

Safety Data Sheet

Safety Data Sheet

Section 1. Identification

Product name	: ALPHA® SUPERLO SOLIDS 26F FLUX
Product code	: 115247
Product type	: Liquid.
Date of issue/Date of revision	: September 26 2016.

Manufacturer - Supplier	Telephone no.:	Emergency phone:
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Section 2. Hazards identification

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
: FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (Narcotic effects) - Category 3
: Danger
 Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness and dizziness.
: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.

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Section 2. Hazards identification

Response	: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Store in a well-ventilated place. Keep cool.
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.
Hazards not otherwise classified	: Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	%	CAS number
	80-100	67-63-0
ester	1-10	-
Organic acid	1-10	-

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary	first aid measures
Eye contact	: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Get medical attention.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 4. First aid measures

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Most important symptoms/effects, acute and delayed		
Potential acute health effec	—	
Eye contact	: Causes serious eye irritation.	
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.	
Skin contact	: Defatting to the skin. May cause skin dryness and irritation.	
Ingestion	: Can cause central nervous system (CNS) depression.	
Over-exposure signs/symp	<u>ioms</u>	
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness	
Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness	
Skin contact	: Adverse symptoms may include the following: irritation dryness cracking	
Ingestion	: No specific data.	
Indication of immediate med	ical attention and special treatment needed, if necessary	
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 	
Specific treatments	: No specific treatment.	
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.	
See toxicological information (Section 11)		

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO2, water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Highly flammable liquid and vapor. 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 thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions 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.

Section 5. Fire-fighting measures

Special protective 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.

Section 6. Accidental release measures

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Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for co	onta	ainment and cleaning up
Small spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures

Section 7. Handling and storage

Conditions for safe	: Store in accordance with local regulations. Store in a segregated and approved area.
storage, including any	Store in original container protected from direct sunlight in a dry, cool and well-ventilated
incompatibilities	area, away from incompatible materials (see Section 10) and food and drink. Store
-	locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep
	container tightly closed and sealed until ready for use. Containers that have been
	opened must be carefully resealed and kept upright to prevent leakage. Do not store in
	unlabeled containers. Use appropriate containment to avoid environmental
	contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Isopropyl alcohol	ACGIH TLV (United States, 4/2014). Notes: Refers to Appendix A
	Carcinogens. ACGIH 2003 Adoption
	STEL: 400 ppm 15 minutes.
	TWA: 200 ppm 8 hours.
	NIOSH REL (United States, 10/2013).
	STEL: 1225 mg/m ³ 15 minutes.
	STEL: 500 ppm 15 minutes.
	TWA: 980 mg/m ³ 10 hours.
	TWA: 400 ppm 10 hours.
	OSHA PEL (United States, 2/2013).
	TWA: 980 mg/m ³ 8 hours.
	TWA: 400 ppm 8 hours.
ester	Manufacturer (United States).
	TWA: 10 mg/m ³

Appropriate engineering controls	: 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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	: 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 will be necessary to reduce emissions to acceptable levels.
Individual protection meas	ures de la constante de la const
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Skin protection	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
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Section 8. Exposure controls/personal protection

Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	: Liquid.
Color	: Not available.
Odor	: Not available.
Odor threshold	: Not available.
рН	: Not available.
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: 12°C (53.6°F)
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: Not available.
Solubility	: Easily soluble in the following materials: cold water.
VOC	: 997.9 g/l
Partition coefficient: n- octanol/water	: Not available.
Auto-ignition temperature	: 399°C (750.2°F)
Decomposition temperature	: Not available.
Viscosity	: Not available.

Section 10. Stability and reactivity

Reactivity	1	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	1	The product is stable.
Possibility of hazardous reactions	1	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatibility with various substances	1	Reactive or incompatible with the following materials: oxidizing materials, reducing materials, acids, alkalis and moisture.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 10. Stability and reactivity

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Routes of entry	: Dermal contact. Ey	e contact. Inhalation. Ingestion.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Isopropyl alcohol	LD50 Dermal	Rabbit	6290 mg/kg	-
	LD50 Oral	Rat	4.7 g/kg	-
ester	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	6400 mg/kg	-
Organic acid	LD50 Oral	Rat	2260 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
ester	Eyes - Moderate irritant	Rabbit	-	0.1 Mililiters	-
Organic acid	Eyes - Severe irritant	Rabbit	-	750 Micrograms	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

No applicable toxicity data

Additional information:

Classification

Product/ingredient name	OSHA	IARC	NTP
Isopropyl alcohol	-	3	-

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Isopropyl alcohol	Negative	Positive	Positive	Rat	Oral: 1000 mg/ kg	-
	Positive	Negative	Positive	Rat - Female	Oral: 1242 mg/ kg Continuous Fixed dose	24 hours per day

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

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Section 11. Toxicological information

Name		Category	Route of exposure	Target organs			
Isopropyl alcohol		Category 3	Not applicable.	Narcotic effects			
Specific target organ toxic	ity (repeated exposu	<u>re)</u>	1				
Not available.							
Aspiration hazard Not available.							
Information on the likely routes of exposure	: Not available.						
Potential acute health effect	<u>ts</u>						
Eye contact	: Causes serious e	eye irritation.					
Inhalation	: Can cause centra dizziness.	al nervous system (CNS) de	pression. May cause	e drowsiness and			
Skin contact	-	kin. May cause skin drynes					
Ingestion	: Can cause centra	al nervous system (CNS) de	pression.				
Symptoms related to the ph	weical chemical and	toxicological characterist	lice				
Eye contact		ns may include the following					
	pain or irritation watering redness	pain or irritation watering					
Inhalation	nausea or vomitir headache drowsiness/fatigu dizziness/vertigo	drowsiness/fatigue					
Skin contact	: Adverse symptom irritation dryness cracking	ns may include the followinູ] :				
Ingestion	: No specific data.						
<u>Delayed and immediate effe</u> <u>Short term exposure</u>	cts and also chronic	effects from short and lo	ng term exposure				
Potential immediate effects	: Not available.						
Potential delayed effects	: Not available.						
Long term exposure							
Potential immediate effects	: Not available.						
Potential delayed effects	: Not available.	: Not available.					
Potential chronic health eff							
General	dermatitis.	eated contact can defat the		ation, cracking and/or			
Carcinogenicity	-	cant effects or critical hazard					
Mutagenicity	-	cant effects or critical hazard					
Teratogenicity	-	: No known significant effects or critical hazards.					
Developmental effects	-	: No known significant effects or critical hazards.					
Fertility effects	: NO KNOWN SIGNIFIC	ant effects or critical hazard					
Continued on next page		A Mac	Dermid Performance: A Platform Specialty	Solutions Business			

Numerical measures of toxicity

Acute	toxicity	<u>vestimates</u>

Route	ATE value
Oral	4825.5 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute LC50 1400000 to 1950000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
ester	Acute LC50 4200 mg/l Fresh water Acute LC50 30.9 mg/l	Fish - Rasbora heteromorpha Fish	96 hours 96 hours
Organic acid	Acute EC50 374200 to 400000 μg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Isopropyl alcohol	0.05	-	low
ester	0.49	-	low
Organic acid	-0.59	-	low
Mobility in soil	•	·	·

<u>Mobility in so</u> Soil/water pa

Soil/water partition	: Not available.
coefficient (Koc)	

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : 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 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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	•					
	DOT Classification	TDG Classification	Mexico Classification	UN	IMDG	ΙΑΤΑ
UN number	UN1219	UN1219	UN1219	UN1219	UN1219	UN1219
UN proper shipping name	Isopropanol solution	Isopropanol	Isopropanol	Isopropanol	Isopropanol	Isopropanol
Transport hazard class(es)	3	3	3	3	3	3
Packing group	II	11	11	11	II	
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information - DOT Classification	ERG# 129					

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	: TSCA 5(a)2 proposed significant new use rule (SNUR): No products were found.
	TSCA 5(a)2 final significant new use rule (SNUR): No products were found.
	TSCA 12(b) one-time export: bis(2-butoxyethyl) ether
	TSCA 12(b) annual export notification: No products were found.
United States inventory (TSCA 8b)	: All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification

: Fire hazard

Immediate (acute) health hazard

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Isopropyl alcohol	67-63-0	80-100
	bis(2-butoxyethyl) ether	112-73-2	1-10
Supplier notification	Isopropyl alcohol	67-63-0	80-100
	bis(2-butoxyethyl) ether	112-73-2	1-10

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

California Prop. 65

Section 15. Regulatory information

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

<u>Canada</u>	
WHMIS (Canada)	: Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
Canada inventory	: At least one component is not listed in DSL but all such components are listed in NDSL.
International lists	
National inventory	
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Philippines	: All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.) 1 Health 3 Flammability 0 **Physical hazards**

Procedure used to derive the classification

Class	sification	Justification	
Flam. Liq. 2, H225		On basis of test data	
Eye Irrit. 2A, H319 STOT SE 3, H336		Calculation method Calculation method	
listory			
Date of issue/Date of revision	: September 26 2016.		
Date of previous issue	: May 14 2015.		
Version	: 2		
Prepared by		Regulatory Affairs Department enthone.msds@macdermidenthone.com	
ey to abbreviations	: ATE = Acute Toxicity Estir BCF = Bioconcentration Fa		
	IATA = International Air Tr IBC = Intermediate Bulk C IMDG = International Marit LogPow = logarithm of the	ontainer time Dangerous Goods octanol/water partition coefficient	
		ional Convention for the Prevention of Pollution From Ships, rotocol of 1978. ("Marpol" = marine pollution)	

indicates information t

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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Alpha Assembly SDS GHS Americas