

Revision: 01/04/2020

	Supersedes Revision: 12/02/2016					
	according	to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830	and US OSHA HCS 2015			
	Section 1. Identification of the Substance/Mixture and of the Company/Undertaking					
.1	Product Code: Product Name: Synonyms:	10638 FLLL32 (2E,2'E)-1,1'-cyclohexylidenebis[3-(3,4-dimetho	xyphenyl)]-2-propen-1-one; JAK2 Inhibitor X;			
2	Relevant identified uses of	the substance or mixture and uses advised aga	inst:			
	Relevant identified uses:	For research use only, not for human or veterin	ary use.			
1.3	Details of the Supplier of th	e Safety Data Sheet:				
	Company Name:	Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108				
	Web site address:	www.caymanchem.com				
	Information:	Cayman Chemical Company	+1 (734)971-3335			
4	Emergency telephone num	ber:				
	Emergency Contact:	CHEMTREC Within USA and Canada: CHEMTREC Outside USA and Canada:	+1 (800)424-9300 +1 (703)527-3887			
		Section 2. Hazards Identifica	ation			
	Skin Sensitization, Catego Specific Target Organ To:	ory 1 xicity (single exposure), Category 3				
2	-	-				
2	Specific Target Organ To: Label Elements:	xicity (single exposure), Category 3				
2	Specific Target Organ To	-				
2	Specific Target Organ To: Label Elements: GHS Signal Word:	xicity (single exposure), Category 3 Warning				
2	Specific Target Organ To: Label Elements: GHS Signal Word: GHS Hazard Phrases:	xicity (single exposure), Category 3 Warning				
2	Specific Target Organ To: Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation	xicity (single exposure), Category 3 Warning n. ic skin reaction.				
2	Specific Target Organ To: Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi	wicity (single exposure), Category 3 Warning n. ic skin reaction. irritation.				
2	Specific Target Organ To Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phras	wicity (single exposure), Category 3 Warning n. ic skin reaction. irritation. ry irritation.				
2	Specific Target Organ To: Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phras P261: Avoid breathing {dustion	wicity (single exposure), Category 3 Warning N. In the skin reaction. Irritation. Irry irritation. Irry irritation.				
2	Specific Target Organ To Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phrase P261: Avoid breathing {dus P264: Wash {hands} thorous	wicity (single exposure), Category 3 Warning M				
2	Specific Target Organ To Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phrase P261: Avoid breathing {dus P264: Wash {hands} thorou P272: Contaminated work of	wicity (single exposure), Category 3 Warning N. In the skin reaction. In the skin react				
2	Specific Target Organ To: Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phras P261: Avoid breathing {dus P264: Wash {hands} thorou P272: Contaminated work of P280: Wear {protective glow	wicity (single exposure), Category 3 Warning N. In the skin reaction. Irritation. Irry irritation. Irry irritation. Irry irritation. Irry irritation. In the section of the				
2	Specific Target Organ To Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phras P261: Avoid breathing {dus P264: Wash {hands} thorou P272: Contaminated work of P280: Wear {protective glow GHS Response Phrases:	wicity (single exposure), Category 3 Warning Warning Warning Kategory Structure Kategory				
2	Specific Target Organ To: Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phrase P261: Avoid breathing {dus P264: Wash {hands} thorou P272: Contaminated work of P280: Wear {protective glow GHS Response Phrases: P302+352: IF ON SKIN: Wa P304+340: IF INHALED: Re P305+351+338: IF IN EYES	wicity (single exposure), Category 3 Warning N. In the skin reaction. In the skin react	ion comfortable for breathing.			
2	Specific Target Organ To: Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phrase P261: Avoid breathing {dus P264: Wash {hands} thorou P272: Contaminated work of P280: Wear {protective glow GHS Response Phrases: P302+352: IF ON SKIN: Wa P304+340: IF INHALED: Re P305+351+338: IF IN EYES	wicity (single exposure), Category 3 Warning Warning Warning Warning Warning Kate Skin reaction. Kate Skin	ion comfortable for breathing.			
2	Specific Target Organ To: Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phras P261: Avoid breathing {dus P264: Wash {hands} thorou P272: Contaminated work of P280: Wear {protective glow GHS Response Phrases: P302+352: IF ON SKIN: Wa P304+340: IF INHALED: Re P305+351+338: IF IN EYES to do. Continue rinsing. P312: Call a POISON CEN	wicity (single exposure), Category 3 Warning Warning Warning Warning Warning Warning Konseries K	ion comfortable for breathing.			
2	Specific Target Organ Tox Label Elements: GHS Signal Word: GHS Hazard Phrases: H315: Causes skin irritation H317: May cause an allergi H319: Causes serious eye H335: May cause respirator GHS Precautionary Phras P261: Avoid breathing {dus P264: Wash {hands} thorou P272: Contaminated work of P280: Wear {protective glow GHS Response Phrases: P302+352: IF ON SKIN: Wa P304+340: IF INHALED: Re P305+351+338: IF IN EYES to do. Continue rinsing. P312: Call a POISON CEN	wicity (single exposure), Category 3 Warning Warning Warning Warning Warning Kate Skin reaction. Kate Skin	ion comfortable for breathing.			



Revision: 01/04/2020 Supersedes Revision: 12/02/2016

	D3637	364: Take off cont	minated clothing and wash it l	ooforo rouso				
	P362+364: Take off contaminated clothing and wash it before reuse. GHS Storage and Disposal Phrases:							
Please refer to Section 7 for Storage and Section 13 for Disposal information.								
	UFI:							
2.3		e Human Health	Causes serious eye irritation					
	Effects	and Symptoms:	Causes skin irritation.					
			Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. May cause an allergic skin reaction.					
			May cause respiratory system irritation. To the best of our knowledge, the toxicological properties have not been thoroughly investigated.					
					-			
		Sect	tion 3. Composition	/Information of	on Ingredie	nts		
CAS RTE		Hazardous Comp REACH Registra	oonents (Chemical Name)/	Concentration	EC No./ EC Index No.	GHS Classification		
				100.0.%				
12268 NA	95-15-3	FLLL32		100.0 %	NA NA	Skin Corr. 2: H315 Skin Sens. 1: H317		
						Eye Damage 2A: H319		
						STOT (SE) 3: H335 H336		
			Section 4. Fi	rst Aid Measu	ires	·		
4.1	Descrip	tion of First Aid						
	Measures:							
	In Case of Inhalation:		Remove to fresh air. If not bre	eathing, give artificial	respiration or giv	e oxygen by trained personnel.		
			Get immediate medical attention.					
	In Case of Skin Contact:		Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated					
			clothing. Get medical attention if symptoms occur. Wash clothing before reuse.					
In Case of Eye		of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined					
		-	and tested by medical persor	inel.				
	In Case of Ingestion:		Wash out mouth with water provided person is conscious. Never give anything by mouth to an					
			unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by					
			medical personnel.					
			Section 5. Fire	Fighting Mea	sures			
5.1	Suitable Extinguishing Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.							
	Media:		Use water spray to cool fire-e	exposed containers.				
	Unsuita	ble Extinguishing	A solid water stream may be	inefficient.				
	Media:	0 0						
5.2	Flammable Properties andNo data available.							
	Hazards	5:						
			No data available.					
	Flash P	t:	No data.					
	Explosi	ve Limits:	LEL: No data.	UEL: No da	ta.			
	-	ition Pt:	No data.					
5.3	-		: As in any fire, wear self-conta	ained breathing appa	ratus pressure-de	emand (NIOSH approved or		
	3	5	equivalent), and full protectiv	• • • •	-			



Revision: 01/04/2020

Supersedes Revision: 12/02/2016

Section 6. Accidental Release Measures 6.1 Avoid raising and breathing dust, and provide adequate ventilation. **Protective Precautions,** Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). **Emergency Procedures:** 6.2 Environmental Take steps to avoid release into the environment, if safe to do so. Precautions: 6.3 Methods and Material For Contain spill and collect, as appropriate. Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations. Up: Section 7. Handling and Storage 7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray. in Handling: Avoid prolonged or repeated exposure. 7.2 Precautions To Be Taken Keep container tightly closed. Store in accordance with information listed on the product insert. in Storing: Section 8. Exposure Controls/Personal Protection 8.1 **Exposure Parameters:** 8.2 **Exposure Controls:** 8.2.1 Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. (Ventilation etc.): 8.2.2 Personal protection equipment: Eye Protection: Safety glasses Compatible chemical-resistant gloves **Protective Gloves:** Other Protective Clothing: Lab coat NIOSH approved respirator, as conditions warrant. **Respiratory Equipment** (Specify Type): Work/Hygienic/Maintenan Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. ce Practices: Wash thoroughly after handling. No data available. Section 9. Physical and Chemical Properties 9.1 Information on Basic Physical and Chemical Properties **Physical States:** []Gas [] Liquid [X] Solid Appearance and Odor: A crystalline solid No data. pH: No data. Melting Point: No data. **Boiling Point:** No data. Flash Pt: No data. **Evaporation Rate:** No data available. Flammability (solid, gas): **Explosive Limits:** LEL: No data. UEL: No data. Vapor Pressure (vs. Air or mm No data. Hq): Vapor Density (vs. Air = 1): No data.

Image: Solution of the second seco	No data. ~15 mg/ml in DMSO; ~10 m No data. No data. No data. No data. No data. t: C28H32O6 464.6 <u>Section 10. Stability</u> to data available. nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X to data available. o data available.	and Reactiv	vity				
ty Notes: /Water Partition ent: ition Pt: position Temperature y: formation Volatile: ar Formula & Weight ty: Note striction: With ons To Avoid: Note atibility - Materials Note d: poss Ca	~15 mg/ml in DMSO; ~10 m No data. No data. No data. No data. No data. No data. t: C28H32O6 464.6 Section 10. Stability o data available. nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available.	and Reactiv	vity				
Water Partition ent: ition Pt: position Temperature y: formation Volatile: ar Formula & Weight ty: Note sty: Uf Note(s): St rization: W ons To Avoid: No atibility - Materials No d: bus ca	No data. No data. No data. No data. No data. t: C28H32O6 464.6 <u>Section 10. Stability</u> to data available. Instable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X to data available. to data available. to data available. to data available.	and Reactiv	vity				
ent: ition Pt: position Temperature y: formation Volatile: ar Formula & Weight ty: Naterials Nateri	No data. No data. No data. No data. E: C28H32O6 464.6 Section 10. Stability o data available. Instable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X to data available. o data available.	information listed c		insert.			
ition Pt: position Temperature y: formation Volatile: ar Formula & Weight ty: Note size in the second secon	No data. No data. No data. C28H32O6 464.6 Section 10. Stability o data available. nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available. o data available.	information listed c		insert.			
iosition Temperature y: formation Volatile: ar Formula & Weight ty: Note 'Note(s): Si tization: W ons To Avoid: No atibility - Materials No d: bus ca	No data. No data. No data. C28H32O6 464.6 Section 10. Stability o data available. nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available. o data available.	information listed c		insert.			
iosition Temperature y: formation Volatile: ar Formula & Weight ty: Note 'Note(s): Si tization: W ons To Avoid: No atibility - Materials No d: bus ca	No data. No data. t: C28H32O6 464.6 Section 10. Stability o data available. nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available. arbon dioxide	information listed c		insert.			
y: formation Volatile: ar Formula & Weight ty: Note 's Note(s): St rization: W ons To Avoid: No atibility - Materials No d: case case	No data. No data. t: C28H32O6 464.6 Section 10. Stability o data available. nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available. arbon dioxide	information listed c		insert.			
Tormation Volatile: ar Formula & Weight ty: Note 'Note(s): St tization: W ons To Avoid: Note atibility - Materials Note d: bus ca	t: C28H32O6 464.6 Section 10. Stability o data available. Instable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available. arbon dioxide	information listed c		insert.			
Volatile: ar Formula & Weight ty: Note 'Note(s): St rization: W ons To Avoid: No atibility - Materials No d: case case	t: C28H32O6 464.6 Section 10. Stability o data available. Instable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available. arbon dioxide	information listed c		insert.			
ar Formula & Weight ty: Note Note(s): Strization: W ons To Avoid: Note atibility - Materials Note d: Cartion C	t: C28H32O6 464.6 Section 10. Stability o data available. Instable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available. arbon dioxide	information listed c		insert.			
ty: Note Note(s): Strization: W ons To Avoid: No atibility - Materials No d: case case	Section 10. Stability o data available. nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available.	information listed c		insert.			
Image: State of the system Units Note(s): State Station: W Station: W Station: Note Station: Station: Station: Calibrid:	o data available. nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available.	information listed c		insert.			
Image: State of the system Units Note(s): State Station: W Station: W Station: Note Station: Station: Station: Calibrid:	nstable [] Stable [X] table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available.		on the product	insert.			
rization: Si rization: W ons To Avoid: Na atibility - Materials Na d: case ca	table if stored in accordance with i fill occur [] Will not occur [X o data available. o data available. arbon dioxide		on the product	insert.			
rization: W ons To Avoid: No atibility - Materials No d: ous ca	'ill occur [] Will not occur [X o data available. o data available. arbon dioxide		in the product	insen.			
ons To Avoid: No atibility - Materials No d: ous ca	o data available. o data available. arbon dioxide						
atibility - Materials No d: pus ca	o data available. arbon dioxide						
d: ous ca	arbon dioxide						
ous ca							
osition or ca	arbon monoxide	10.6 Hazardous carbon dioxide					
	Decomposition or carbon monoxide						
ucts:							
	Section 11. Toxicolog	jical Informa	ation				
tion on Th	ne toxicological effects of this proc	luct have not been	thoroughly stu	udied.			
ogical Effects:							
-	nents (Chemical Name)	NTP	IARC	ACGIH	OSHA		
FLLL32		n.a.	n.a.	n.a.	n.a.		
	Section 12. Ecologic	cal Informati	on				
: Av	void release into the environment.						
R	unoff from fire control or dilution w	ater may cause po	ollution.				
nce and No	o data available.						
bility:							
mulative No	o data available.						
l:							
	o data available						
aanti							
i i i	bility: nulative No : n Soil: No of PBT and vPvB N ent:	bility: No data available. nulative No data available. : No data available. of PBT and vPvB No data available. ent: No data available.	bility: No data available. nulative No data available. n Soil: No data available. of PBT and vPvB No data available. ent: Vo data available.	bility: No data available. nulative No data available. n Soil: No data available. of PBT and vPvB No data available. ent: Volta available.	bility: No data available. nulative No data available. n Soil: No data available. of PBT and vPvB No data available. ent: Vo data available.		



Revision: 01/04/2020 Supersedes Revision: 12/02/2016

Page: 5 of 5

	Section 13. Dispos	al Considerat	ions			
3.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.						
Section 14. Transport Information						
RANSPORT (US I	DOT):					
r Shipping Name	Not dangerous goods.					
d Class:						
UN/NA Number:						
14.1 LAND TRANSPORT (European ADR/RID):						
	Not dangerous goods.					
	IATA):					
	Not dangerous goods.					
r:		Packing Grou	ıp:			
SS:						
nsport	Transport in accordance with lo	cal, state, and federa	l regulations.			
	Section 15. Regul	atory Informat	tion			
uperfund Amendn	nents and Reauthorization Act of	of 1986) Lists				
				S. 313 (TRI)		
1226895-15-3 FLLL32 No No No						
CAS # Hazardous Components (Chemical Name) Other US EPA or State Lists						
FLLL32	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No					
ormation	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.					
	Section 16. Oth	ner Information	า			
	01/04/2020					
rmation About	No data available.					
:y or Disclaimer:	currently available to us. Howev express or implied, with respect	er, we make no warra to such information, a	anty of merchantabilit and we assume no lia	y or any other warranty, ability resulting from its		
	RANSPORT (US I r Shipping Name: d Class: nber: RANSPORT (Euro hipping Name: r: ss: ANSPORT (ICAO// Shipping Name: r: ss: nsport (ICAO// Shipping Name: r: ss: nsport (ICAO// Shipping Name: r: flucture FLLL32 Hazardous Com FLLL32 FLLL32 ormation	Disposal Method: Dispose in accordance with loca Section 14. Tran RANSPORT (US DOT): r Shipping Name: Not dangerous goods. d Class: nber: RANSPORT (European ADR/RID): hipping Name: Not dangerous goods. r: ss: ANSPORT (ICAO/IATA): Shipping Name: Not dangerous goods. r: ss: nsport Transport in accordance with lo Section 15. Regul uperfund Amendments and Reauthorization Act of Hazardous Components (Chemical Name) FLLL32 Hazardous Components (Chemical Name) FLLL32 Macros Section 16. Oth 01/04/2020 rmation This SDS was prepared in accord No.1272/2008. Section 16. Oth 01/04/2020 rmation About No data available. sy or Disclaimer: DISCLAIMER: This information currently available to us. However express or implied, with respect use. Users should make their o	Disposal Method: Dispose in accordance with local, state, and federal r Section 14. Transport Informat RANSPORT (US DOT): r Shipping Name: Not dangerous goods. d Class: nber: RANSPORT (European ADR/RID): hipping Name: Not dangerous goods. r: ss: ANSPORT (ICAO/IATA): Shipping Name: Not dangerous goods. r: ss: ANSPORT (ICAO/IATA): Shipping Name: Not dangerous goods. r: Section 15. Regulatory Information ss: nsport Transport in accordance with local, state, and federa Section 15. Regulatory Information uperfund Amendments and Reauthorization Act of 1986) Lists Hazardous Components (Chemical Name) S. 302 (EHS) FLLL32 No Hazardous Components (Chemical Name) Other US EPA or S FLLL32 No Hazardous Components (Chemical Name) Other US EPA or S FLLL32 CAA HAP,ODC: No PROP.65: No promation This SDS was prepared in accordance with 29 CFR or No.1272/2008. Section 16. Other Information 01/04/2020 rmation About No data available. cy or Disclaimer: DISCLAIMER: This information is believed to be accur currently available to us. However, we make no warra express or implied, with respect to such information, i use. Users should make their own investigations to c	Section 14. Transport Information RANSPORT (US DOT): r shipping Name: Not dangerous goods. d class: nber: RANSPORT (European ADR/RID): hipping Name: Not dangerous goods. r: ss: ANSPORT (ICAO/IATA): Shipping Name: Not dangerous goods. r: Packing Group: ss: nsport Transport in accordance with local, state, and federal regulations. Section 15. Regulatory Information uperfund Amendments and Reauthorization Act of 1986) Lists Hazardous Components (Chemical Name) S. 302 (EHS) S. 304 RQ FLL132 No No Hazardous Components (Chemical Name) Other US EPA or State Lists FLL132 CAA HAP,ODC: No; CWA NPDES: No PROP.65: No Section 16. Other Information Othor/104/2020 Section 16. Other Information Othor/4/2020 ISSCLAIMER: This information is believed to be accurate and represents is currently available to us. However, we make no warranty of merch		

Multi-region format