds

Full Text of abbreviated H statements :

COMMET Fe-30/C

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H304 : May be fatal if swallowed and enters airways.

**Full Text of R- Phrases referred
to in Sections 2 and 3**

:
R65 : Harmful, may cause lung damage if swallowed
R66 : Repeated Exposure may cause skin dryness or cracking

DATE OF PREVIOUS VERSION : 06/06/2016

REVISION REASON : Removed SABS Logo

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