

SAFETY DATA SHEET

SUN FCA 110

Section 1. Identification

Product name: SUN FCA 110
Synonyms: Not available

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

Product use: Process Oil
Manufacturer: HollyFrontier Refining & Marketing LLC
1700 South Union Avenue
Tulsa, OK 74107
USA
Customer Service: (800) 456-4786

Emergency telephone number: CHEMTREC® (800) 424-9300
CCN 201319

Section 2. Hazards identification

Classification of the substance or mixture: ASPIRATION HAZARD —Category 1

GHS label elements

Hazardous pictogram:



Signal word: Danger
Hazard statements: May be fatal if swallowed and enters airways.

Precautionary statements

Prevention: Not applicable.
Response: IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
Storage: Store locked up.
Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements: Avoid contact with skin and clothing. Wash thoroughly after handling. Defatting of the skin. Prolonged or repeated contact may dry skin and cause irritation. Heated material may cause thermal burns.

Hazards not otherwise classified: This substance/mixture does not meet the PBT/vPvB criteria for REACH, Annex XIII.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

CAS number/other identifiers

CAS number: Not applicable.

Product code: 1457-10

Ingredient name	%	CAS number
Distillates (petroleum), solvent-dewaxed heavy paraffinic	65 - 80	64742-65-0
Distillates (petroleum), solvent-dewaxed light paraffinic	20 – 35	64742-56-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Based on our knowledge of our products, there are no additional ingredients present that are classified as hazardous to health or to the environment, which require reporting in this section. As applicable, see Section 8 for Occupational Exposure Limits.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Remove contact lenses. If eye irritation persists, obtain medical treatment. For contact with heated product, flush immediately with plenty of cool water for at least 15 minutes. Get medical attention.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue monitoring by trained personnel. Get immediate medical attention if victim is unconscious. Seek medical attention if cough or other symptoms develop.

Skin contact: Wash with soap and water. Get medical attention if irritation develops or persists. Remove contaminated clothing and wash before reuse. For contact with heated product, flush immediately with plenty of cool water for at least 15 minutes.

Ingestion: Aspiration hazard. Can enter lungs and cause damage. If swallowed, get medical attention immediately. Contact a physician or Poison Control Center. Do not induce vomiting. Never give anything by mouth to an intoxicated, unconscious or convulsing person. Get medical attention immediately.

Most important symptoms/effects, acute and delayed

Eye contact:	Slightly irritating to the eyes. May cause tearing, burning sensation and redness. Contact with product at elevated temperatures may result in thermal burns.
Inhalation:	Vapors and/or mists which may be formed at elevated temperatures may be irritating to eyes, nose, throat, upper respiratory tract and lungs.
Skin contact:	May cause skin dryness, irritation and defatting of the skin. Contact with product at elevated temperatures may result in thermal burns.
Ingestion:	Aspiration hazard. While ingesting or vomiting, may enter lungs and cause damage. Gastrointestinal tract irritation with possible nausea, vomiting and diarrhea.

See toxicological information (Section 11).

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

Notes to physician:	Treat symptomatically. Contact physician or poison control center immediately if ingested or if large quantities have been inhaled.
Specific treatments:	No specific treatment.
Protection of medical responders:	Do not attempt to take action without suitable protective equipment. See Section 8 for additional information on protection measures. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 5. Fire-fighting measures**Extinguishing media**

Suitable extinguishing media: In case of fire, use water spray (fog), regular foam, dry chemical or carbon dioxide. Carbon dioxide can disperse oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Unsuitable extinguishing media: Do not direct solid streams into the hot burning liquid.

Specific hazards arising from the chemical: Use water spray or fog to cool exposed containers. Closed containers of this material may explode when subjected to heat from surrounding fire.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon dioxide, carbon monoxide and other asphyxiants.

Special protective actions for fire-fighters: Fight fire from a safe distance and protected location. Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Special protective equipment for fire-fighters: Wear structural firefighting gear. As in any fire, wear self-contained breathing apparatus pressure-demand,

MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	Remove ignition sources. Ensure adequate ventilation. Do not attempt to take action without suitable protective equipment. See Section 8 for additional information on protection measures.
For emergency responders:	Remove ignition sources. Ensure adequate ventilation. Do not attempt to take action without suitable protective equipment. See Section 8 for additional information on protection measures.
Environmental precautions:	Do not allow spilled material to runoff and contact soil, waterways, drains and sewers.

Methods and materials used for containment and clean-up

Small spill:	Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container. Dispose of via a licensed waste disposal contractor.
Large spill:	Stop leak if possible without risk. Approach release from upwind. Prevent entry of release material into sewers, waterways, basements or confined areas. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures:	Wear appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation or wear appropriate respirator. High pressure skin injection is a medical emergency. The injury will not appear serious at first but within a few hours, the affected tissue will appear swollen, discolored and extremely painful. Follow all SDS/label precautions even after container is emptied because it may contain product residue.
Advice on general hygiene practices:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Remove contaminated clothing and protective equipment prior to entering eating areas.
Conditions for safe storage, including any incompatibilities:	NFPA Class IIIB storage. Combustible liquid. Flash point is greater than 200° F (93.3° C). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Oil mist, mineral	OSHA PEL TWA: 5 mg/m ³
	ACGIH TLV TWA: 5 mg/m ³ Form: Inhalable fraction
	NIOSH REL (United States, 1/2013). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist

Appropriate engineering controls:	Use with adequate ventilation. Local exhaust ventilation may be necessary when handling or using this product to keep exposure to airborne contaminants below the exposure limit.
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Personal protective measures

Personal hygiene measures:	Wash thoroughly after handling. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye and face protection:	Safety glasses with side shields or splash proof chemical goggles are recommended to protect against the splash of product.

Skin protection

Hand protection:	Protective gloves are recommended to protect against contact with product. The gloves listed may provide protection against permeation: neoprene, nitrile, Viton®. Gloves of other chemically resistant materials may not provide adequate protection.
Other body protection:	Where splashing is possible, fully chemical resistant protective clothing (e.g. acid suit) and boots are recommended. Wear insulated impervious protective gear to protect against the splash of product. The following materials are acceptable for use as protective clothing: neoprene; nitrile; Viton®. Wear appropriate footwear.
Respiratory protection:	Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted. Half-mask air purifying respirator with dust / mist filters or HEPA filter cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with dust / mist filters or HEPA filter cartridges is acceptable for exposures to fifty (50) times the exposure limit. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-face-piece airline respirator in the positive pressure mode with emergency escape provisions.

Section 9. Physical and chemical properties**Appearance**

Physical state:	Liquid
Color:	Colorless
Odor:	Slight
Odor threshold:	Not available
pH:	Not applicable
Melting point:	Pour point [ASTM D5950]: -18°C (0°F)
Boiling point:	256 to 599°C (510 to 1111°F) [ASTM D2887]
Flash point:	Open cup: 186°C (367°F) [ASTM D92]
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Lower and upper explosive (flammable) limits:	Not available

Vapor pressure:	0.00011 kPa (0.0008 mm Hg) @ 37.8°C (100°F)
Vapor density:	Not available
Specific gravity:	0.86 [16°C (60°F)] [ASTM D1298] Bulk density: 7.2 lbs/gal [ASTM D1250]
Solubility:	Insoluble in the following materials: cold water and hot water
Partition coefficient:	
n-octanol/water:	2 to >6
Auto-ignition temperature:	354°C (670°F) [ASTM D2155]
Decomposition temperature:	Not available
Viscosity:	Kinematic (40°C (104°F)): 0.205cm ² /s (20.5 cSt) [ASTM D445] Kinematic (100°F): 108 SUS [ASTM D2161]
Molecular weight:	365 g/mole

Section 10. Stability and reactivity

Reactivity:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability:	The product is stable.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	Keep away from heat, sparks and flame.
Incompatible materials:	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition products may include the following materials: Carbon dioxide, Carbon monoxide and other asphyxiants.

Section 11. Toxicological information

Likely Routes of Exposure: Routes of entry anticipated: Oral, Dermal, Inhalation.

Symptoms related to the physical, chemical and toxicological characteristics:

Eye contact:	Slightly irritating to the eyes. May cause tearing, burning sensation and redness. Contact with product at elevated temperatures may result in thermal burns.
Inhalation:	Vapors and/or mists which may be formed at elevated temperatures may be irritating to eyes, nose, throat, upper respiratory tract and lungs.
Skin contact:	May cause skin dryness, irritation and defatting of the skin. Contact with product at elevated temperatures may result in thermal burns.
Ingestion:	Aspiration hazard. While ingesting or vomiting, may enter lungs and cause damage. Gastrointestinal tract irritation with

possible nausea, vomiting and diarrhea.

Information on toxicological effects

Basis for Assessment: Product has not been tested. Information given is based on data on individual components or similar materials. Samples of similar paraffinic oils have been in acute oral, dermal and inhalation studies.

Acute Toxicity: Not classified as acutely toxic.

Distillates (petroleum), solvent-dewaxed light and heavy paraffinic

Acute Inhalation Toxicity: Rat, LC50>5.53 mg/L, 4 hours

Acute Dermal Toxicity: Rabbit, LD50>2000 mg/kg

Acute Oral Toxicity: Rat, LD50>5000 mg/kg

Skin Corrosion/Irritation: Slightly irritating to the skin. Heated material can cause thermal burns.

Eye Irritation: Heated material can cause thermal burns. Non-irritating to the eyes.

Skin Sensitization: No evidence of skin sensitization.

Respiratory Sensitization: Not available.

Mutagenicity: Not considered to be a germ cell mutagen.

Carcinogenicity: The mineral oils in the product contain < 3% DMSO extract (IP 346). Not considered to be carcinogenic.

Reproductive Toxicity: Not considered to be toxic to the reproductive system.

Teratogenicity: No teratogenic effects observed.

Aspiration Hazard: ASPIRATION HAZARD – Category 1

Specific target organ toxicity (single exposure): Not available.

Specific target organ toxicity (repeated exposure): Not available.

Section 12. Ecological information

Basis for Assessment: Product has not been tested. Information given is based on data on individual components or similar materials. Samples of similar paraffinic oils have been tested in fish, invertebrates and algae.

Distillates (petroleum), solvent-dewaxed light and heavy paraffinic

Acute EC50 >100 mg/L, Algae, 72 hours

Acute EC50 >100 mg/L, Daphnia, 48 hours

Acute LC50 >100 mg/L, Fish, 96 hours

Persistence and degradability: Considered to be inherently biodegradable.

Bioaccumulative potential: Constituents of other Lubricant Base Oils show measured or predicted values for log K_{ow} from 2 to ≥ 6 and are considered potentially bioaccumulative.

Mobility in soil Not available.
Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods: Follow federal, state and local regulations. This material is not a RCRA hazardous waste, if not contaminated. If material has been “used”, RCRA criteria (ignitability, reactivity, corrosivity and toxicity) must be determined.

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe manner. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers may retain some product residue. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated	Not regulated	Not regulated	Not regulated
UN proper shipping name	—	—	—	—	—	—
Transport hazard class(es)	—	—	—	—	—	—
Packing group	—	—	—	—	—	—
Environmental hazards	No	No	No	No	No	No
Additional information	—	—	—	—	—	—

Special precautions for user: **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal Regulations

United States Toxic Substance Control Act (TSCA)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) Inventory.

TSCA Exempt (R&D, LVE, Polymer Exemption, Other)	Not regulated
TSCA Section 4	Not regulated
TSCA Section 5	Not regulated
TSCA Section 5(a)2)	Not regulated
TSCA Section 6	Not regulated
TSCA Section 12[b]	Not regulated

Superfund Amendments and Reauthorization Act (SARA)

EPCRA (SARA) Title III Section 313
Toxic Chemical Release Inventory
(TRI) This product does not contain any chemicals in excess of the applicable *de minimis* concentration that are subject to the reporting requirements of Section 313.

EPCRA (SARA) Title III Section 302
Extremely Hazardous Substances
Reporting Quantities This product does not contain any chemicals listed under Section 302.

EPCRA (SARA) Title III Section 311
Hazardous Classes

Distillates (petroleum), solvent-dewaxed heavy paraffinic	
Immediate (acute) health hazard	Yes
Delayed (chronic) health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Distillates (petroleum), solvent-dewaxed light paraffinic	
Immediate (acute) health hazard	Yes
Delayed (chronic) health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Other Federal Regulations

Chemical Facility Anti-terrorism Standards (6 CFR 27), Appendix A, Chemicals of Interest: Not Listed

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) 40 CFR 302.4: Not Regulated.

RCRA (Resource Conservation and Recovery Act) 40 CFR Part 261: Not Listed as RCRA hazardous waste as shipped.

State regulations

Illinois None of the components of this material are listed.

Louisiana	None of the components of this material are listed.
Massachusetts	Listed as: Oil Mist (Mineral).
Michigan	None of the components of this material are listed.
Minnesota	Listed as: Oil Mist (Mineral).
New York	None of the components of this material are listed.
New Jersey	The following components are listed: MINERAL OIL (UNTREATED and MILDLY TREATED); MINERAL OIL (UNTREATED and MILDLY TREATED)
Pennsylvania	None of the components of this material are listed.
California Proposition 65	This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

International regulations**International lists**

Australia Inventory (AICS)	The components of this material are listed or exempted.
Canadian Domestic Substance List (DSL)	The components of this material are listed or exempted.
Canadian Non-domestic Substance List (NDSL)	The components of this material are not listed.
China Inventory (IECSC)	The components of this material are listed or exempted.
European EINECS Inventory	The components of this material are listed or exempted.
European ELINCS Inventory	The components of this material are not listed.
Japan Existing & New Chemical Substances (ENCS)	The components of this material are listed or exempted.
Korea Existing Chemical Inventory (KECI)	The components of this material are listed or exempted.
Korea Toxic Chemicals Control Law	Not determined.
Malaysia Inventory (EHS Register)	Not determined.
New Zealand Inventory of Chemicals (NZIoC)	The components of this material are listed or exempted.
Philippines Inventory (PICCS)	The components of this material are listed or exempted.
Taiwan Inventory (CSNN)	The components of this material are listed or exempted.
Turkey Inventory and Control of Chemicals (CICR)	Not determined.

Section 16. Other information**Hazard Ratings:**

Key: 0 = least; 1 = slight; 2 = moderate; 3 = high; 4 = extreme

HMIS Rating: Health = 1; Fire = 1; Reactivity = 0

NFPA Rating: Health = 1; Fire = 1; Reactivity = 0

Date of issue/Date of revision: 06/19/2015
Date of previous issue: No previous validation.
Version: 1
Key to abbreviations:
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogP_{ow} = logarithm of the octanol/water partition coefficient
PBT = Persistent, Bioaccumulative and Toxic
UN = United Nations
vPvB = Very Persistent and very Bioaccumulative

DISCLAIMER: The information and recommendations contained within this document are, to the best of HollyFrontier Refining & Marketing LLC – Tulsa’s knowledge and belief, accurate and reliable as of the date issued. This information and recommendations are offered for the user’s consideration and examination. We extend no warranties and make no representations as to the accuracy or completeness of the information contained herein and assume no responsibility regarding suitability of this information for the users intended purpose or for the consequence of its use. It is the user’s responsibility to satisfy itself that the product is suitable for the intended use and ensure proper health, safety, and other necessary information is followed.