Material Safety Data Sheet

1. Product and Company Identification

Material name	**Mat er il Sf y**
Use of the preparation	**Dh1. PicSf hPf hd**
Version #	**ua**
Revision date	**r a cnCPcr ua**
CAS #	**mf pPlS**
Company identification	**UsV PPc#RC1RSv iMAbcRh2** **t uuiURhAH Sil PS P** **#RVAiz VPAEMz ia g: ugcwwke** **xhf P v il PRP y** **3 V o Ah i%ucke B cweuw** **UsV PPc#RC1RSv i/ RVP/ i WWCPyiVf h** **N3 AVVcWS isf P/ f hiP/ ixl Y iwckucgeB cgr ua** **N4f S CPY iwceut cga gcB wa a** **U#iMIy PAb SiMRS iFf h** **N3 AVVcWS isf P/ f hiP/ ixl Y iwckucgB gc%t %** **N4f S CPY iwcr uct r t cr e e w** **5bRf V6i/ oCly PAb SOf h7 If Sf y8/ oOCAb**
Date prepared	**nCPir kEr ua**
MSDS number	**r %‰ wa**

2. Hazards Identification

Emergency overview	**MAh PRCPisf P/ iy1f hiRhv i 2 yibR2iS yIVPif hif SSf PRPf AhO**
Acute health effects	
	z h2ioAP hPf RVi/ RqRSv yiRS ioS yIb v iPAiGiv l iPAi poAyIS iPAiP/ iCAboAh hPyO
Skin contact	1,5-pentanediol **MAh PRCPisf P/ iy1f hibR2iS yIVPif hif SSf PRPf AhO** 2-pyrrolidone **MAh PRCPisf P/ iy1f hibR2iS yIVPif hif SSf PRPf AhO** Alkyldiol ethoxylate **MAh PRCPisf P/ iy1f hibR2iS yIVPif hiy H S if SSf PRPf AhO** Amino alkyldiol **MAh PRCPisf P/ iy1f hibR2iS yIVPif hif SSf PRPf AhO** Ammonium nitrate **MAh PRCPisf P/ iy1f hibR2iS yIVPif hif SSf PRPf AhO** Ethyl alkyldiol **MAh PRCPisf P/ iy1f hibR2iS yIVPif hibf Vv if SSf PRPf AhO** Metal nitrate # 2 **MAh PRCPisf P/ iy1f hibR2iS yIVPif hif SSf PRPf AhO**

3. Composition / Information on Ingredients

Component/Substance	CAS Number	% By Weight
Cyan ink		
TRP S	B B t r cwkce	0iB u
wEe coh PRh v f AV	wwwcr a ce	0iwu
r co2SSAVf v Ah	%%%ge ce	0iB Oe
5P/ 2ViRV12Vvf AV	#SAoSf PRS2	0iB Oe
mPRVihf PSRP iLir	#SAoSf PRS2	0iB Oe
z V12Vvf AVi P/ Ap2VRP	#SAoSf PRS2	0ir Oe
z bbAhf Ibihf PSRP	%gkgcer cr	0ir Oe
l lGyPf PlP vid P/ RVAC2Rhf h iyRVPiLir	#SAoSf PRS2	0ir Oe
Magenta ink		
TRP S	B B t r cwkce	0iB u
wEe coh PRh v f AV	wwwcr a ce	0iwu
r co2SSAVf v Ah	%%%ge ce	0iB Oe
5P/ 2ViRV12Vvf AV	#SAoSf PRS2	0iB Oe
mPRVihf PSRP iLir	#SAoSf PRS2	0iB Oe
z V12Vvf AVi P/ Ap2VRP	#SAoSf PRS2	0ir Oe
z bf hAiRV12Vvf AV	#SAoSf PRS2	0ir Oe
z bbAhf Ibihf PSRP	%gkgcer cr	0ir Oe
Yellow ink		
TRP S	B B t r cwkce	0iB u
wEe coh PRh v f AV	wwwcr a ce	0iwu
r co2SSAVf v Ah	%%%ge ce	0iB Oe
5P/ 2ViRV12Vvf AV	#SAoSf PRS2	0iB Oe
mPRVihf PSRP iLir	#SAoSf PRS2	0iB Oe
z V12Vvf AVi P/ Ap2VRP	#SAoSf PRS2	0ir Oe
z bbAhf Ibihf PSRP	%gkgcer cr	0ir Oe

Composition comments

3 / f yif h1iyl odV2iCAhPRf hyiRhiR7I AIyif h1iWASblVRPf AhO
3 / f yioSAvlCPi/ RyiG hi HRVIRP vilyf hdCSf P Sf RiyoCf Wf vif hir aiMK9iwawuOwr uiNURqRS
MAbblhf CRPf Ahil PRhvRSvY O

4. First Aid Measures

First aid procedures

Eye contact
4AihAPiSlGi 2 yOiDbb v f RP V2iWVIy/ isf P/ iVRSdiRbAIhPyiAWlCV RhEsRSbisRP SiNVAsicS yyI
RPiV RyPiweibf hIP yiASilhPf VicRSPf CV yiRS iS bAH vOiDWlf SSf PRPf AhioSyf yPyidPib v f

Skin contact
TRy/ iRWWCP v iRS RyiP/ ASAId V2isf P/ ibf Vv iyARciRhv isRP SOiDWlf SSf PRPf AhioSyf yPyi
RPP hPf AhO

Inhalation
mAH iPAiWS y/ iRf SOiDWly2bcPAbyioSyf yPEdPib v f CRViRPP hPf AhO

Ingestion
DWlf hdyPf AhiAWlRiVRSdiRbAIhPiv A yiACCISEy 1ib v f CRViRPP hPf AhO

5. Fire Fighting Measures

Flash point and method
: ir ui®KiN: iat Ot i®MY □i# hy12cmRSP hyiMVAy v iMIo

Hazardous combustion products
9 WSiPAiy CPf AhiwuO

Flammable properties
(Ah i1hAshO

Extinguishing media

Suitable extinguishing media
Mnr EsRP SEv S2iC/ bf CRVEASiWARb

Unsuitable extinguishing media
(Ah i1hAshO

Unusual fire and explosion hazard
(Ah i1hAshO

Special firefighting procedures	(Ah i y PRGVf y/ v O

6. Accidental Release Measures

Personal precautions	T RSiRcoSAcSf RP ioSy Ah RVicSAP CPf H i 7If db h PO
Environmental precautions	4AihAPiV PicSAv lCPi h P Siv SRf h yOi4AihAPiWWly/ if h PAiy lSWRC isRP SiASiy Rhf PRS2iy sS
Other information	l AR1ildsf P/ if h SPiRGyASGh PibRP Sf RVOil VAsV2iH RCIlbiASiys dP/ ibRP Sf RVif h PAiRiGR AP/ Siy RV v iCAh PRf h SOi4f yoAy iAWlf hiCAbdVf RhC isf P/ iWv SRVEyPRP ERhv iVACRViS l iRVyAiy CPf Ahiwt i4f yoAy RViCAhyf v SRPf AhyO

7. Handling and Storage

Handling	z H Af v iCAh PRCPisf P/ iy1f hE2 yiRhv iCVAP/ f hdO
Storage	- diAlPiAWlP/ iS RC/ iAWlC/ f VvS hOi- diRsR2iWSAbi pC yyf H i/ RPiASiCAVv O

8. Exposure Controls / Personal Protection

Exposure guidelines	5poAy lS iVf bf Pyi/ RH ih APiG hi y PRGVf y/ v iWASiP/ f yicSAv lCPO
Personal protective equipment	
General	xy ioSy Ah RVicSAP CPf H i 7If db h PiPAibf hf bf q i poAy lS iPAiy1f hiRhv i 2 O
General hygeine considerations	URhv V if hiRCCASv RhC isf P/ idAAv if hv lyPSf RVi/ 2df h iRhv iyRWP2icSRCPf C O

9. Physical & Chemical Properties

Appearance	(APiRH Rf VRGV O
Color	M2Rh EbRdh PRE2 VVAs
Odor	(APiRH Rf VRGV O
Odor threshold	(APiRH Rf VRGV O
Physical state	Ff 7If v O
Form	(APiRH Rf VRGV O
pH	%oeiciKOB e
Melting point	(APiRH Rf VRGV O
Freezing point	(APiRH Rf VRGV O
Boiling point	(APiv P Sbf h v
Flash point	: ir uu®KiN: iat Ot i®MY □i# hy12cmRSP hyiMVAy v iMlo
Evaporation rate	(APiv P Sbf h v
Flammability	(APiRH Rf VRGV O
Flammability limits in air, upper, % by volume	(APiRH Rf VRGV O
Flammability limits in air, lower, % by volume	(APiv P Sbf h v
Vapor pressure	(APiv P Sbf h v
Vapor density	: iwiNRf Si□iwOuY
Specific gravity	wiciwOr
Relative density	(APiRH Rf VRGV O
Solubility (water)	l AVIGV if hisRP S
Partition coefficient (n-octanol/water)	(APiRH Rf VRGV O
Auto-ignition temperature	(APiRH Rf VRGV O
Decomposition temperature	(APiRH Rf VRGV O
VOC	0it i)
Viscosity	: ir iCo

10. Chemical Stability & Reactivity Information

Chemical stability	l PRGV ilhv SiS CAbb hv viyPASRdiCAhvf Pf AhyO
Incompatible materials	DhCAbdRPf GV isf P/ iyPSAhdGRy yiRhviApfvf qf hdRdhPyO
Hazardous decomposition products	xoAhiv CAboAyf Pf AhEP/ f yicSAvlCPibR2i2f VvidRy AlyihfPSAdhiApfv yECRSGAhibAhApfv CRSGAhivf Apfv iRhv, ASiVAsibAV ClVRSisfd Pi/ 2vSACRSGAhyO
Possibility of hazardous reactions	Tf VVihAPiACClSO

11. Toxicological Information

Toxicological information	9 WSiPAil CPf Ahir iWASioAP hPf RVi/ RVP/ i WWCPyiRhvil CPf AhigWASiWf SyPiRfvib RyIS

12. Ecological Information

Persistence and degradability	(APiRH Rf VRGV O

13. Disposal Considerations

Disposal instructions	4fycAy iAWlf hiCAbdVf RhC isf P/ iWv SRVEyPRP ERhviVACRViS dVRPf AhyO U# yi#VRh Pi#RSPh SyiNPSRv bRS1Y iyIodVf yiS C2CVf hdcSAdSRbi hRGV yiyf bdV ECAhH S C2CVf hdAWlU#iASf df hRVif h1. PiRhviFRy S& PiyIodVf yCiiiKASibAS if hWASbRPf AhiRhv f WlP/ f yiy SHf C if yiRH Rf VRGV if hi2AlSiVACRPf AhEdV Ry iHf yf Pi/ PPd6, , ssO/ oOCAb, S C2

14. Transport Information

IATA

Proper shipping name	(APiRodVf CRGV
Hazard class	(APiRodVf CRGV
UN number	(Ah
Packing group	(, z
Packaging exceptions	(Ah
Packaging non bulk	(Ah
Labels required	(Ah
General	(APiRivRhdSAlyidAAvilhv Sixhf P vil PRP yi4n3 EDz 3 z Ez 49EDm4 EASi9D4O

15. Regulatory Information

US federal regulations xl i3 l Mz iwr NGY 6i4A yihAPiCAhPRf hiVf yP viC/ bf CRVyO

CERCLA (Superfund) reportable quantity

(Ah

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Dbb vf RP iURqRSvici(A 4 VR2 viURqRSvici(A Kf S iURqRSvici(A #S yyIS iURqRSvici(A 9 RCPf Hf P2iURqRSvici(A
Section 302 extremely hazardous substance	(A
Section 311 hazardous chemical	(A

International regulations z VViC/ bf CRViyIGyPRhCyif hiP/ f yiU#icSAvlCPi/ RH iG hihAPfWf viASiRS ip bcPiWSAbihA Ihv SiC/ bf CRViyIGyPRhCyihAPfWf CRPf AhiVRsyif hiP/ iWAVVAsf hdCAlhPSf y6iixl iN3 l M: N5D(5Ml , 5FD(Ml Y El sf Pq SVRhvEMRhRvRiN4l F, (4l FY Ez lyPSRVf RE&RdRhE#/ f Vf odf h y - AS RE(si RVRhvERhviM/ f hRO

State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance

r co2SSAVf v Ah iN%%gp ce Y	Ff y P v O
z bbAhf I bihf PSRP iN%gg cer (	Ff y P v O

16. Other Information

HMIS® ratings	URVP/ 6iw KVRbbRGf Vf P26iw #/ 2yf CRVi/ RqRSv 6iu
NFPA ratings	URVP/ 6iw KVRbbRGf Vf P26iw DhyPRGf Vf P26iu
Issue date	nCPir kir ua iia 6r k#m
Revision	a
Replaces sheet dated	mRSir %r ua iig6g%m
Manufacturer information	UsV PPc#RC1RSv iMAbdRh2 wuui(5iMf SCV i AlV HRSv MASHRVVf yEn9ia B t t ucgr t a ixl N4f S CPY iwceut cga gcB wa a N3 AVVcWS isf P/ f hiP/ ixl Y iwckucgeB cgr ua
Other information	3 / f yim l 4l isRyicS dRS v if hiRCCASv RhC isf P/ ixl z inl Uz iURqRSv iMAbblhf CRPf AhyiS dVRP Nr a iMK9iwa wuOwr uuY O
Disclaimer	3 / f yil RWP2i4RPRil / PivACIb hPif yicSAHf v v isf P/ AlPiC/ RSdiPAiCIyPAb SyiAWlUsV PPc# MAbdRh2Oii4RPRif yiP/ ibAyPiCISS hPi1hAshiPAiUsV PPc#RC1RSv iMAbdRh2iRPiP/ iPf b iAW cS dRSRPf AhiAWlP/ f yiv ACIb hPiRhv if yiGVf H v iPAiGiRCCISRP OiiDPiy/ AlVv ihAPiGiCAhy dlRSRhP f hdyoCf Wf CicSAoSPf yiAWlP/ icSAv ICPyiRyiv yCSf Gv iASiyIf PRGf Vf P2iWASiRid RooVf CRPf AhOi3 / f yiv ACIb hPisRyicS dRS v iPAiP/ iS 7If S b hPyiAWlP/ i. ISf yv f CPf AhiyoC l CPf AhiwiRGAH iRhv ibR2ihAPib PiS dVRPAS2iS 7If S b hPyif hiAP/ SiCAlhPSf yO
MSDS sections updated	wwOi3 Apf CAVAdf CRViDhWASbRPf Ah6i3 Apf CAVAdf CRVif hWASbRPf Ah wgOi3 SRhyoASPiDhWASbRPf Ah6i h SRV