Version 1.1	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
			Print Date 04/20/2023
SECTIO	N 1. IDENTIFICATION		
Pro	duct name	: EPOCAST@	0 35 A US
Mar	nufacturer or supplier's c	letails	
	Company name of supplier Address		Advanced Materials Americas LLC 980 ands, es of America (USA)
Tele	ephone		ency: (800) 257-5547
E-m	ail address	: Global_Pro	duct_EHS_AdMat@huntsman.com
Eme	ergency telephone number	: Chemtrec: (800) 424-9300 or (703) 527-3887
Rec	commended use of the cl	nemical and rest	rictions on use
Rec	Recommended use		tituents

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)			
Skin irritation	: Category 2		
Eye irritation	: Category 2A		
Skin sensitisation	: Category 1		
Germ cell mutagenicity	: Category 2		
Specific target organ toxicity - repeated exposure (Oral)	: Category 2 (Nasal inner lining, Gastrointestinal tract, female reproductive organs, Stomach)		
Short-term (acute) aquatic hazard	: Category 2		
Long-term (chronic) aquatic hazard	: Category 2		
GHS label elements			
Hazard pictograms			
Signal word	: Warning		
Hazard statements	: H315 Causes skin irritation.		



ersion	Revision Date:	SDS Number:	Date of last issue: 12/12/2016
1	03/28/2023	400001008328	Date of first issue: 12/12/2016
			Print Date 04/20/202
			se an allergic skin reaction.
			serious eye irritation.
			ed of causing genetic defects. se damage to organs (Nasal inner lining,
Gastrointestinal tract, female reproductive organs, S through prolonged or repeated exposure if swallowe			
			aquatic life with long lasting effects.
Preca	autionary statements	: Prevention:	
	,	P201 Obtain s	pecial instructions before use.
		P202 Do not h and understoo	andle until all safety precautions have been read d.
		P260 Do not b	reathe mist or vapours.
			in thoroughly after handling.
			nated work clothing must not be allowed out of
		the workplace.	
			lease to the environment. otective gloves/ protective clothing/ eye protection
		face protection	
		Response:	
		•	F ON SKIN: Wash with plenty of soap and wate
			P338 IF IN EYES: Rinse cautiously with water
			nutes. Remove contact lenses, if present and ear
			F exposed or concerned: Get medical advice/
		P333 + P313 l attention.	f skin irritation or rash occurs: Get medical advic
			f eye irritation persists: Get medical advice/
		P362 Take off P391 Collect s	contaminated clothing and wash before reuse. pillage.
		Storage:	
		P405 Store loc	cked up.
		Disposal:	
		P501 Dispose disposal plant.	of contents/ container to an approved waste

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
7-oxabicyclo[4.1.0]hept-3-ylmethyl 7- oxabicyclo[4.1.0]heptane-3-carboxylate	2386-87-0	50 - 70
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	30 - 50



Versio 1.1	on Revision Date: 03/28/2023	SDS Number: 400001008328		
				Print Date 04/20/2023
	,2'-[(1-methylethylidene)bis(henyleneoxymethylene)]bisc		1675-54-3	5 - 10
	-(2,3-epoxypropoxy)-N,N-bis poxypropyl)aniline	s(2,3-	5026-74-4	1 - 5

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

Both 25068-38-6 and 1675-54-3 can be used to describe the epoxy resin which is produced through the reaction of bisphenol A and epichlorohydrin

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Treat symptomatically. Get medical attention if symptoms occur.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Induce vomiting immediately and call a physician. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	:	None known.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection and use the recommended protective clothing If potential for exposure exists refer to Section 8 for specific personal protective equipment. Avoid inhalation, ingestion and contact with skin and eyes. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Notes to physician	:	Treat symptomatically.

Enriching lives through innovation

EPOCAST® 35 A US

Version 1.1

Revision Date: 03/28/2023

SDS Number: 400001008328

Date of last issue: 12/12/2016 Date of first issue: 12/12/2016

Print Date 04/20/2023

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	Exercise caution when using a high volume water jet as it may scatter and spread fire
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Carbon oxides Halogenated compounds Nitrogen oxides (NOx)
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against : Normal measures for preventive fire protection.

Version 1.1	Revision Date: 03/28/2023		DS Number: 00001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
fire ar	nd explosion			Print Date 04/20/2023
Advic	e on safe handling	:	and/or dermatitis Persons suffering should avoid cont product. Do not breathe va Avoid exposure - Avoid contact with For personal proto Smoking, eating a application area.	obtain special instructions before use.
Condi	tions for safe storage	:	place. Containers which kept upright to pre Observe label pre	
Mater	ials to avoid	:	For incompatible SDS.	materials please refer to Section 10 of this
	mmended storage erature	:	36 - 46 °F / 2 - 8 °	°C
	er information on ge stability	:	Stable under norn	nal conditions.

EPOCAST® 35 A US

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter.
Respiratory protection	:	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Version 1.1	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
Material Break through time		: butyl-rubber : >8 h	Print Date 04/20/2023
Mate Mate Brea		: Solvent-resista : Nitrile rubber : 10 - 480 min	nt gloves (butyl-rubber)
Mate	rial	: Neoprene glove	es
Rema	arks	approved stand chemical produ necessary. The suitability fo	ant, impervious gloves complying with an ard should be worn at all times when handling cts if a risk assessment indicates this is or a specific workplace should be discussed ers of the protective gloves.
Eye p	protection	: Eye wash bottle Tightly fitting sa Wear face-shiel problems.	
Skin	and body protection		ning rotection according to the amount and f the dangerous substance at the work place.
Hygie	ene measures	: When using do When using do Wash hands be	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: amber
Odour	: slight
Odour Threshold	: No data is available on the product itself.
рН	: No data is available on the product itself.
Melting point/freezing point	: No data available
Boiling point	: > 392 °F / > 200 °C
Flash point	: 244 °F / 118 °C Method: Pensky-Martens closed cup
Evaporation rate	: No data is available on the product itself.
Flammability (solid, gas)	: No data is available on the product itself.
Flammability (liquids)	: No data is available on the product itself.



SAFETY DATA SHEET

HUNTSMAN

Enriching lives through innovation

EPOCAST® 35 A US

Vers 1.1	sion	Revision Date: 03/28/2023		S Number: 001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016			
		explosion limit / Upper bility limit	:	No data is availa	Print Date 04/20/2023 ole on the product itself.			
	Lower explosion limit / Lower flammability limit Vapour pressure		:	No data is availa	ble on the product itself.			
			:	< 0.001 hPa (68	°F / 20 °C)			
	Relative	e vapour density	:	No data is availa	ole on the product itself.			
	Relative	e density	:	: No data is available on the product itself.				
	Density	,	:	1.2 g/cm3 (77 °F	/ 25 °C)			
	Solubili Wate	ty(ies) er solubility	:	practically insolul	ble (68 °F / 20 °C)			
	Solubility in other solvents Partition coefficient: n- octanol/water		:	No data is availa	ble on the product itself.			
			:	No data is availa	ble on the product itself.			
		nition temperature	:	No data is availa	ble on the product itself.			
	Decom	position temperature	:	> 392 °F / > 200	°C			
		celerating position temperature	:	No data is availa	ble on the product itself.			
	Viscosi Visco	ty osity, dynamic	:	5,000 mPa.s (77	°F / 25 °C)			
	Explosi	ve properties	:	No data is availa	ble on the product itself.			
	Oxidizir	ng properties	:	No data is availa	ole on the product itself.			
	Molecu	lar weight	:	No data available)			
	Particle	size	:	No data is availa	ble on the product itself.			

SECTION 10. STABILITY AND REACTIVITY

Reactivity :		No dangerous reaction known under conditions of normal use.	
Chemical stability		Stable under normal conditions.	
Possibility of hazardous reactions	:	No hazards to be specially mentioned.	
Conditions to avoid	:	None known.	
Incompatible materials	:	None known.	
Hazardous decomposition	:	No decomposition if stored and applied as directed.	



			Enriching lives through innovation	
EPOCA	ST® 35 A US			
Version 1.1	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016	
			Print Date 04/20/2023	
produ Hazar produ	dous decomposition	 carbon dioxide carbon monoxide Halogenated compounds Nitrogen oxides (NOx) 		
SECTION	11. TOXICOLOGICAL	INFORMATION		
Acute	e toxicity			
Produ	-			
	oral toxicity		v estimate: > 5,000 mg/kg culation method	
Comp	oonents:			
7-oxa	bicyclo[4.1.0]hept-3-y	/Imethyl 7-oxabicy	/clo[4.1.0]heptane-3-carboxylate:	
	oral toxicity	: LD50 (Rat, m Method: OE0 GLP: yes	hale and female): ca. 5,000 mg/kg CD Test Guideline 401 The substance or mixture has no acute oral	
Acute	inhalation toxicity	Exposure tim Test atmospl Method: OEC GLP: yes	nere: dust/mist CD Test Guideline 436 The substance or mixture has no acute	
Acute	dermal toxicity	Method: OE0 GLP: yes	nale and female): > 2,000 mg/kg CD Test Guideline 402 The substance or mixture has no acute dermal	
Phene	ol, polymer with form	aldehvde, glvcidv	ether:	
	oral toxicity	: LD50 (Rat, fe Method: OE0	emale): > 2,000 mg/kg CD Test Guideline 420 The substance or mixture has no acute oral	
Acute	dermal toxicity	Method: OEC	nale and female): > 2,000 mg/kg CD Test Guideline 402 The substance or mixture has no acute dermal	
	1-methylethylidene)b oral toxicity	: LD50 (Rat, fe Method: OE0	exymethylene)]bisoxirane: emale): > 2,000 mg/kg CD Test Guideline 420 The substance or mixture has no acute oral	

sion	Revision Date: 03/28/2023	SDS Number:Date of last issue: 12/12/400001008328Date of first issue: 12/12/	/2016
		Pr Remarks: No mortality observed at this dos	rint Date 04/20/2 e.
Aquita	dormal toxiaity	\sim LDE0 (Pat. male and female): ~ 2.000 mg//	a
Acute	dermal toxicity	: LD50 (Rat, male and female): > 2,000 mg/k Method: OECD Test Guideline 402	y
		Assessment: The substance or mixture has toxicity	no acute derma
p-(2,3-	epoxypropoxy)-N,I	-bis(2,3-epoxypropyl)aniline:	
Acute of	oral toxicity	: LD50 (Rat, male and female): 1,037 mg/kg	
		Method: OECD Test Guideline 401 Assessment: The component/mixture is mo single ingestion.	derately toxic af
Acute of	dermal toxicity	: LD50 (Rat, male and female): > 4,000 mg/k	g
		Method: OECD Test Guideline 402	
		Assessment: The substance or mixture has toxicity	no acute derma
Skin c	orrosion/irritation		
Compo	onents:		
		ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxy	late:
Specie		: Rabbit	
Assess		: No skin irritation	
Method	1	: OECD Test Guideline 404	
Result GLP		: Normally reversible injuries : yes	
Pheno Specie Methoo Result	S	naldehyde, glycidyl ether: : Rabbit : OECD Test Guideline 404 : Urritating to skip	
Result		: Irritating to skin.	
		bis(4,1-phenyleneoxymethylene)]bisoxirane:	
Specie		: Rabbit	
	ure time	: 4 h	
Assess		: Irritating to skin.	
Method	1 L	: OECD Test Guideline 404	
Result		: Irritating to skin.	
		-bis(2,3-epoxypropyl)aniline:	
Specie		: Rabbit	
Assess		: No skin irritation	
Method	1	: OECD Test Guideline 404	
Result		: No skin irritation	
Seriou	s eye damage/eye	rritation	
_	onents:		_
7-oxab		ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxy	late:
	s	: Rabbit	
Specie Result	-	: No eye irritation	



sion	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016		
	00/20/2020	+00001000320			
٨٥٥٥	ssment	: No eye irritation	Print Date 04/20/2		
Meth		: OECD Test Gui			
GLP	Ju	: Ves			
ULI		. 905			
Phenol, polymer with for Species		maldehyde, glycidyl e	ther:		
		: Rabbit			
Resu		: Irritating to eyes.			
Method		: OECD Test Gui	ideline 405		
2,2'-[(1-methylethylidene	bis(4,1-phenyleneoxy)	/methylene)]bisoxirane:		
Spec	ies	: Rabbit			
Resu		: Irritating to eyes	S.		
Asse	ssment	: Irritating to eyes	S.		
Meth	bd	: OECD Test Gui			
p-(2.3	B-epoxypropoxy)-N.	N-bis(2,3-epoxypropyl))aniline:		
Spec		: Rabbit	-		
Resu		: slight irritation			
	ssment	: No eye irritation	1		
Meth		: Other guideline			
Deem	instant on altin same	itiantian			
-	iratory or skin sens ponents:	itisation			
Com	ponents:		o[4.1.0]heptane-3-carboxylate:		
Com	ponents: abicyclo[4.1.0]hept-3				
Com 7-oxa Test	ponents: abicyclo[4.1.0]hept-3 Type	3-ylmethyl 7-oxabicycl			
Com 7-oxa Test Expo	ponents: abicyclo[4.1.0]hept-3 Type sure routes	3-ylmethyl 7-oxabicycl : Maximisation To : Skin			
Com 7-oxa Test Expo Spec	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig	est		
Com 7-oxa Test Expo Spec	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens	est sitisation by skin contact.		
Com 7-oxa Test Expo Spec Asse	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui	est sitisation by skin contact.		
Com 7-oxa Test Expo Spec Asse Metho Resu	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od It	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui : May cause sens	est sitisation by skin contact. ideline 406 sitisation by skin contact.		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od It ol, polymer with for	3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sens OECD Test Gui May cause sens May cause sens	est sitisation by skin contact. ideline 406 sitisation by skin contact.		
Com 7-oxa Test Expo Spec Asse Metho Resu Phen Expo	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od lt ol, polymer with for sure routes	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui : May cause sens : May cause sens : May cause sens : Skin	est sitisation by skin contact. ideline 406 sitisation by skin contact.		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen Expo Spec	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od It ol, polymer with for sure routes ies	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui : May cause sens : May cause sens : May cause sens : Skin : Skin : Mouse	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther:		
Com 7-oxa Test Expo Spec Asse Metho Resu Phen Expo Spec Metho	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od It ol, polymer with for sure routes ies od	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui : May cause sens : May cause sens : May cause sens : Skin : Skin : Mouse : OECD Test Gui	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen Expo Spec	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od It ol, polymer with for sure routes ies od	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui : May cause sens : May cause sens : May cause sens : Skin : Skin : Mouse : OECD Test Gui	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther:		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen Expo Spec Metho Resu	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od lt ol, polymer with for sure routes ies od lt	3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sens OECD Test Gui May cause sens maldehyde, glycidyl er Skin Skin Mouse OECD Test Gui May cause sens	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429		
Com 7-oxa Test Expo Spec Asses Meth Resu Phen Expo Spec Meth Resu 2,2'-[ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od It ol, polymer with for sure routes ies od It (1-methylethylidene	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui : May cause sens : May cause sens : Skin : Mouse : OECD Test Gui : May cause sens : May cause sens : May cause sens	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact.		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen Expo Spec Metho Resu 2,2'-[Test	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od It ol, polymer with for sure routes ies od It (1-methylethylidene Type	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui : May cause sens : May cause sens : Skin : Mouse : OECD Test Gui : May cause sens : May cause sens : May cause sens	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. methylene)]bisoxirane:		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen Expo Spec Metho Resu 2,2'-[Test Expo	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od it ol, polymer with for sure routes ies od it (1-methylethylidene Type sure routes	3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sens OECD Test Gui May cause sens May cause sens May cause sens May cause sens May cause sens May cause sens DECD Test Gui May cause sens DECD Test Gui Local lymph noo Skin	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. methylene)]bisoxirane:		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen Expo Spec Metho Resu 2,2'-[Test	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od lt ol, polymer with for sure routes ies od lt (1-methylethylidene Type sure routes ies	3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sens OECD Test Gui May cause sens May cause sens May cause sens May cause sens May cause sens May cause sens bis(4,1-phenyleneoxy Local lymph noo Skin Mouse Mouse	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. (methylene)]bisoxirane: de assay (LLNA)		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen Expo Spec Metho Resu 2,2'-[Test Expo Spec	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od lt ol, polymer with for sure routes ies od lt (1-methylethylidene Type sure routes ies od	3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sens OECD Test Gui May cause sens May cause sens May cause sens May cause sens May cause sens May cause sens DECD Test Gui May cause sens DECD Test Gui May cause sens DECD Test Gui May cause sens DECD Test Gui Skin Local lymph noo Skin Mouse OECD Test Gui	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. (methylene)]bisoxirane: de assay (LLNA)		
Com 7-oxa Test Expo Spec Asses Metho Resu Phen Expo Spec Metho Resu 2,2'-[Test Expo Spec Resu	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od it ol, polymer with for sure routes ies od it (1-methylethylidene Type sure routes ies od it	3-ylmethyl 7-oxabicycl : Maximisation To : Skin : Guinea pig : May cause sens : OECD Test Gui : May cause sens : May cause sens : May cause sens : Skin : Mouse : OECD Test Gui : May cause sens : Decch Test Gui : Skin : Local lymph noor : Skin : Mouse : OECD Test Gui : The product is a	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. methylene)]bisoxirane: de assay (LLNA) ideline 429 a skin sensitiser, sub-category 1B.		
Com 7-oxa Test Expo Spec Asses Metha Resu Phen Expo Spec Metha Resu 2,2'-[Test Expo Spec Metha Resu Phen Resu Resu Phen Resu Resu Phen Resu Phen Resu Phen Resu Resu Resu Resu Resu Resu Resu Resu	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od it ol, polymer with for sure routes ies od it (1-methylethylidene Type sure routes ies od it 3-epoxypropoxy)-N,	3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sens OECD Test Gui May cause sens maldehyde, glycidyl ef Skin Skin Mouse OECD Test Gui May cause sens bis(4,1-phenyleneoxy Local lymph noo Skin Mouse OECD Test Gui The product is a N-bis(2,3-epoxypropyl)	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. methylene)]bisoxirane: de assay (LLNA) ideline 429 a skin sensitiser, sub-category 1B.)aniline:		
Com 7-oxa Test Expo Spec Asses Metha Resu Phen Expo Spec Metha Resu 2,2'-[Test Expo Spec Metha Resu Phen Resu Resu Resu Phen Resu Phen Resu Phen Resu Phen Resu Resu Phen Resu Resu Phen Resu Phen Resu Phen Resu Phen Resu Phen Resu Resu Resu Resu Resu Resu Resu Resu	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od it ol, polymer with for sure routes ies od it (1-methylethylidene Type sure routes ies od it 3-epoxypropoxy)-N, Type	 3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sensi OECD Test Gui May cause sensi May cause sensi May cause sensi Traddehyde, glycidyl ef Skin Mouse OECD Test Gui May cause sensi 	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. methylene)]bisoxirane: de assay (LLNA) ideline 429 a skin sensitiser, sub-category 1B.		
Com 7-oxa Test Expo Spec Assee Metha Resu Phen Expo Spec Metha Resu 2,2'-[Test Expo Spec Metha Resu Phen Resu 2,2'- [Test Expo Spec Test Spec Assee Metha Resu	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od lt ol, polymer with for sure routes ies od lt (1-methylethylidene Type sure routes ies od lt 3-epoxypropoxy)-N, Type ies	 3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sens OECD Test Gui May cause sens Tmaldehyde, glycidyl ef Skin Mouse OECD Test Gui May cause sens 	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. methylene)]bisoxirane: de assay (LLNA) ideline 429 a skin sensitiser, sub-category 1B.)aniline: de assay (LLNA)		
Com 7-oxa Test Expo Spec Assee Metha Resu Phen Expo Spec Metha Resu 2,2'-[Test Expo Spec Metha Resu Phen Resu 2,2'- [Test Expo Spec Test Spec Assee Metha Resu	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od it ol, polymer with for sure routes ies od it (1-methylethylidene Type sure routes ies od it 3-epoxypropoxy)-N, Type	 3-ylmethyl 7-oxabicycl Maximisation Tailing Skin Guinea pig May cause sensi OECD Test Gui May cause sensi May cause sensi Traddehyde, glycidyl efficient Skin Mouse OECD Test Gui May cause sensi 	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. methylene)]bisoxirane: de assay (LLNA) ideline 429 a skin sensitiser, sub-category 1B.)aniline:		
Com 7-oxa Test Expo Spec Assee Metha Resu Phen Expo Spec Metha Resu 2,2'-[Test Expo Spec Metha Resu Phen Resu 2,2'- [Test Expo Spec Test Spec Assee Metha Resu	ponents: abicyclo[4.1.0]hept-3 Type sure routes ies ssment od It ol, polymer with for sure routes ies od It (1-methylethylidene Type sure routes ies od It 3-epoxypropoxy)-N, Type ies ssment	 3-ylmethyl 7-oxabicycl Maximisation To Skin Guinea pig May cause sens OECD Test Gui May cause sens Tmaldehyde, glycidyl ef Skin Mouse OECD Test Gui May cause sens 	est sitisation by skin contact. ideline 406 sitisation by skin contact. ther: ideline 429 sitisation by skin contact. methylene)]bisoxirane: de assay (LLNA) ideline 429 a skin sensitiser, sub-category 1B.)aniline: de assay (LLNA) vidence of high skin sensitisation rate in		



Version 1.1	Revision Date: 03/28/2023	SDS Number:Date of last issue: 12/12/2016400001008328Date of first issue: 12/12/2016					
Resul Rema		Print Date 04/20/2023 Probability or evidence of high skin sensitisation rate in humans Information given is based on data obtained from similar					
		substances.					
Germ	cell mutagenicity						
<u>Com</u>	oonents:						
7-oxa	7-oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:						
Geno	toxicity in vitro	: Test Type: gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Result: positive GLP: yes					
		Test Type: gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Result: negative GLP: no					
		Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: without metabolic activation Result: positive GLP: no					
		Test Type: reverse mutation assay Test system: Salmonella tryphimurium and E. coli Metabolic activation: Metabolic activation Method: OECD Test Guideline 471 Result: positive GLP: yes					
		Test Type: unscheduled DNA synthesis assay Test system: rat hepatocytes Metabolic activation: without metabolic activation Method: OECD Test Guideline 482 Result: Not classified due to inconclusive data.					
Geno	toxicity in vivo	 Test Type: In vivo micronucleus test Species: Mouse (male and female) Cell type: Somatic Application Route: Intraperitoneal injection Dose: 0.5, 1 and 2.25g/kg Method: Directive 67/548/EEC, Annex V, B.12. Result: negative GLP: yes 					
		Test Type: unscheduled DNA synthesis assay Species: Rat (male) Cell type: Liver cells Application Route: Oral Dose: 500, 1000, 2000 mg/kg bw Method: OECD Test Guideline 486					



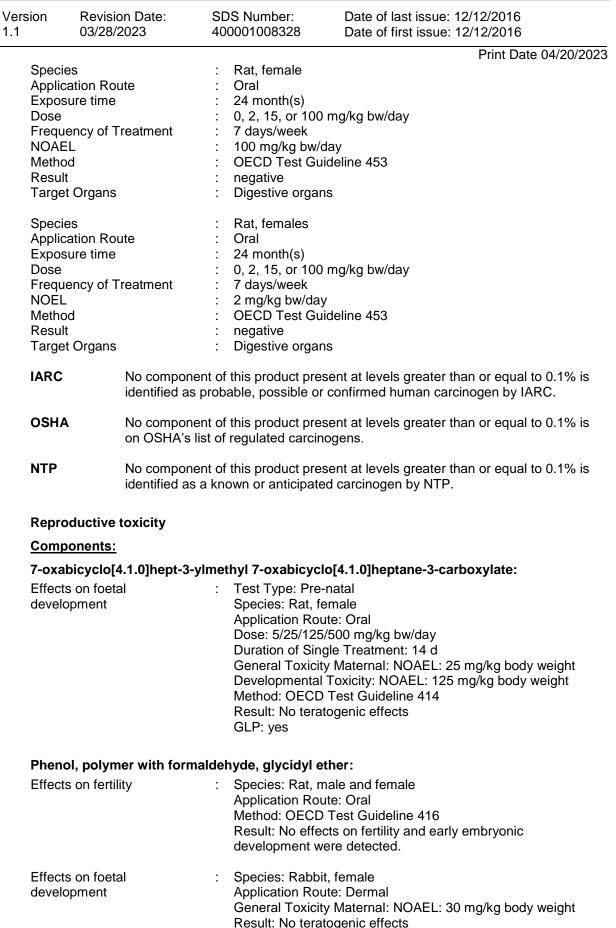
Version 1.1	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
		Result: negativ GLP: yes	Print Date 04/20/2023 e
		assay Species: Trans Cell type: Gern Application Rot Dose: 250/500, Method: OECD	
	cell mutagenicity - ssment	: In vitro tests sh observed with i	owed mutagenic effects which were not n vivo test.
Phen	ol, polymer with forr	naldehyde, glycidyl e	ther:
	toxicity in vitro		ation: with and without metabolic activation
			0 - 5000 ug/plate ation: with and without metabolic activation
Geno	toxicity in vivo	: Cell type: Gern Application Ro Result: negativ	ute: Oral
		Cell type: Som Application Ro Dose: 0 - 5000 Result: negativ	ute: Oral mg/kg
2,2'-[((1-methylethylidene)	bis(4,1-phenyleneoxy	ymethylene)]bisoxirane:
	toxicity in vitro	: Test Type: In v Test system: m	itro mammalian cell gene mutation test nouse lymphoma cells ation: without metabolic activation
		Test system: S Metabolic activ	
Geno	toxicity in vivo	: Test Type: in v Species: Mous Cell type: Gern Application Rou Dose: 3333, 10 Result: negativ	e (male) n ute: Oral 0000 mg/kg
		Test Type: gen Species: Rat (r	e mutation test nale)

HUNTSMAN

sion	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
			Route: Oral 0,500,1000 mg/kg bw/day CD Test Guideline 488
p-(2,3	-epoxypropoxy)-N,I	I-bis(2,3-epoxyprop	byl)aniline:
	toxicity in vitro	: Test Type: C Test system: Metabolic ac	hromosome aberration test in vitro Human lymphocytes tivation: with and without metabolic activation CD Test Guideline 473
		Test system:	everse mutation assay Salmonella typhimurium CD Test Guideline 471 ive
		Test system: Metabolic ac	n vitro mammalian cell gene mutation test mouse lymphoma cells tivation: with and without metabolic activation CD Test Guideline 476 ive
Genot	toxicity in vivo	Species: Mou Application R Dose: 438, 8 Method: OEC Result: nega	Route: Oral 75, 1750mg/kg bw CD Test Guideline 474 tive formation given is based on data obtained from
	cell mutagenicity - ssment	: In vitro tests	showed mutagenic effects
Carci	nogenicity		
Comp	oonents:		
			vclo[4.1.0]heptane-3-carboxylate:
Rema	ırks	and this cyclo of skin cance	Bisphenol A, Bisphenol F or Novolac epoxy resing baliphatic epoxy resin may exhibit a possible risk or under conditions of long-term skin contact. The banents however do not have this adverse effect).
Specie Applic Dose NOAE Metho Resul GLP	cation Route EL od	: Mouse, male : Dermal : 4000-8000 m : 4,000 - 8,000 : carcinogenic : negative : no	ng/kg bw)

ersion 1	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
Dhan	al nalymar with farm	naldahuda aluaidul a	Print Date 04/20/2023
		naldehyde, glycidyl e	
Speci		: Rat, male and	female
	cation Route	: Oral	
	sure time	: 24 month(s)	
Dose		: 15 mg/kg	
Frequ	ency of Treatment	: 7 daily	
Metho	bd	: OECD Test Gu	uideline 453
Resul	t	: negative	
Speci	es	: Mouse, male	
Applic	cation Route	: Dermal	
Expos	sure time	: 24 month(s)	
Dose		: .1 mg/kg	
Frequ	ency of Treatment	: 3 daily	
Metho		: OECD Test Gu	uideline 453
Resul	t	: negative	
Speci	es	: Rat, female	
	cation Route	: Dermal	
	sure time	: 24 month(s)	
Dose		: 1 mg/kg	
	ency of Treatment	: 5 daily	
Metho	-	: OECD Test Gu	ideline 453
Resul		: negative	
Expos Dose Frequ NOAE Metho Resul	od t t Organs	 Oral 24 month(s) 0, 2, 15, or 100 7 days/week 15 mg/kg bw/d OECD Test Gu negative Digestive organ Mouse, male 	udeline 453
	cation Route	: Dermal	
	sure time	: 24 month(s)	
Dose		: 0, 0.1, 10, 100	ma/ka bw/dav
	ency of Treatment	: 3 days/week	
NOEL		: 0.1 mg/kg body	v weight
Metho		: OECD Test Gu	
Resul		: negative	
	et Organs	: Digestive orga	ns
Speci	es	: Rat, female	
	cation Route	: Dermal	
	sure time	: 24 month(s)	
Dose		: 0.1, 100, 1000	mg/kg bw/day
	ency of Treatment	: 5 days/week	
NOEL		: 100 mg/kg bod	lv weight
Metho		: OECD Test Gu	uideline 453
Resul		: negative	
	-		







EDOC	AST® 35 A US		Enriching lives through innovation
Version 1.1	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
			Print Date 04/20/202
		Method: OECE	
		Method: OECE	
2,2'-[(1-methylethylidene)	bis(4,1-phenyleneox	ymethylene)]bisoxirane:
	ts on fertility	: Test Type: Two Species: Rat, r Application Ro Dose: 0, 50, 18 Duration of Sin Frequency of T General Toxici General Toxici Symptoms: No Method: OECE	b-generation study male and female ute: Oral 30, 540 or 750 milligram per kilogram igle Treatment: 238 d Treatment: 1 daily ty - Parent: NOEL: 540 mg/kg body weight ty F1: NOEL: 750 mg/kg body weight adverse effects D Test Guideline 416 ects on fertility and early embryonic
	ts on foetal opment	Duration of Sin Frequency of T General Toxici Developmenta Method: Other	ute: Dermal 00 or 300 milligram per kilogram gle Treatment: 28 d Treatment: 1 daily ty Maternal: NOAEL: 30 mg/kg body weight I Toxicity: NOAEL: 300 mg/kg body weight guidelines togenic effects -natal it, female
		Dose: 0, 20, 6 Duration of Sin Frequency of T General Toxici Developmenta Method: OECE	0 or 180 milligram per kilogram gle Treatment: 13 d Treatment: 1 daily ty Maternal: NOAEL: 60 mg/kg body weight I Toxicity: NOAEL: 180 mg/kg body weight O Test Guideline 414 togenic effects
		Duration of Sin Frequency of T General Toxici	emale

sion	Revision Date:	SDS Number: Date of last issue: 12/12/2016	
0.011	03/28/2023	400001008328 Date of first issue: 12/12/2016	
		Print Date Method: OECD Test Guideline 414 Result: No teratogenic effects	e 04/20/202
p-(2,3	-epoxypropoxy)-N,I	N-bis(2,3-epoxypropyl)aniline:	
Effect	s on fertility	 Test Type: Two-generation study Species: Rat, male and female Application Route: Oral Dose: 5/15/25 mg/kg bw/d General Toxicity - Parent: NOAEL: 25 mg/kg body General Toxicity F1: NOAEL: 25 mg/kg body weigh Method: OECD Test Guideline 416 	
	s on foetal opment	: Test Type: Pre-natal Species: Rat, female Application Route: Oral Dose: 0/5/15/40 mg/kg bw/d Duration of Single Treatment: 15 d Frequency of Treatment: 7 days/week General Toxicity Maternal: NOEL: 15 mg/kg body w Developmental Toxicity: NOEL: 15 mg/kg body wei Method: OECD Test Guideline 414	
	- single exposure Ita available		
- 5101		΄ Δ	
	- repeated exposu	e	
<u>Com</u>	oonents:		
Comp 7-oxa Expos Targe	oonents:	 P-yImethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. 	arget orgar
Comr 7-oxa Expos Targe Asses	ponents: bicyclo[4.1.0]hept-3 sure routes et Organs ssment	 B-yImethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. 	arget orgar
Comr 7-oxa Expos Targe Asses p-(2,3 Expos	Doments: bicyclo[4.1.0]hept-3 sure routes at Organs ssment B-epoxypropoxy)-N , sure routes	 B-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. N-bis(2,3-epoxypropyl)aniline: Ingestion 	arget orgar
Comr 7-oxa Expos Targe Asses p-(2,3 Expos Targe	ponents: bicyclo[4.1.0]hept-3 sure routes et Organs ssment B-epoxypropoxy)-N,	 B-yImethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. N-bis(2,3-epoxypropyl)aniline: 	
Comr 7-oxa Expos Targe Asses p-(2,3 Expos Targe Asses	 bicyclo[4.1.0]hept-3 bicyclo[4.1.0]hept-3 sure routes bit Organs ssment bicyclopoxy)-N, lisure routes bit Organs 	 B-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. N-bis(2,3-epoxypropyl)aniline: Ingestion Gastrointestinal tract, female reproductive organs The substance or mixture is classified as specific ta 	
Comp 7-oxa Expos Targe Asses p-(2,3 Expos Targe Asses Repe	Doments: bicyclo[4.1.0]hept-3 sure routes et Organs ssment B-epoxypropoxy)-N , sure routes et Organs ssment	 B-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. N-bis(2,3-epoxypropyl)aniline: Ingestion Gastrointestinal tract, female reproductive organs The substance or mixture is classified as specific ta 	
Comr 7-oxa Expos Targe Asses P-(2,3 Expos Targe Asses Reper Comr 7-oxa	Donents: bicyclo[4.1.0]hept-3 sure routes of Organs ssment B-epoxypropoxy)-N, sure routes of Organs ssment ated dose toxicity Donents: bicyclo[4.1.0]hept-3	 B-yImethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. N-bis(2,3-epoxypropyl)aniline: Ingestion Gastrointestinal tract, female reproductive organs The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. 8-yImethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: 	
Comr 7-oxa Expos Targe Asses P-(2,3 Expos Targe Asses Reper Comr 7-oxa Speci	Doments: bicyclo[4.1.0]hept-3 sure routes to Organs ssment B-epoxypropoxy)-N,I sure routes to Organs ssment ated dose toxicity Doments: bicyclo[4.1.0]hept-3 es	 B-yImethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. N-bis(2,3-epoxypropyl)aniline: Ingestion Gastrointestinal tract, female reproductive organs The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. N-bis(2,3-epoxypropyl)aniline: Rat, male and female 	
Comr 7-oxa Expos Targe Asses P-(2,3 Expos Targe Asses Repea Comr 7-oxa Speci NOEL	Doments: Ibicyclo[4.1.0]hept-3 sure routes at Organs ssment B-epoxypropoxy)-N,I sure routes at Organs ssment ated dose toxicity Doments: Ibicyclo[4.1.0]hept-3 es -	 B-yImethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. N-bis(2,3-epoxypropyl)aniline: Ingestion Gastrointestinal tract, female reproductive organs The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. S-yImethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Rat, male and female 5 mg/kg 	
Comr 7-oxa Expos Targe Asses P-(2,3 Expos Targe Asses Repea Comr 7-oxa Speci NOEL Applic	Doments: bicyclo[4.1.0]hept-3 sure routes at Organs ssment B-epoxypropoxy)-N,I sure routes at Organs ssment ated dose toxicity Doments: bicyclo[4.1.0]hept-3 es cation Route	 9-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. V-bis(2,3-epoxypropyl)aniline: Ingestion Gastrointestinal tract, female reproductive organs The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. 9-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Rat, male and female 5 mg/kg oral (gavage) 	
Comr 7-oxa Expos Targe Asses P-(2,3 Expos Targe Asses Reper Comr 7-oxa Speci NOEL Applic Expos	Doments: Ibicyclo[4.1.0]hept-3 sure routes at Organs ssment B-epoxypropoxy)-N,I sure routes at Organs ssment ated dose toxicity Doments: Ibicyclo[4.1.0]hept-3 es -	 9-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. V-bis(2,3-epoxypropyl)aniline: Ingestion Gastrointestinal tract, female reproductive organs The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. P-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Rat, male and female 5 mg/kg oral (gavage) 90 d 	
Comr 7-oxa Expos Targe Asses P-(2,3 Expos Targe Asses Repea Comr 7-oxa Speci NOEL Applic	Doments: bicyclo[4.1.0]hept-3 sure routes at Organs ssment cepoxypropoxy)-N,I sure routes ated dose toxicity Doments: bicyclo[4.1.0]hept-3 es cation Route sure time	 9-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Ingestion Nasal inner lining The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. V-bis(2,3-epoxypropyl)aniline: Ingestion Gastrointestinal tract, female reproductive organs The substance or mixture is classified as specific ta toxicant, repeated exposure, category 2. 9-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate: Rat, male and female 5 mg/kg oral (gavage) 	

Version 1.1	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
Phen	ol polymer with for	naldehyde, glycidyl e	Print Date 04/20/2023
Speci		: Rat, male and	remaie
NOAE		: 50 mg/kg	
	cation Route	: Ingestion : 14 Weeks	
	sure time per of exposures	: 7 d	
Metho		: Subchronic tox	icity
Weth	Ju	. Subcritonic lox	loity
Speci		: Rat, male and	female
NOEL		: 10 mg/kg	
	cation Route	: Skin contact	
	sure time	: 13 Weeks	
	per of exposures	: 5 d	
Metho	DC	: Subchronic tox	ICITY
Speci		: Mouse, male	
NOAE		: 100 mg/kg	
	cation Route	: Skin contact	
	sure time	: 13 Weeks	
	per of exposures	: 3 d	
Metho	DC	: Subchronic tox	ICITY
2,2'-[((1-methylethylidene)	bis(4,1-phenyleneox	ymethylene)]bisoxirane:
Speci	ies	: Rat, male and	female
NOAE	EL	: 50 mg/kg	
Applic	cation Route	: oral (gavage)	
Expo	sure time	: 14 Weeks	
Numb	per of exposures	: 7 d	
Dose		: 0, 50, 250, 100	0 mg/kg/day
Metho	bd	: OECD Test Gu	ideline 408
Speci	ies	: Rat, male and	female
NOAE		: >= 10 mg/kg	
Applic	cation Route	: Skin contact	
	sure time	: 13 Weeks	
	per of exposures	: 5 d	
Dose		: 0, 10, 100, 100	
Metho	bd	: OECD Test Gu	lideline 411
Speci		: Mouse, male	
NOAE		: 100 mg/kg	
	cation Route	: Skin contact	
	sure time	: 13 Weeks	
	per of exposures	: 3 d	<i></i>
Dose		: 0, 1, 10, 100 m	
Metho	bd	: OECD Test Gu	ideline 411
p-(2,3	3-epoxypropoxy)-N,N	l-bis(2,3-epoxypropy	l)aniline:
Speci	ies	: Rat, male and	female
NOAE		: 15 mg/kg bw/d	
	cation Route	: Oral	
	sure time	: 90 d	
NUME	per of exposures	: one daily	





EPOCAST® 35 A US

Version 1.1	Revision Date: 03/28/2023	SDS Numb 400001008	
			Print Date 04/20/2023
Metho	bd	: OECD	Test Guideline 408
GLP		: yes	
Spec		: Rat, ma	ale and female
NOAI		: 50 mg/l : Oral	/kg bw/day
	Application Route		
	sure time per of exposures	: 28 d : Once d	haily
Dose			150, 450 mg/kg bw/day
Targe	et Organs		intestinal tract, female reproductive organs, Stomach
	ssment		bstance or mixture is classified as specific target organ
D			nt, repeated exposure, category 2.
Rema	arks	substar	ation given is based on data obtained from similar nces.
Aspii	ation toxicity		
No da	ata available		
Expe	rience with human e	xposure	
No da	ata available		
Toxic	ology, Metabolism,	Distribution	
	ata available		
Neur	ological effects		
	ata available		
Furth	er information		
	No data available		
NU UZ			
ECTION	12. ECOLOGICAL IN	FORMATION	
Ecote	oxicity		
Com	oononte:		

Components:

7-oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)): 24 mg/l Exposure time: 96 h Test Type: flow-through test Test substance: Fresh water Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 32 - 56 mg/l Exposure time: 48 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	 ErC50 (Selenastrum capricornutum (green algae)): > 110 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201 GLP: yes

	Revision Date: 03/28/2023	-	S Number: 0001008328	Date of last issue: Date of first issue:	
					Print Date 04/20/2
			Exposure time: 7 Test Type: static Test substance:	2 h test	green algae)): 30 mg/l
Toxic	ity to microorganisms	:	Exposure time: 3 Test Type: static Test substance:	test	
			Exposure time: 3 Test Type: static Test substance:	test	
Ecote	oxicology Assessment				
Chror	nic aquatic toxicity	:	This product has	no known ecotoxico	logical effects.
	ol, polymer with forma ity to fish	Idel :	LC50 (Oncorhyn Exposure time: 9 Test Type: static Test substance:	chus mykiss (rainbov 16 h test	v trout)): 1.5 mg/l
	ity to daphnia and other				
	tic invertebrates	•	Exposure time: 4 Test Type: static Test substance: Method: OECD	test	1.7 mg/l
		•	Test Type: static Test substance: Method: OECD	8 h test Fresh water Fest Guideline 202 magna (Water flea)): 8 h test	
Toxic plants	tic invertebrates	:	Test Type: static Test substance: Method: OECD EC50 (Daphnia r Exposure time: 4 Test Type: static Test substance:	8 h test Fresh water Fest Guideline 202 magna (Water flea)): 8 h test Fresh water um capricornutum (g 2 h test	
plants	tic invertebrates tity to algae/aquatic s	:	Test Type: static Test substance: Method: OECD T EC50 (Daphnia n Exposure time: 4 Test Type: static Test substance: EC50 (Selenastr Exposure time: 7 Test Type: static	8 h test Fresh water Fest Guideline 202 magna (Water flea)): 8 h test Fresh water um capricornutum (g 2 h test	2.7 mg/l

SAFETY DATA SHEET

HUNTSMAN

Version Revision Date: SDS Number: Date of last issue: 12/12/2016 400001008328 1.1 03/28/2023 Date of first issue: 12/12/2016 Print Date 04/20/2023 Method: OECD Test Guideline 211 Toxicity to microorganisms IC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: static test Test substance: Fresh water 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane: Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.8 mg/l Exposure time: 48 h aquatic invertebrates Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202 Toxicity to algae/aquatic EC50: 11 mg/l plants Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: EPA-660/3-75-009 NOEC: 4.2 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: EPA-660/3-75-009 Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 0.3 mg/l aquatic invertebrates Exposure time: 21 d (Chronic toxicity) Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 211 Toxicity to microorganisms IC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: static test Test substance: Fresh water Ecotoxicology Assessment Chronic aquatic toxicity Toxic to aquatic life with long lasting effects. 2 p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline: Toxicity to fish • LC50 (Cyprinus carpio (Carp)): 4.2 mg/l Exposure time: 96 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 203 Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 18 mg/l aquatic invertebrates Exposure time: 48 h Test Type: static test



rsion I	Revision Date: 03/28/2023	-	0S Number: 0001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
			Test substance:	Print Date 04/20/2023 Fresh water
				Test Guideline 202
Toxicit plants	ty to algae/aquatic	:	Exposure time: 7 Test Type: static Test substance:	test
			mg/l Exposure time: 7 Test Type: static Test substance:	test
M-Fac toxicity	tor (Acute aquatic /)	:	1	
aquati	ty to daphnia and other c invertebrates hic toxicity)	:	Exposure time: 2 Test Type: semi Test substance: Method: OECD	-static test Fresh water Fest Guideline 211 ation given is based on data obtained from
M-Fac toxicity	tor (Chronic aquatic /)	:	1	
Toxicit	y to microorganisms	:	EC50 (Pseudom mg Exposure time: 7 Test Type: static Test substance: Method: DIN 38	test Fresh water
Ecoto	xicology Assessment			
Acute	aquatic toxicity	:	This product has	no known ecotoxicological effects.
Chron	ic aquatic toxicity	:	Harmful to aqua	tic life with long lasting effects.
Persis	stence and degradabili	ity		
<u>Comp</u>	onents:			
	bicyclo[4.1.0]hept-3-yl gradability	met :	aerobic Inoculum: activa Concentration: 2 Result: Biodegra Biodegradation: Exposure time: 2	idable, but failing 10-d window 71 %

Version 1.1	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
Phen	ol. polymer with for	maldehyde, glycidyl	Print Date 04/20/2023
	gradability	: Inoculum: Sev Concentration Result: Not rea Biodegradation Exposure time	vage (STP effluent) : 20 mg/l adily biodegradable. n: 5 %
Stabil	lity in water		alf life (DT50): 4.83 d (25 °C) pH: 4 D Test Guideline 111 sh water
			alf life (DT50): 7.1 d (25 °C) pH: 9 D Test Guideline 111 sh water
			alf life (DT50): 3.58 d (25 °C) pH: 7 D Test Guideline 111 sh water
2,2'-[((1-methylethylidene)	bis(4,1-phenyleneox	ymethylene)]bisoxirane:
Biode	gradability	Concentration Result: Not rea Biodegradation Exposure time	adily biodegradable. n: 5 %
Stabil	lity in water		alf life (DT50): 4.83 d (25 °C) pH: 4 D Test Guideline 111 sh water
			alf life (DT50): 7.1 d (25 °C) pH: 9 D Test Guideline 111 sh water
			alf life (DT50): 3.58 d (25 °C) pH: 7 D Test Guideline 111 sh water
p-(2,3	3-epoxypropoxy)-N,I	l-bis(2,3-epoxypropy	/l)aniline:
Biode	egradability	Biodegradation Exposure time	: 3.2 mg/l adily biodegradable. n: 3.4 %
Stabil	lity in water		alf life (DT50): 4.3 hrs (50 °C) pH: 7 D Test Guideline 111 sh water
		Degradation h	alf life (DT50): 4.1 d (20 °C) pH: 7



POCA	ST® 35 A US		Enriching lives through innovation
sion	Revision Date: 03/28/2023	SDS Number: 400001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
		Method: OECD	Print Date 04/20/20 Test Guideline 111
			lf life (DT50): 3.9 hrs (50 °C) pH: 4 Test Guideline 111 n water
			lf life (DT50): 10 h (40 °C) pH: 7 Test Guideline 111
		Method: OECD	lf life (DT50): 2.2 d (25 °C) pH: 4 Test Guideline 111 ation available. n water
			lf life (DT50): 4.3 h (50 °C) pH: 7 Test Guideline 111
			lf life (DT50): 2.3 d (25 °C) pH: 7 Test Guideline 111 n water
			lf life (DT50): 2.6 d (25 °C) pH: 9 Test Guideline 111 n water
			lf life (DT50): 5.7 hrs (50 °C) pH: 9 Test Guideline 111 n water
		Degradation ha GLP: yes	lf life (DT50): 10.8 d (12 °C)
Bioac	cumulative potentia	I	
<u>Comp</u>	onents:		
			o[4.1.0]heptane-3-carboxylate:
	on coefficient: n- bl/water	: log Pow: 1.34 (Method: OECD GLP: yes	Test Guideline 107
Pheno	ol, polymer with forn	naldehyde, glycidyl e	ther:
Bioaco	cumulation		n factor (BCF): 31 not bioaccumulate.
	on coefficient: n- bl/water	: log Pow: 3.242 pH: 7.1 Method: OECD	(77 °F / 25 °C) Test Guideline 117
2,2'-[([/]	1-methylethylidene)	bis(4,1-phenyleneoxy	/methylene)]bisoxirane:
	cumulation	: Bioconcentratio	on factor (BCF): 31 s not bioaccumulate.

rsion	Revision Date: 03/28/2023		OS Number: 0001008328	Date of last issue: 12/12/2016 Date of first issue: 12/12/2016
				Print Date 04/20/202
	tion coefficient: n- nol/water	:	log Pow: 3.242	(77 °F / 25 °C)
octar	IOI/water		pH: 7.1 Method: OECD	Test Guideline 117
m (2		:) 2 onovumronul)	aniline.
	3-epoxypropoxy)-N,N-b tion coefficient: n-	is(∡ ∶		
	nol/water	·	pH: 7	(1
Mob	ility in soil			
<u>Com</u>	ponents:			
Pher	nol, polymer with forma	lde	hyde, glycidyl et	her:
	ibution among onmental compartments	:	Koc: 445	
2,2'-	[(1-methylethylidene)bis	s (4 ,	1-phenyleneoxy	methylene)]bisoxirane:
	ibution among onmental compartments	:	Koc: 445	
p-(2,	3-epoxypropoxy)-N,N-b	is(2	2,3-epoxypropyl)	aniline:
	ibution among	:	Koc: 84	
envir	onmental compartments		Method: OECD	Test Guideline 121
Othe	er adverse effects			
Prod	luct:			
Ozor	ne-Depletion Potential	:		CFR Protection of Environment; Part 82 atospheric Ozone - CAA Section 602 Class I
				product neither contains, nor was ith a Class I or Class II ODS as defined by th
				Act Section 602 (40 CFR 82, Subpt. A, App.A
	tional ecological	:		al hazard cannot be excluded in the event of
infori	mation			nandling or disposal. Iife with long lasting effects.

Disposal methods	
Waste from residues	 Dispose of contents and container in accordance with all local, regional, national and international regulations. Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

Enriching lives through innovation

HUNTSMAN



EPOCAST® 35 A US

Version	Revision Date:
1.1	03/28/2023

Date of last issue: 12/12/2016 Date of first issue: 12/12/2016

Print Date 04/20/2023

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR		
UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (EPOXY PHENOL NOVOLAC RESIN, BISPHENOL A EPOXY RESIN)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes
IMDG-Code UN number		UN 3082
Proper shipping name		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
		(EPOXY PHENOL NOVOLAC RESIN, BISPHENOL A EPOXY RESIN)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes
•		-

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SDS Number:

400001008328

Not applicable for product as supplied.

National Regulations

49 CFR UN/ID/NA number Proper shipping name	:	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (EPOXY PHENOL NOVOLAC RESIN, BISPHENOL A EPOXY RESIN)
Class	:	9
Packing group	:	
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	yes
Remarks	:	Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

Special precautions for user

Remarks

: Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO. 49CFR: no dangerous good in non-bulk packaging



EPOCAST® 35 A US

Version	Revision Date:	SDS Number:	Da
1.1	03/28/2023	400001008328	Da

Date of last issue: 12/12/2016 Date of first issue: 12/12/2016

Print Date 04/20/2023

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 311/312 Hazards	 Skin corrosion or irritation Serious eye damage or eye irritation Respiratory or skin sensitisation Germ cell mutagenicity Specific target organ toxicity (single or repeated exposure)
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.

This product does not contain any hazardous air pollutants (HAP) >=0.1%, as defined by the U.S. Clean Air Act Section 112 (40 CFR 61

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AIIC	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory

Inventories

AIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIOC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals No substances are subject to a Significant New Use Rule.



EPOCAST® 35 A US

Version	Revi
1.1	03/2

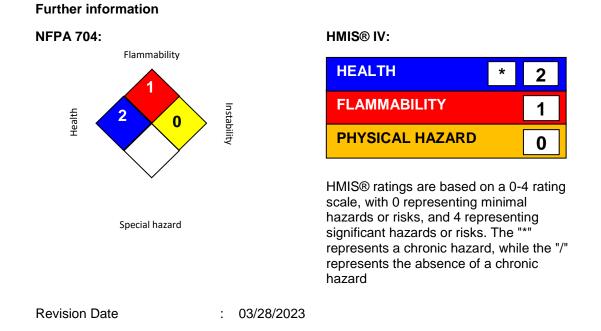
vision Date: 28/2023 SDS Number: 400001008328 Date of last issue: 12/12/2016 Date of first issue: 12/12/2016

> Print Date 04/20/2023 rt Notification (40 CFR 707,

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

The following substance(s) is/are subject to TSCA 12(b) export notification requirements: p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline 5026-74-4

SECTION 16. OTHER INFORMATION



The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.



EPOCAST® 35 A US

Version Revision Date: 1.1 03/28/2023

SDS Number: 400001008328

Date of last issue: 12/12/2016 Date of first issue: 12/12/2016

Print Date 04/20/2023

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.

HARDENER 927 US

Version 1.1	Revision Date: 11/09/2022	SDS Numb 400001008	
			Print Date 04/20/2023
SECTIC	ON 1. IDENTIFICATION		
Pro	oduct name	: HARDI	ENER 927 US
Ма	anufacturer or supplier's o	letails	
	mpany name of supplier dress	: P.O. B The W TX 7	oodlands,
Tel	lephone		mergency: (800) 257-5547
E-r	mail address	: Global	_Product_EHS_AdMat@huntsman.com
Err	nergency telephone numbe	· : Chemt	rec: (800) 424-9300 or (703) 527-3887
Re	commended use of the c	nemical and	l restrictions on use
Re	commended use	: Harder	ner

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) Acute toxicity (Oral) : Category 4

Eye irritation	: Category 2A
Skin sensitisation	: Category 1
Short-term (acute) aquatic hazard	: Category 2
Long-term (chronic) aquatic hazard	: Category 2
GHS label elements Hazard pictograms	
Signal word	: Warning
Hazard statements	 H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	: Prevention:



1/15

HARDENER 927 US

HUNTSMAN

Enriching lives through innovation

		Print Date 04/20/2023
		eathing mist or vapours.
		in thoroughly after handling.
		at, drink or smoke when using this product.
	P272 Contamir the workplace.	nated work clothing must not be allowed out of
	P273 Avoid rele	ease to the environment.
	P280 Wear pro	tective gloves/ eye protection/ face protection.
	Response:	
		P330 IF SWALLOWED: Call a POISON
		or if you feel unwell. Rinse mouth.
		F ON SKIN: Wash with plenty of soap and water.
		P338 IF IN EYES: Rinse cautiously with water
	to do. Continue	utes. Remove contact lenses, if present and eas
		skin irritation or rash occurs: Get medical advice
	attention.	Skin initiation of rash occurs. Get medical advice
		eye irritation persists: Get medical advice/
	attention.	
	P363 Wash co	ntaminated clothing before reuse.
	P391 Collect sp	
	Storage:	
	Not available	
	Disposal:	
		of contents/container to an approved facility in the local, regional, national and international

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
m-phenylenediamine	108-45-2	50 - 70

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice	: Move out of dangerous area.
	Consult a physician.
	Show this safety data sheet to the doctor in attendance.
	Treat symptomatically.
	Get medical attention if symptoms occur.

SAFETY DATA SHEET

HARDENER 927 US

Versior 1.1	n Revision Date: 11/09/2022		2S Number: 0001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017
lfi	inhaled	:	If inhaled, remove	Print Date 04/20/2023 an after significant exposure. e to fresh air. tion if symptoms occur.
In	case of skin contact	:	If on skin, rinse w	ell with water.
In	case of eye contact	:	Remove contact I Keep eye wide op	
lf:	swallowed	:	Keep respiratory Never give anythi If symptoms pers	mmediately and call a physician. tract clear. ng by mouth to an unconscious person. ist, call a physician. diately to hospital.
ar	ost important symptoms ad effects, both acute and elayed	:	None known.	
Pr	otection of first-aiders	:	and use the record If potential for exp personal protective Avoid inhalation, No action shall be suitable training.	ingestion and contact with skin and eyes. taken involving any personal risk or without bus to the person providing aid to give
No	otes to physician	:	Treat symptomati	cally.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	Exercise caution when using a high volume water jet as it may scatter and spread fire
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	No hazardous combustion products are known
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Collect contaminated fire extinguishing water separately. This



HUNTSMAN Enriching lives through innovation

HARDENER 927 US

Vers 1.1	ion	Revision Date: 11/09/2022		DS Number: 0001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017
					Print Date 04/20/2023
					arged into drains. contaminated fire extinguishing water must accordance with local regulations.
	Special for firef	protective equipment ighters	:	Wear self-contain necessary.	ed breathing apparatus for firefighting if

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against : fire and explosion	Normal measures for preventive fire protection.
Advice on safe handling :	Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage :	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers.
Materials to avoid :	For incompatible materials please refer to Section 10 of this SDS.



HARDENER 927 US

Versio 1.1	n Revision Date: 11/09/2022	SDS Number: 400001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017
Recommended storage temperature		: 36 - 104 °F / 2 -	Print Date 04/20/2023 40 °C
-	urther information on torage stability	: Stable under nor	rmal conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible	Basis			
			concentration				
m-phenylenediamine	108-45-2	TWA	0.1 mg/m3	ACGIH			
Personal protective equipment							
Respiratory protection	ventilation that exposi Recomment	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines Recommended Filter type: Combined particulates and organic vapour type					
Filter type	: Filter type	A-P					
Respiratory protection	: No persona required.	al respiratory prote	ctive equipment norm	ally			
Respiratory protection		In the case of vapour formation use a respirator with an approved filter.					
Hand protection Material Break through time	: butyl-rubb : > 8 h	butyl-rubber > 8 h					
Material Material Break through time	: Nitrile rubb	Solvent-resistant gloves (butyl-rubber) Nitrile rubber 10 - 480 min					
Remarks	approved s chemical p necessary. The suitab	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. The suitability for a specific workplace should be discussed with the producers of the protective gloves.					
Eye protection	Tightly fittir	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.					
Skin and body protection	Choose bo	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.					

HARDENER 927 US

ΠΑΚΟ	ENER 927 03					
Version 1.1	Revision Date: 11/09/2022	SDS Number: 400001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017			
			Print Date 04/20/2023			
Hygi	with skin, eyes and clothing. Io not eat or drink. Io not smoke. before breaks and immediately after handling					
SECTION	N 9. PHYSICAL AND CH	EMICAL PROPER	TIES			
Арре	earance	: liquid				
Colo	our	: dark amber				
Odo	ur	: amine-like				
Odo	ur Threshold	: No data is av	: No data is available on the product itself.			
рН		: No data is av	: No data is available on the product itself.			
Melt	ing point/freezing point	: No data avai	: No data available			
Boili	ng point	: > 392 °F / > :	200 °C			
Flas	h point	: > 280 °F / > Method: Pen	138 °C sky-Martens closed cup, closed cup			
Evap	poration rate	: No data is av	vailable on the product itself.			
Flam	nmability (solid, gas)	: No data is av	vailable on the product itself.			
Flam	nmability (liquids)	: No data is av	vailable on the product itself.			
	er explosion limit / Upper mability limit	: No data is av	: No data is available on the product itself.			
	er explosion limit / Lower mability limit	: No data is av	: No data is available on the product itself.			
Vapo	our pressure	: <1 hPa (68 [·]	°F / 20 °C)			

Relative vapour density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	1.1 g/cm3 (77 °F / 25 °C)
Solubility(ies) Water solubility	:	partly soluble (68 °F / 20 °C)
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n- octanol/water	:	No data is available on the product itself.
Auto-ignition temperature	:	No data is available on the product itself.



SAFETY DATA SHEET



Enriching lives through innovation

HARDENER 927 US

Vers 1.1	on Revision Date: 11/09/2022	SDS Number: 400001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017
	Decomposition temperature	: > 392 °F / > 20	Print Date 04/20/2023 00 °C
	Self-Accelerating decomposition temperature (SADT)	: No data is ava	ilable on the product itself.
	Viscosity Viscosity, dynamic	: ca. 30,000 mP	Pa.s (77 °F / 25 °C)
	Explosive properties	: No data is ava	ilable on the product itself.
	Oxidizing properties	: No data is ava	ilable on the product itself.
	Molecular weight	: No data availa	ble
	Particle size	: No data is ava	ilable on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No hazards to be specially mentioned.
Conditions to avoid	:	None known.
Incompatible materials	:	None known.
Hazardous decomposition	:	Burning produces noxious and toxic fumes.
products		Nitrogen oxides (NOx)
		Carbon oxides
		No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity	
Product:	
Acute oral toxicity	: Acute toxicity estimate: 900 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate: 6.4 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate: 2,200 mg/kg Method: Calculation method

HARDENER 927 US

LIN 927 03		
Revision Date: 11/09/2022	SDS Number: 400001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017
		Print Date 04/20/2023
nents:		
-	: LD50 (Rat, ma Method: OECD	le): 450 mg/kg) Test Guideline 401
	Acute toxicity e	estimate (Rat, male): 450 mg/kg
halation toxicity	: LC50 (Rat, ma Exposure time: Test atmosphe Method: OECE	: 4 h
ermal toxicity	Method: OECE Assessment: T single contact	mation given is based on data obtained from
rrosion/irritation		
nents:		
ylenediamine:		
	: Rabbit : No skin irritatio : OECD Test Gu : slight irritation	
eye damage/eye iı	ritation	
nents:		
ylenediamine:		
	: Rabbit : Irritating to eye : Irritant : OECD Test Gu	
	11/09/2022 nents: ylenediamine: ral toxicity halation toxicity ermal toxicity rrosion/irritation nents: ylenediamine: nent	11/09/2022 400001008329 nents: ylenediamine: ral toxicity : LD50 (Rat, ma Method: OECE halation toxicity : LC50 (Rat, ma Exposure time: Test atmosphe Method: OECE halation toxicity : LC50 (Rat, ma Exposure time: Test atmosphe Method: OECE ermal toxicity : see user define Method: OECE ermal toxicity : see user define Method: OECE arrosion/irritation Method: OECE nents: : see user define Method: OECE ylenediamine: : Rabbit nent : Rabbit inent : No skin irritation is eye damage/eye irritation : slight irritation is intritisting to eye : Irritating to eye is intritisting to eye : Irritating to eye

Respiratory or skin sensitisation

Components:

m-phenylenediamine:

Test Type :	Local lymph node assay (LLNA)
Exposure routes :	Skin
Species :	Mouse
Assessment :	May cause sensitisation by skin contact.
Method :	OECD Test Guideline 429
Result :	May cause sensitisation by skin contact.



HARDENER 927 US

rsion	Revision Date: 11/09/2022	SDS Number: 400001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017
Gorm	cell mutagenicity		Print Date 04/20/202
	onents:		
	enylenediamine:		
-	oxicity in vitro	Test system: Sa Metabolic activa	erse mutation assay almonella typhimurium ation: with and without metabolic activation Test Guideline 471
Genot	oxicity in vivo	Species: Mouse Application Rou Dose: 16, 33, 6	5 mg/kg/day Test Guideline 474
	cell mutagenicity - sment	: Animal testing of	did not show any mutagenic effects.
Carci	nogenicity		
IARC	No compon		sent at levels greater than or equal to 0.1% is confirmed human carcinogen by IARC.
OSHA		ent of this product prea list of regulated carcin	sent at levels greater than or equal to 0.1% is ogens.
NTP			sent at levels greater than or equal to 0.1% is ed carcinogen by NTP.
No da	ductive toxicity ta available - single exposure		
	ta available		
	- repeated exposure	•	
Repea	ated dose toxicity		
Comp	onents:		
m-phe	enylenediamine:		
Expos	L ation Route ure time er of exposures	 Rat, male and f 6 mg/kg oral (gavage) 90 d daily 2/6/18 mg/kg by OECD Test Gu 	w/day

No data available



Enriching lives through innovation

HARDENER 927 US

HARDE	ENER 927 US			
Version 1.1	Revision Date: 11/09/2022		DS Number: 00001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017
Expe	rience with human exp	000	Iro	Print Date 04/20/2023
-	ata available	030		
Toxic	ology, Metabolism, Dis	stril	bution	
No da	ata available			
	ological effects			
	ata available			
	er information ata available			
SECTION	12. ECOLOGICAL INFO	ORI	MATION	
Ecoto	oxicity			
<u>Com</u>	oonents:			
m-ph	enylenediamine:			
Toxic	ity to fish	:	LC50 (Oncorhync Exposure time: 96 Test Type: flow-th Test substance: F Method: Fish Acu	nrough test Fresh water
	ity to daphnia and other ic invertebrates	:	EC50 (Gammarus Exposure time: 48 Test Type: flow-th Test substance: F GLP: yes	nrough test
Toxic plants	ity to algae/aquatic	:	ErC50 (Selenastr Exposure time: 96 Test Type: static Test substance: F Method: OECD T	test Fresh water
			NOEC (Selenastr Exposure time: 96 Test Type: static Test substance: F Method: OECD T	test Fresh water
aquat	ity to daphnia and other ic invertebrates nic toxicity)	:	NOEC (Daphnia r Exposure time: 2 ⁻⁷ Test Type: flow-th Analytical monitor Test substance: F Method: OECD T GLP: yes	nrough test ring: yes Fresh water
M-Fac toxicit	ctor (Chronic aquatic y)	:	1	

HARDENER 927 US

HUNTSMAN

rsion I	Revision Date: 11/09/2022		0S Number: 0001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017	
				Print Date 04/20/2023 Test Guideline 209 nation given is based on data obtained from ces.	
Ecoto	xicology Assessmen	t			
Acute	aquatic toxicity	:	Toxic to aquatic	life.	
Chronic aquatic toxicity		:	: Toxic to aquatic life with long lasting effects.		
Persis	stence and degradabi	lity			
<u>Comp</u>	onents:				
m-phe	enylenediamine:				
Biode	gradability	:	GLP: yes	2 mg/l legradable 30 %	
Photo	degradation	:		er t Photolysis Screening Test: Sunlight aters Containing Dissolved Humic Substances	
Bioac	cumulative potential				
<u>Comp</u>	onents:				
m-phe	enylenediamine:				
	on coefficient: n- ol/water	:	log Pow: -0.39 (pH: 7 Method: QSAR GLP: no	77 °F / 25 °C)	
Mobili	ity in soil				
No da	ta available				
Other	adverse effects				
<u>Produ</u>	ict:				
Ozone	e-Depletion Potential	:	Protection of Str Substances Remarks: This p manufactured w	CFR Protection of Environment; Part 82 ratospheric Ozone - CAA Section 602 Class I product neither contains, nor was rith a Class I or Class II ODS as defined by the Act Section 602 (40 CFR 82, Subpt. A, App.A +	
Additic inform	onal ecological ation	:	unprofessional h Very toxic to aqu	al hazard cannot be excluded in the event of nandling or disposal. uatic life with long lasting effects. life with long lasting effects.	

Enriching lives through innovation

HARDENER 927 US

Version	F
1.1	1

Revision Date: 11/09/2022

SDS Number: 400001008329 Date of last issue: 06/20/2017 Date of first issue: 06/20/2017

Print Date 04/20/2023

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Dispose of contents and container in accordance with all local, regional, national and international regulations. Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR		
UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (PHENYLENEDIAMINES)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes
IMDG-Code		
UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PHENYLENEDIAMINES)
Class	:	,
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR	
UN/ID/NA number	: UN 3082
Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (PHENYLENEDIAMINES)
Class	: 9
Packing group	: III
Labels	: CLASS 9
ERG Code	: 171

HUNTSMAN Enriching lives through innovation

HARDENER 927 US

Version	Revision Date:	SDS Number:	Date of last issue: 06/20/2017		
1.1	11/09/2022	400001008329	Date of first issue: 06/20/2017		
			Print Date 04/20/2023		
Marin	ne pollutant	: yes			
Remarks		: Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.			
Spec	ial precautions for u	ser			
Rema	arks	: 49CFR: no dan	gerous good in non-bulk packaging		
based	d upon the properties	of the unpackaged mat	for informational purposes only, and solely erial as it is described within this Safety Data mode of transportation, package sizes, and		

SECTION 15. REGULATORY INFORMATION

variations in regional or country regulations.

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 311/312 Hazards	Acute toxicity (any route of exposure) Respiratory or skin sensitisation Serious eye damage or eye irritation		
SARA 313 :	The following components are subject to reporting levels established by SARA Title III, Section 313:		
	m-phenylenediamine	108-45-2	>= 50 - < 70 %

This product does not contain any hazardous air pollutants (HAP) >=0.1%, as defined by the U.S. Clean Air Act Section 112 (40 CFR 61

California Prop. 65

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

The components of this product are reported in the following inventories:				
DSL	: This product contains one or several components listed in the Canadian NDSL.			
AIIC	: On the inventory, or in compliance with the inventory			
NZIoC	: Not in compliance with the inventory			
ENCS	: Notified. Allowed to be imported / manufactured only by the notifiers. Please contact your Huntsman sales representative for more information.			
KECI	: Not in compliance with the inventory			
PICCS	: Not in compliance with the inventory			
IECSC	 Notified. Allowed to be imported / manufactured only by the notifiers. Please contact your Huntsman sales representative for more information. 			

HARDENER 927 US

Version 1.1	Revision Date: 11/09/2022	SDS Number: 400001008329	Date of last issue: 06/20/2017 Date of first issue: 06/20/2017
			Print Date 04/20/2023
TCSI		: Not in compliar	nce with the inventory
TSCA		: All substances	listed as active on the TSCA inventory
Invor	torios		

Inventories

AIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

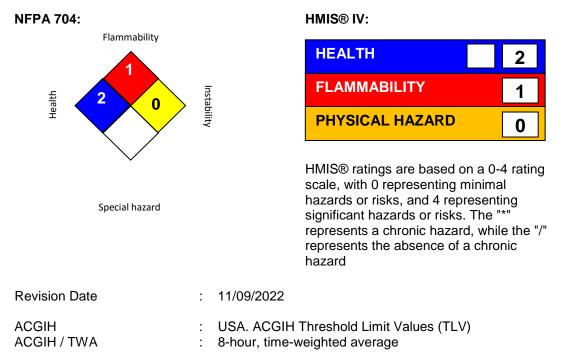
TSCA - 5(a) Significant New Use Rule List of Chemicals No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information



The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.



HARDENER 927 US

Version	Revision Date:
1.1	11/09/2022

SDS Number: 400001008329

Date of last issue: 06/20/2017 Date of first issue: 06/20/2017

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.