Creosalus, Inc (Advanced ChemTech) www.AdvancedChemTech.com SAFETY DATA SHEET

Revision Date 09/20/2017

1.1	JCT AND COMPANY IDENTIFICA Product identifiers			
	Product name	: Fmoc-Asn(Trt)-OPfp		
	Product Number	: FN5152		
	Brand	: Advanced ChemTech		
4.0	CAS-No.	:132388-64-8		
1.2	Identified uses	substance or mixture and uses advised against : Laboratory chemicals, Manufacture of substances		
1.3	Details of the supplier of the sa			
1.5	Company	: Creosalus, Inc.		
	Company	5609 Fern Valley Rd, Louisville, KY 40228 USA		
	Telephone	: +1 800-456-1403		
	Fax	:+1 502-968-1000		
1.4	Emergency telephone number			
2. HAZAF	RDS IDENTIFICATION			
2.1	Classification of the substance	or mixture: Not a hazardous substance or mixture.		
2.2	GHS Label elements, including	precautionary statements: Not a hazardous substance or mixture.		
2.3		d (HNOC) or not covered by GHS – none		
3. COMP	OSITION/INFORMATION ON INGR	EDIENTS		
3.1	Substances			
••••	Formula	: C44H31F5N2O5		
	Molecular Weight	: 762.69g/mole		
	CAS-No.	: 132388-64-8		
	No ingredients are hazardous acc			
		sed according to the applicable regulations.		
	AID MEASURES			
4. FIRST	Description of first aid measure			
4.1				
	If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration.			
	In case of skin contact: Wash off with soap and plenty of water. In case of eye contact: Flush eyes with water as a precaution.			
		g by mouth to an unconscious person. Rinse mouth with water.		
10				
4.2	labeling (see section 2.2) and/or i	effects, both acute and delayed: The most important known symptoms and effects are described a section 11		
4.3		dical attention and special treatment needed: No data available		
	GHTING MEASURES			
5.1	Extinguishing media			
		Jse water spray, alcohol-resistant foam, dry chemical or carbon dioxide.		
5.2	Special hazards arising from the substance or mixture: Carbon oxides, nitrogen oxides (NOx), fluorides			
5.3		If contained breathing apparatus for fire fighting if necessary.		
5.4	Further information: No data av	aliable		
	ENTAL RELEASE MEASURES	· · · · · · · · · · · · · · · · · · ·		
6.1		ve equipment, and emergency procedure: Avoid dust formation. Avoid breathing vapors, mist		
	For personal protection see section			
6.2	Environmental precautions: Do			
~ ~		ainment and cleaning up: Sweep up and shovel. Keep in suitable, closed containers for disposal.		
6.3	Reference to other sections: For			
6.3 6.4		r disposal see section 13.		
6.4	ING AND STORAGE	or disposal see section 13.		
6.4	Precautions for safe handling:	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre		
6.4 7. HANDL 7.1	Precautions for safe handling: fire protection. For precautions, set	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre-		
6.4 7. HANDL	Precautions for safe handling: fire protection. For precautions, su Conditions for safe storage,	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre se section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated		
6.4 7. HANDL 7.1 7.2	Precautions for safe handling: fire protection. For precautions, sr Conditions for safe storage, Recommended storage temperate	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C		
6.4 7. HANDL 7.1	Precautions for safe handling: fire protection. For precautions, sr Conditions for safe storage, Recommended storage temperate	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- se section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated		
6.4 7. HANDL 7.1 7.2 7.3	Precautions for safe handling: fire protection. For precautions, sr Conditions for safe storage, Recommended storage temperate	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS	Precautions for safe handling: fire protection. For precautions, so Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS	Precautions for safe handling: fire protection. For precautions, so Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR fol parameters	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, so Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR fol parameters	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR fol parameters Components with workplace co sure controls	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR fol parameters Components with workplace co sure controls	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- es section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION ontrol parameters Contains no substances with occupational exposure limit values.		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR ol parameters Components with workplace co sure controls Appropriate engineering control Personal protective equipment	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION Introl parameters Contains no substances with occupational exposure limit values.		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR ol parameters Components with workplace co sure controls Appropriate engineering control Personal protective equipment	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION Introl parameters Contains no substances with occupational exposure limit values.		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR ol parameters Components with workplace co sure controls Appropriate engineering contro Personal protective equipment Eye/face protection Use equipm or EN 166(EU).	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION Introl parameters Contains no substances with occupational exposure limit values. In General industrial hygiene practice.		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR fol parameters Components with workplace co sure controls Appropriate engineering contro Personal protective equipment Eye/face protection Use equipm or EN 166(EU). Skin protection Handle with glow	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION Introl parameters Contains no substances with occupational exposure limit values. In General industrial hygiene practice. The tore ye protection tested and approved under appropriate government standards such as NIOS wes. Gloves must be inspected prior to use. Use proper glove removal technique (without touching		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR fol parameters Components with workplace co sure controls Appropriate engineering contro Personal protective equipment Eye/face protection Use equipm or EN 166(EU). Skin protection Handle with glow	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- sestion 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION Introl parameters Contains no substances with occupational exposure limit values. In General industrial hygiene practice. In the for eye protection tested and approved under appropriate government standards such as NIOS wes. Gloves must be inspected prior to use. Use proper glove removal technique (without touching act with this product. Dispose of contaminated gloves after use in accordance with applicable law		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperat Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR ol parameters Components with workplace co sure controls Appropriate engineering control Personal protective equipment Eye/face protection Use equipm or EN 166 (EU). Skin protection Handle with glow outer surface) to avoid skin cont good laboratory practices. Wash a	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION ontrol parameters Contains no substances with occupational exposure limit values. Pls General industrial hygiene practice. ent for eye protection tested and approved under appropriate government standards such as NIOS ves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching act with this product. Dispose of contaminated gloves after use in accordance with applicable law and dry hands.		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, si Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR ol parameters Components with workplace co sure controls Appropriate engineering contro Personal protective equipment Eye/face protection Use equipm or EN 166(EU). Skin protection Handle with gloo outer surface) to avoid skin cont good laboratory practices. Wash is Body Protection Choose body	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION OTECTION Introl parameters Contains no substances with occupational exposure limit values. In General industrial hygiene practice. ent for eye protection tested and approved under appropriate government standards such as NIOS res. Gloves must be inspected prior to use. Use proper glove removal technique (without touching act with this product. Dispose of contaminated gloves after use in accordance with applicable lav and dry hands. protection in relation to its type, to the concentration and amount of dangerous substances, and		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, si Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR ol parameters Components with workplace co sure controls Appropriate engineering contro Personal protective equipment Eye/face protection Use equipm or EN 166(EU). Skin protection Handle with gloo outer surface) to avoid skin cont good laboratory practices. Wash is Body Protection Choose body	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preve es section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION OTECTION OTECTION ontrol parameters Contains no substances with occupational exposure limit values. OIS General industrial hygiene practice. ent for eye protection tested and approved under appropriate government standards such as NIOSI ves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching g act with this product. Dispose of contaminated gloves after use in accordance with applicable law and dry hands. protection in relation to its type, to the concentration and amount of dangerous substances, and protective equipment must be selected according to the concentration and amount of the dang		
6.4 7. HANDL 7.1 7.2 7.3 8. EXPOS 8.1 Contr	Precautions for safe handling: fire protection. For precautions, sc Conditions for safe storage, Recommended storage temperati Specific end use(s): Apart from SURE CONTROLS/PERSONAL PR fol parameters Components with workplace co sure controls Appropriate engineering contro Personal protective equipment Eye/face protection Use equipment or EN 166(EU). Skin protection Handle with glow outer surface) to avoid skin cont good laboratory practices. Wash is Body Protection Choose body specific work-place., the type of	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for pre- ee section 2.2. including any incompatibilities: Keep container tightly closed in a dry and well-ventilated ure: 2 - 8 °C the uses mentioned in section 1.2 no other specific uses are stipulated OTECTION OTECTION OTECTION ontrol parameters Contains no substances with occupational exposure limit values. OIS General industrial hygiene practice. ent for eye protection tested and approved under appropriate government standards such as NIOS ves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching a act with this product. Dispose of contaminated gloves after use in accordance with applicable law and dry hands. protection in relation to its type, to the concentration and amount of dangerous substances, and protective equipment must be selected according to the concentration and amount of the dan		

Respiratory protection Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure Do not let product enter drains.

9. PHY	SICAL AND CHEMICAL PROPERTIES				
9.1	Information on basic physical and chemical properties				
	a) Appearance	Form: White to Off-White powder			
	b) Odor	no data available			
	c) Odor Threshold	no data available			
	d) pH	no data available			
	e) Melting point/freezing point	no data available			
	f) Initial boiling point and boiling range	no data available			
	g) Flash point	no data available			
	h) Evaporation rate	no data available			
	i) Flammability (solid, gas)	no data available			
	j) Upper/lower flammability or explosive limits	no data available			
	k) Vapor pressure	no data available			
	I) Vapor density	no data available			
	m) Relative density	no data available			
	n) Water solubility	no data available			
	 Partition coefficient: n- octanol/water 	no data available			
	 p) Auto-ignition temperature 	no data available			
	 d) Decomposition temperature 	no data available			
	r) Viscosity	no data available			
	s) Explosive properties	no data available			
	t) Oxidizing properties	no data available			
9.2	Óther safety information:	no data available			

10. STABILITY AND REACTIVITY

- 10.1 Reactivity: No data available
- Chemical stability: Stable under recommended storage conditions. 10.2
- 10.3 Possibility of hazardous reactions: No data available
- 10.4 Conditions to avoid: No data available
- 10.5 Incompatible materials: Strong oxidizing agents
- 10.6 Hazardous decomposition products: Other decomposition products - no data available. In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

- Information on toxicological effects 11.1
 - Acute toxicity: No data available
 - Inhalation: No data available
 - Dermal: No data available
 - Skin corrosion/irritation: No data available
 - Serious eye damage/eye irritation: No data available
 - Respiratory or skin sensitization: No data available
 - Germ cell mutagenicity: No data available
 - Carcinogenicity:
 - IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
 - ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
 - NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
 - OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
 - Reproductive toxicity: No data available
 - Specific target organ toxicity single exposure: No data available
 - Specific target organ toxicity repeated exposure: No data available
 - Aspiration hazard: No data available
 - Additional Information
 - **RTECS:** Not available
 - To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

- Toxicity: No data available 12.1
- Persistence and degradability: No data available 12.2
- Bioaccumulative potential: No data available 12.3
- 12.4
- Mobility in soil: No data available Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted 12.5 12.6 Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods
 - Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

© CREOSALUS, INC. ALL RIGHTS RESERVED

DOT (US) Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods

15. REGULATORY INFORMATION

 SARA 302 Components

 SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

 SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

 SARA 31/312 Hazards: No SARA Hazards

 Massachusetts Right to Know Components: No components are subject to the Massachusetts Right to Know Act.

 Pennsylvania Right to Know Components

 Fmoc-Asn(Trt)-OPfp
 CAS-No.

 Revision Date

 132388-64-8

 New Jersey Right to Know Components

 Fmoc-Asn(Trt)-OPfp
 CAS-No.

 Revision Date

 132388-64-8

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating	
Health hazard:	0
Chronic Health Hazard:	0
Flammability:	0
Physical Hazard	0
NFPA Rating	
Health hazard:	0
Fire Hazard:	0
Reactivity Hazard:	0

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. CreoSalus, Inc. shall not be liable for any damage resulting in the handling or from contact with the above product.

© CREOSALUS, INC. ALL RIGHTS RESERVED