*** SAFETY DATA SHEET ***

SECTION 1

Manufacturer: SANDSTROM PRODUCTS COMPANY
Address: 224 South Main Street
Port Byron, IL 61275
USA
Telephone#: (309) 523-2121
Emergency#: (800) 424-9300
(703) 527-3887

MFG. Code ID: E728-G35 Revision level: 11-06/10/21
Trade name: 28A SOLID FILM LUBRICANT — MIL-L-23398/MIL-PRF-46147
Recommended use of chemical: SOLID FILM LUBRICANT

Restrictions on use: Do not use where there is a potential for contact with food.

SECTION 2 HAZARD IDENTIFICATION

HAZARD CLASSIFICATION:

DANGER!
FLAMMABLE LIQUID: CATEGORY 2
EYE IRRITANT: CATEGORY 2A
REPRODUCTIVE TOXICITY: CATEGORY 1
STOT SE: CATEGORY 3 (D/D)

HAZARD & PRECAUTIONARY STATEMENTS:

FLAMMABILITY:
H225: HIGHLY FLAMMABLE LIQUID AND VAPOR. P210: KEEP AWAY FROM HEAT/ SPARKS/ OPEN FLAMES/ HOT SURFACES. -NO SMOKING. P233: KEEP CONTAINER TIGHTLY CLOSED. P240: GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT. P241: USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/ LIGHTING EQUIPMENT. P242: USE ONLY NON-SPARKING TOOLS. P243: TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE. P280: WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE PROTECTION. P303,P361,P353: IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER. P370,P378: IN CASE OF FIRE: USE MEDIA SPECIFIED IN SECTION V TO EXTINGUISH. P403,P235:

STORE IN A WELL-VENTILATED PLACE. KEEP COOL. P501: DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL/ REGIONAL/ NATIONAL/ INTERNATIONAL REGULATIONS.

EYE CONTACT:
W319: CAUSES SERIOUS EYE IRRITATION. P280: WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECT ION. P264: WASH HANDS AND EXPOSED BODY PARTS THOROUGHLY AFTER HANDLING. P305,P351,P338: IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. P337,P313: IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ ATTENTION.

SKIN CONTACT:
NOT CLASSIFIED AS A HAZARDOUS SUBSTANCE OR MIXTURE IN CONTACT WITH SKIN.

INHALATION:
NOT CLASSIFIED AS A HAZARDOUS SUBSTANCE OR MIXTURE FOR INHALATION.INGESTION
NOT CLASSIFIED AS A HAZARDOUS SUBSTANCE OR MIXTURE FOR INGESTION.

HAZARDS NOT CLASSIFIED:
NO DATA AVAILABLE.

OTHER HEALTH EFFECTS:
H360: MAY DAMAGE FERTILITY OR THE UNBORN CHILD. H336: MAY CAUSE DROWSINESS OR DIZZINESS. F201: OBTAIN SPECIAL INSTRUCTIONS BEFORE USE. P202: DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD. P2B80: WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECT ION. P261: AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPORS/ SPRAY. P271: USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA. P308+P313: IF EXPOSED OR CONCBRNED: GET MEDICAL ADVICE/ ATTENTION. P304+P340: IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREA THING. P312: CALL A POLSON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL. P405; STORE LOCKED UP. P403+P233: STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. P501: DISPOSE OF CONTENTS/ CONTAINER IN ACCORDANCE WITH LOCAL/ REGIONAL/ NATION AL/ INTERNATIONAL REGULATIONS.

OTHER HAZARDS:
USE ONLY IN A WELL-VENTILATED AREA OR IN A HOOD WHERE NO FLAME OR OTHER IGNITION SOURCES ARE PRESENT. DO Not USE PRODUCT IN FOOD-PROCESSING OR FOOD-HANDLING EQUIPMENT OR ON SURFACES THAT MAY CONTACT FOOD. DO NOT ALLOW PRODUCT TO CONTAMINATE FOODSTUFFS. DO NOT EAT, DRINK OR SMOKE WHEN USING PRODUCT. WASH HANDS THOROUGHLY AFTER HANDLING. DO NOT BREATHE VAPORS. WEAR SUITABLE EYE AND SKIN PROTECTION. KEEP CONTAINER CLOSED WHEN NOT IN USE. PROTECT FROM TEMPERATURE EXTREMES. IN CASE OF SPILL OR LEAK, REMOVE IGNITION SOURCES AND VENTILATE AREA.

SECTION 3

No.	component	CAS#	% by wt.	SARA	vapor pressure (mm Hg @ 20C)	LEL (@ 25 c)
1.	2-PROPOXYPROPANOL 1	569-01-3	15-20	NO	1.70	1.50
2.	1,3-DIOXOLANE	646-06-0	15-20	NO	70,00	N/A
3.	PROPYLENE GLYCOL METHYL ETHER ACETATE	108-65-6	15-20	No	3.70	1.50 @ 200¢c
4.	ACETONE	67-64-1	10-15	No	182.00	2.60

(N/A = not applicable)

SECTION 4 FIRST AID MEASURES

EYE CONTACT:
IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. SEEK PROMPT MEDICAL ATTENTION.

SKIN CONTACT:
REMOVE CONTAMINATED CLOTHING AND SHOES. WIPE EXCESS FROM SKIN AND FLUSH WITH WATER USING SOAP IF AVAILABLE. SEEK MEDICAL ATTENTION IF IRRITATION OCCURS. DO NOT REUSE CLOTHING UNTIL THOROUGHLY DECONTAMINATED.

INHALATION:
REMOVE VICTIM TO FRESH AIR AND TREAT SYMPTOMATICALLY. PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF THE VICTIM IS NOT BREATHING. SEEK PROMPT MEDICAL ATTENTION.

INGESTION:
DILUTE WITH LIQUID UNLESS THE VICTIM IS UNCONSCIOUS OR VERY DROWSY. IF VOMITING SPONTANEOUSLY OCCURS, KEEP THE VICTIM'S HEAD BELOW THE HIPS TO PREVENT ASPIRATION INTO THE LUNGS. CONSULT A PHYSICIAN, HOSPITAL OR POISON CONTROL CENTER AND/OR TRANSPORT TO AN EMERGENCY FACILITY IMMEDIATELY.

SECTION 5 FIRE FIGHTING MEASURES

Flammability classification - OSHA: FLAMMABLE LIQUID
- DOT: FLAMMABLE LIQUID

EXTINGUISHING MEDIA:
USE WATER FOG, FOAM, DRY CHEMICAL OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:
WARNING. FLAMMABLE CLEAR FIRE AREA OF UNPROTECTED PERSONNEL. DO NOT ENTER CONFINED FIRE SPACE WITHOUT HELMET, FACE SHIELD, BUNKER COAT, GLOVES, RUBBER BOOTS, AND A POSITIVE PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILD UP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED PREVENT WEAKENING OF CONTAINER STRUCTURE.

SECTION 6 ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES:
LARGE SPILLS >> EVACUATE THE HAZARD AREA OF UNPROTECTED PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. IF VAPOR CLOUD FORMS, WATER FOG MAY BE USED TO SUPPRESS; CONTAIN RUN-OFF. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE, DISPOSE OF FLUSH SOLUTIONS AS ABOVE. SMALL SPILLS >> TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS, SEAL TIGHTLY FOR PROPER DISPOSAL.

SECTION 7 HANDLING AND STORAGE

KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND SOURCE OF IGNITION
NO SMOKING
KEEP CONTAINER CLOSED IN A DRY AND VENTILATED AREA
OBSERVE LABEL PRECAUTIONS
DO NOT EAT, DRINK OR SMOKE DURING USE

SECTION 8 EXPOSURE CONTROLS/EMPLOYEE PROTECTION

No.	(OSHA)	PEL/TWA	PEL/CEILING	PEL/STEL	SKIN
1	N/E	N/E	N/E	N/E	N/E
2	N/E	N/E	N/E	N/E	N/E
3	N/E	N/E	N/E	N/E	N/E
4	1000ppm	N/E	N/E	N/E	N/E

No.	(ACGIH)	TLV/TWA	TLV/CEILING	TLV/STEL	SKIN
1	N/E		N/E	N/E	N/E
2	20ppm		N/E	N/E	N/E
3	N/E		N/E	N/E	N/E
4	250ppm		N/E	500ppm	N/E

>> The dried film of this product may become a dust nuisance when removed by sanding or grinding. OSHA recommends a PEL/TWA of 15mg/m3 for total dust and 5 mg/m3 for the respirable fraction. ACGIH recommends a TLV/TWA of 10 mg/m3 for total dust.

>> (SKIN) absorption may contribute to the overall exposure to this material. Take appropriate measures to prevent skin contact.

{N/E = not established)

>> None of the components of this product are recognized as carcinogenic.

RESPIRATORY PROTECTION:
AVOID PROLONGED OR REPEATED BREATHING OF VAPORS/MIST. IF EXPOSURE EXCEEDS TLV USE A NIOSH-APPROVED POSITIVE PRESSURE SUPPLIED AIR RESPIRATOR TO PREVENT OVER EXPOSURE.

PROTECTIVE CLOTHING:
AVOID CONTACT WITH EYES. WEAR GOGGLES IF THERE IS A LIKELIHOOD OF CONTACT WITH EYES. DO NOT GET ON SKIN OR ON CLOTHING.

ADDITIONAL PROTECTIVE MEASURES:
USE VENTILATION AS REQUIRED TO CONTROL VAPOR/DUST CONCENTRATIONS. EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE FOR USE IN AN EMERGENCY.

SECTION 9 PHYSICAL PROPERTIES

% volatile by volume: 4.41 +/-2% weight per gallon: 9.90 +/- .2
% volatile by weight: 65.59 +/-2% VOC as supplied is 5.0476 pounds per gallon.

PHYSICAL STATE: LIQUID
COLOR: (G) Gray
ODOR: STRONG SOLVENT
ODOR THRESHOLD: NOT AVAILABLE
pH: N/A
MELTING/FREEZING POINT: NOT AVAILABLE
INITIAL BOILING POINT: 173 (degrees F)
BOILING RANGE: NOT AVAILABLE
EVAPORATION RANGE: NOT AVAILABLE
FLAMMABILITY (SOLID, GAS): NOT AVAILABLE
FLAMMABILITY/EXPLOSIVE LIMITS: NOT AVAILABLE
VAPOR PRESSURE: NOT AVAILABLE
VAPOR DENSITY: NOT AVAILABLE
RELATIVE DENSITY: 1.187
SOLUBILITY: NOT AVAILABLE
PARTITION COEFFICIENT: NOT RELEVANT
AUTO-IGNITION TEMPERATURE: NOT AVAILABLE
DECOMPOSITION TEMPERATURE: NOT AVAILABLE
VISCOSITY (AT 77F): 15-25 SEC,#2 ZAHN

Flash point: 23 +/-2 degrees F. SETAFLASH

SECTION 10 STABILITY AND REACTIVITY

STABILITY: STABLE
HAZARDOUS POLYMERIZATION: MAY OCCUR

CONDITIONS AND MATERIALS TO AVOID:
BASED ON THE PRESENCE OF COMPONENTS 1, 2, 3 AND 4 AVOID OXIDIZING MATERIALS. BASED ON THE PRESENCE OF COMPONENT 2 AVOID STRONG ACIDS.

HAZARDOUS DECOMPOSITION PRODUCTS:
CARBON DIOXIDE, CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION 11 TOXICOLOGICAL INFORMATION

COMPONENTS	CAS #	HAZARD	
2-PROPOXYPROPANOL	1569-01-3	IRRITATING TO EYES,INHALATION, INGESTION	
1,3 DIOXOLANE	646-06-0	LD50 ORAL RAT	>2000 mg/kg
		LC50 INHALATION RAT mg/l	68.4 mg/l/4h
2-METHOXYPROPYL ACETATE	70657-70-4	STOT - SINGLE EXPOSURE	RESPIRATORY SYSTEM IRRITATION
ACETONE	67-64-1	IRRITATING TO EYES	EXPOSURE TIME 24HRS
		STOT – SINGLE EXPOSURE	MAY CAUSE DROWSINESS OR DIZZINESS

SECTION 12 ECOLOGICAL INFORMATION

1569-01-3 2-PROPOXYPROPANOL
Harmful to Aquatic Life: N
Not Harmful to Aquatic Life: N
May be Harmful to Aquatic: Y

646-06-0 1,3-DIOXOLANE
Harmful to Aquatic Life: N
Not Harmful to Aquatic Life: Y
May be Harmful to Aquatic: N

108-65-6 PROPYLENE GLYCOL METHYL ETHER ACETATE
Harmful to Aquatic Life: Y
Not Harmful to Aquatic Life: N
May be Harmful to Aquatic: Y

67-64-1 ACETONE
Harmful to Aquatic Life: Y
Not Harmful to Aquatic Life: N
May be Harmful to Aquatic: Y

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:
WASTE CHARACTERIZATIONS AND COMPLIANCE WITH APPLICABLE LAWS ARE THE SOLE RESPONSIBILITY OF THE END USER. ALL DISPOSAL PRACTICES USED FOR THIS PRODUCT AND ITS CONTAINER(S) MUST BE IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS. THE INFORMATION PRESENTED IN THIS SDS PERTAINS ONLY TO THE PRODUCT AS SHIPPED.

SECTION 14 TRANSPORTATION INFORMATION

Land Transport:

USDOT

Proper shipping name: PAINT
NOS Components:
Hazard class: 3
ID-number: UN1263
Packing group: II
Aquatic Toxicity: YES

Sea Transport: IMDG

Proper shipping name: PAINT
NOS Components: ACETONE
Hazard class: 3
ID-number: UN1263
Packing group: II
Aquatic Toxicity: YES

Air Transport: IATA/ICAO

Proper shipping name: PAINT
NOS Components: ACETONE
Hazard class: 3
ID-number: UN1263
Packing group: II
Aquatic Toxicity: YES

SECTION 15 REGULATORY INFORMATION

CAS# Component		CAS# Component
1569-01-3 2-PROPOXYPROPANOL		646-06-0 1,3-DIOXOLANE
US TSCA inventory: YES		US TSCA Inventory: YES
Canada Domestic Substance List: YES		Canada Domestic Substance List: YES
EC 3: YES		EC: YES
Philippines: YES		Philippines: YES
Japan: UNKNOWN		Japan: YES
Korea: UNKNOWN		Korea: YES
China: YES		China: YES
Australia: YES		Australia: NO

SECTION 15 REGULATORY INFORMATION CONTINUED

CAS#	Component
108-65-6	Propylene Methyl Ether Acetate

US TSCA inventory: YES
Canada Domestic Substance List: YES
EC: YES
Philippines: YES
Japan: YES
Korea: YES
China: UNKNOWN
Australia: YES

CAS#	Component
67-64-1	ACETONE

US TSCA inventory: YES
Canada Domestic Substance List: YES
EC: YES
Philippines: YES
Japan: YES
Korea: YES
China: YES
Australia: YES

⚠ WARNING This product can expose you to chemicals including FORMALDEHYDE ,which is known to the State of California to cause cancer, and 4,4'-(1-METHYLETHYLIDENE)BISPHENOL, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

no.	component	CAS#	SARA
1.	2-PROPOXYPROPANOL 1	569-01-3	NO
2.	1,3-DIOXOLANE	646-06-0	NO
3.	PROPYLENE GLYCOL METHYL ETHER ACETATE	108-65-6	No
4.	ACETONE	67-64-1	No

SECTION 16 OTHER INFORMATION

HMIS:
HEALTH: 2
FLAMMABILITY: 3
REACTIVITY: 0
PERSONAL PROTECT: X

CONTAINERS CAN CONTAIN HAZARDOUS PRODUCT RESIDUES EVEN WHEN EMPTY. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, WE MAKE NO WARRANTY, EXPRESSED, OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.